NEW DIRECTIONS IN DEAF EDUCATION

VOL. 24 • 2024

ODYSSEY

Language-Rich Environments in Deaf Education

CLERC CENTER
AT GALLAUDET

ODYSSEY

ODYSSEY • CLERC CENTER MISSION STATEMENT

The Clerc Center, a federally funded national deaf education center, ensures that the diverse population of deaf and hard of hearing students (birth through age 21) in the nation are educated and empowered and have the linguistic competence to maximize their potential as productive and contributing members of society. This is accomplished through early access to and acquisition of language, excellence in teaching, family involvement, research, identification and implementation of best practices, collaboration, and information sharing among schools and programs across the nation.

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Subscription information: Subscribe to *Odyssey* at *https://clerccenter.gallaudet.edu/Odyssey/*.

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About the cover: Children exposed to accessible language from a young age, especially from birth, will acquire it naturally. Environments that include signed, print, and even spoken languages (when applicable) while incorporating visual tools (e.g., fingerspelling, visual aids, ASL videos) provide deaf and hard of hearing children with the support they need to develop strong cognitive skills for lifelong learning. Find out more in this issue of *Odyssey*! (Cover photo by Matthew Vita)

We would like to thank all of our student, parent, teacher, and staff models from the Clerc Center for their assistance in illustrating this Odyssey *issue.*

FEATURES

NEW DIRECTIONS IN DEAF EDUCATION
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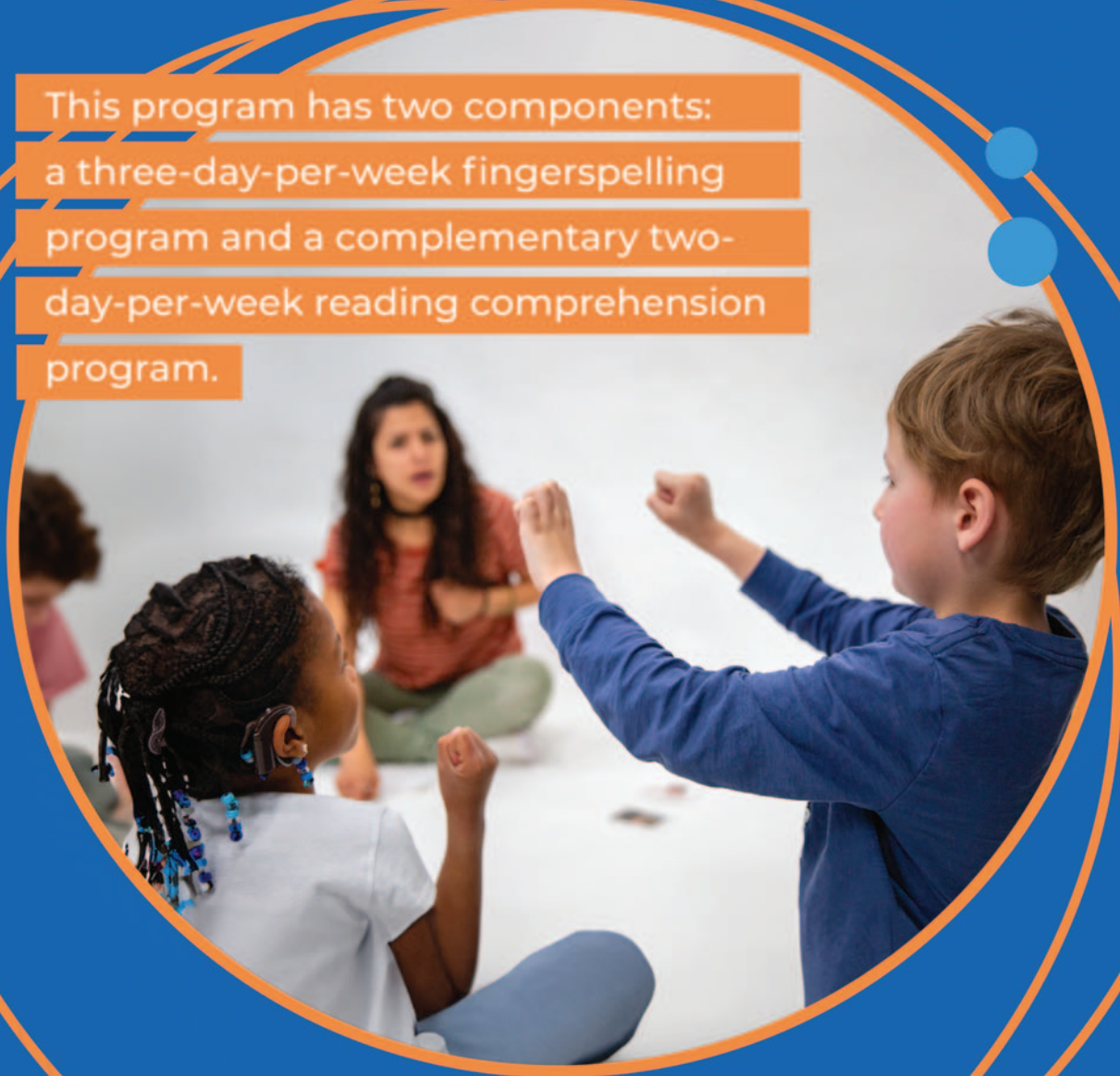
CLERC CENTER NEWS

FINGERSPELLING

OUR WAY TO READING

Fingerspelling Our Way to Reading is an evidence-based, supplementary literacy program for deaf and hard of hearing students in kindergarten to second grade.

This program has two components: a three-day-per-week fingerspelling program and a complementary two-day-per-week reading comprehension program.



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CLERC CENTER
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Unrestricted Learning Environments in Deaf Education:

CENTERING LANGUAGE ACCESS AS THE FOUNDATION FOR OPTIMAL STUDENT LEARNING

"Literacy is the jump-off point from which all of life's successes take flight."
~ Lauri Fortino, American author of children's picture books

At the Clerc Center, we emphasize the importance of language-rich environments and the interconnectedness and interdependence between every person involved in a deaf or hard of hearing child's educational journey, from parents, to teachers, to professionals. We also call attention to the importance of a child being exposed not only to educational content in both American Sign Language (ASL) and English but also to creating incidental learning and language-immersion opportunities that they may not get elsewhere.

Marianne Belsky

Nicole Sutliffe

Through our new **State and School Partnerships initiative**, we are partnering with seven schools, school districts and state departments of education seeking to improve outcomes for the deaf and hard of hearing children they serve. These programs recognize that real change happens not only in the classroom but throughout the educational experience, including support services, parent engagement, the school environment, and the decisions at the district and state levels that impact deaf and hard of hearing students—and they are seeking support in making real change to their programs. Our partnership with these schools and school districts has yielded new understanding, techniques, and strategies of how we can best serve deaf and hard of hearing students nationwide, in a variety of educational environments. Through a combination of site visits, professional development, open conversation, and action plans, partner schools are creating language-rich learning environments designed to meet the educational and social-emotional learning needs of their students. We are seeking to create collaborations across all areas of a well-rounded educational program for deaf and hard of hearing students. If you are interested in serving as a trainer or a resource for the Clerc Center and our partner schools, please contact us at *clerccenter.partnerships@gallaudet.edu*.

In this issue of *Odyssey*, parent and professional authors share stories and experiences on a range of topics. Rob Hammel discusses how a public school's dual language immersion program creates a language-rich environment for deaf and hard of hearing students. Kristen Secora, Marissa Ramos, Brittany Lee, and Cheryl L. Shahan discuss the importance of exposing young deaf and hard of hearing children to plentiful and accessible visual language, including and especially sign language, and explore strategies that may help parents, caregivers, and educational professionals increase their use of signs. Chelsea Hull, co-founder of the Hands & Voices Military Project, and parent and active duty Air Force spouse Connely Leis, write about the difficulties of meeting a child's educational needs while in a military family and the importance of looking at LRE not only as the least restrictive environment but also as the literacy-rich environment. Jacqueline Wunderlich and Anthony W. Verdeja share how their community-based organization, the Family Center on Deafness in Florida, is supporting deaf and hard of hearing children's learning and family involvement. Check out these articles and more!

Thank you for helping to choose *Odyssey's* 2025 theme! The next issue will focus on how deaf and hard of hearing students with disabilities are being provided with equitable access to education through resources, supports, and services. Please see page 81 to learn more. To submit suggestions for our 2026 theme, please scan the QR code below.

—**Marianne Belsky** and **Nicole Sutliffe**
Chief Academic Officer/Chief Administrative Officer
Laurent Clerc National Deaf Education Center
Gallaudet University

Language- and Literacy-Rich Environments:

Strategies for Young Deaf Children

By Kristen Secora, Marissa Ramos, Brittany Lee, and Cheryl L. Shahan

Kristen Secora, PhD, CCC-SLP, is assistant professor of communication disorders at the University of Tennessee, Knoxville. She has been a speech-language pathologist working with deaf children and children with other communication needs since 2016. Her research focuses on supporting children's language acquisition and perspective-taking skills.

Marissa Ramos, MA, CCC-SLP, is an ASL/English bilingual speech-language pathologist with "superior" ranked ASL fluency on the Sign Language Proficiency Interview. She has worked at residential schools for the deaf, public schools, and early intervention. Ramos owns a business, Rise & Sign Therapies, through which she provides speech therapy services to Louisiana residents and consultative services throughout the United States.

Young children do not develop language skills by studying grammar and rules for forming sentences. Children's brains are wired to acquire language naturally; all they need is exposure (Petitto, 2000). This exposure occurs in many forms. Children learn as they see language directed at them. They learn as they see language that flows around them in their environment. They learn as they observe adults interacting through language with each other, adults interacting with other children, and children interacting with each other. Many opportunities for language learning are lost to deaf children if they are not surrounded by other signers (Hauser et al., 2010). In fact, the loss can be so severe that deaf and hard of hearing children can be at risk for language deprivation (Hall et al., 2019), a neurodevelopmental disorder that negatively impacts cognitive, linguistic, behavioral, and social development.

Just as exposure to a spoken language supports language development for hearing children, exposure to sign language—incidentally as well as directly—supports language development for deaf and hard of hearing children. With exposure to a visual language, deaf and hard of hearing children acquire language naturally, meet appropriate language milestones, and develop strong language skills. In turn, strong language skills are important for social-emotional and academic development as well as for establishing healthy relationships within the home, school, and community.

To promote environments that are rich in language for deaf and hard of hearing children, our team of American Sign Language (ASL)/English bilingual researchers, university professors, and speech-language pathologists from institutions in different parts of the country present some practical strategies. These strategies can help parents, especially those who did not learn signs as their first language, to communicate more frequently with their young deaf or hard of hearing

Photos courtesy of Marissa Ramos

Above: A speech-language pathologist models the sign *again* as a young child copies it.

children and help ensure the development of their strong early language skills.

Strategies to Increase Use of Signs in the Home

For families who learn sign language after the birth of their deaf or hard of hearing child, signing may not be natural or easy at first. In fact, it may require planning and conscious implementation. However, it is essential. When a child's family and all members of the educational team know sign—and foster sign language-rich interactions with children—the result is robust exposure to various language models and development of strong early language skills.

Here are some strategies that may help parents, caregivers, and educational professionals to increase their use of signs inside and outside of the home, enriching the language environment for deaf and hard of hearing children:

- **Modeling**—Modeling is the act of exposing the child to a variety of linguistic stimuli (e.g., individual signs and sentences with two or more signs). This means engaging and communicating with the child in ways that are authentic and enjoyable. Validate what the child says by acknowledging and responding to them. Focus on modeling signs that are used frequently. These signs are often the same as the spoken words you would use frequently with a young hearing child, including signs for *more*, *open*, *help*, *go*, and *stop*. Be sure to use the signs in different contexts to help the child develop a versatile vocabulary.
- **Narration**—Narration, sometimes referred to as self-narration, is articulating what is happening as it is happening. Articulate what is happening from your own perspective or from your child's perspective. This can occur throughout the day as you use language to describe your actions as you are eating dinner or as your child is taking a bath. Make sure to add how you are thinking or feeling as you make note of your actions through language.

Brittany Lee, PhD, CCC-SLP, is an assistant professor of communication sciences and disorders at Chapman University. She has previously worked with deaf students as both an English teacher and a speech-language pathologist. Her research focuses on language and literacy development for deaf and hard of hearing children.

Cheryl L. Shahan, PhD, is a clinical associate professor at the University of Tennessee, Knoxville. She teaches deaf education courses and supports/supervises interns and practicum students in the deaf education field. Shahan is also a Deaf Mentor working with hearing families with deaf and hard of hearing children through the Tennessee School for the Deaf.

The authors welcome questions and comments about this article at *ksecora@utk.edu*, *marissa@risesign.org*, *britlee@chapman.edu*, and *cshahan1@utk.edu*.

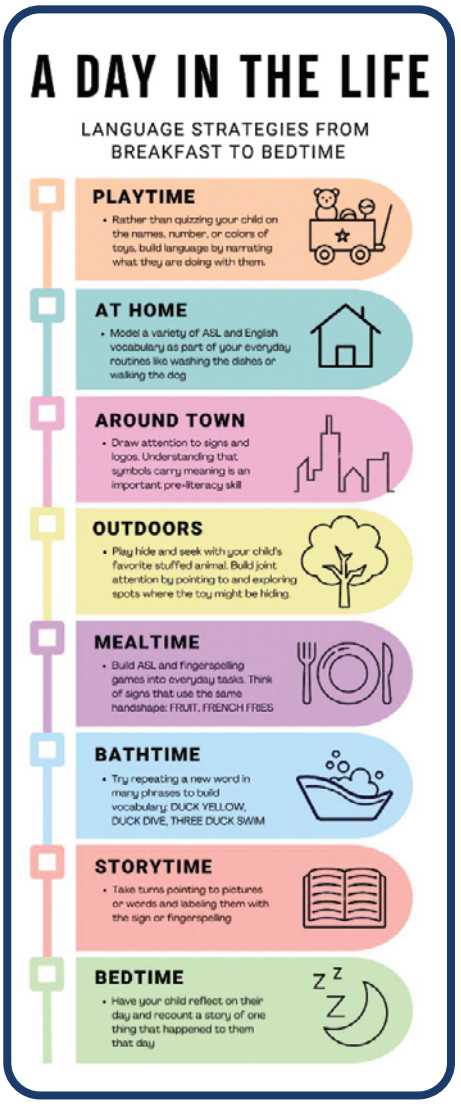
Above: Modeling *more* during meal times can provide important language learning opportunities, even when the child does not copy it immediately.

- **Follow the child's lead**—Get on the child's level. Literally sit or kneel on the floor so you and the child are at eye level with each other. Join the child in activities that are naturally motivating, such as playing with stuffed animals or cars, and communicate with them about these activities.
- **Wait and prompt**—Children understand vocabulary before they can use words to express themselves. When you engage children, give them time to respond but do not require a response. This is sometimes called the expectant pause. This pause provides children with an opportunity to sign without pressuring them to do so.

Above: A parent and a child both sign *pig* during a shared reading activity.

- **Use more than nouns**—Instead of pointing to an object and merely naming it, add information, perhaps noting what the object does, how it is used, or what it looks like. Use verbs and adjectives. Adding fingerspelling reinforces vocabulary and develops pre-literacy skills.
- **Communicate for a variety of reasons**—Comment on a picture, request a snack, describe a toy, express your thoughts and feelings, persuade a friend, or protest activities you do not like or want to do (e.g., "I don't want a bath."). The child will observe, and learn how to use, the language you use to express your wants, needs, and preferences.
- **Incorporate signing into daily routines**—Integrate some or all of these strategies into your daily routine. This will ensure children have ample opportunities for receptive and expressive language practice. Start by choosing one daily activity or a 10-minute period to focus on language. **Figure 1** shares some ideas for integrating language and literacy into everyday routines.

Figure 1



Begin Building Literacy with a Signing Foundation

Literacy skills are built on the foundation of language skills. In fact, ASL skill and fingerspelling skill are two leading predictors of a child's reading ability (Sehyr & Emmorey, 2022). A language-rich environment supports literacy skills by allowing children to explore text both in their books and in their environment. To help signing children connect language to literacy, try the following techniques:

- **Use chaining** (Humphries & MacDougall, 1997)—This technique presents a concept through a chain of expressions that mean the same thing. For example, to illustrate the meaning of *sand*, you would sign *sand*, then show actual sand, then fingerspell *S-A-N-D*. You can also add the spoken or printed word to the chain. This technique facilitates children connecting signed vocabulary to printed language.
- **Fingerspell**—During a walk or a drive, fingerspell the road signs to your child. For preliterate children, emphasize the overall movement of the fingerspelled word and match handshapes to printed letters as they learn to read. Fingerspelling can build awareness of signed and spoken phonology, which can both support reading.

- **Play language games in ASL**—Remember, signs are not made up of sounds but of handshapes, positions, and movements. Think of the sign for *flower* and the sign for *home*. Note how the handshapes are the same, making these words rhyme in ASL much like *cat* and *bat* rhyme in English. Tell ASL number stories and ABC stories that play with handshapes. If you need help finding these stories, there are some good ones on the internet.

Above: A speech-language pathologist reads and signs with a deaf child.

- **Place signs on the page near the print that represents the English translations**—It can be difficult for children to attend to pictures, text, and a signing communication partner all at once. Adjust the usual sign placement by producing the sign on the page or on the child's body to keep the child's attention focused on the story.
- **Connect concepts from the book to the real world**—This means books about sand or turtles might support a trip to the beach or the zoo. Ensure attention is drawn to the connection between the pictures of turtles in the book and the live ones at the beach or in the zoo.
- **Compare how you would say something in ASL and English**—For example, "Where do you want to have lunch?" might translate in ASL to two signs and a specific facial expression. Translating and noticing differences between languages builds metalinguistic knowledge for multilingual children.
- **Call attention to print in the environment**—Draw attention to signs and logos around town, like stop signs or the McDonald's arches. This builds awareness and teaches the important pre-literacy skill that symbols carry meaning.
- **Make reading special**—Trips to the library and bedtime stories are shared experiences that facilitate bonding and enjoyment and build positive attitudes toward reading.

For more suggestions, check out the Laurent Clerc National Deaf Education Center's (n.d.) online resource, *15 Principles for Reading to Deaf Children*, at *https://clerccenter.gallaudet.edu*.

As Much as Possible As Often as Possible

Children—deaf, hard of hearing, and hearing—need exposure to accessible language from birth to develop strong language skills. Strong early language skills lay the foundation for social interactions, literacy skills, and educational success. Further, deaf children who do not experience access to language when they are very young may experience language deprivation (Hall et al., 2019), which requires focused intervention from a variety of professionals, including teachers of the deaf, speech-language pathologists, Deaf Mentors, and the child's parents.

Children are naturally motivated to communicate. By following their lead, adults can model language and enrich their children's learning anywhere and at any time. Equally important, while helping them develop language and literacy skills, parents, caregivers, and educators will be communicating with their deaf or hard of hearing child and building interpersonal connections. With a bit of awareness and creativity, adults can nurture the language and literacy development of their deaf or hard of hearing child, enjoy meaningful communication, and form deep emotional bonds all at the same time.

Authors' note: Brittany Lee's research was supported by NIH NIDCD award T32 DC017703.

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Fostering Language-Rich Environments to Enhance Educational Outcomes for Deaf and Hard of Hearing Students: A Personal Perspective

By Scott Walsh

Scott Walsh, MEd, is a deaf education and training specialist for the Resource Materials and Technology Center for the Deaf/Hard of Hearing, a project of the Florida Department of Education, Bureau of Exceptional Education and Student Services funded through the Individuals with Disabilities Education Act. The center provides statewide coordination for the delivery of specialized technology and instructional materials to deaf and hard of hearing students as well as training and technical assistance to educators and their families. Walsh, who has a severe bilateral hearing loss and attended mainstream educational programs, is a passionate advocate for deaf and hard of hearing students and works with stakeholders to create inclusive academic environments in which they can thrive. He welcomes questions and comments about this article at *scott.walsh@rmtcdhh.org*.

The use of "deaf or hard of hearing" throughout this article refers to all individuals with any hearing variability, including those who are d/Deafblind, d/Deaf with disabilities, or Deaf plus, regardless of communication modality. Also, once you have worked with one deaf or hard of hearing student, you have done exactly that—you've worked with one. Each of these students is unique, as are their needs and the way they access their academic and linguistic environments.

Senses, specifically sight and hearing, are the mechanisms through which we access and navigate our everyday lives, and use of language is the cornerstone of how we connect. For students who are deaf or hard of hearing, barriers to access and inability to effectively use language within an environment can have significant impacts.

How do we break that barrier? How do we ensure deaf and hard of hearing children participate in language-rich environments and, through these linguistic passageways, the cultures that surround them? How do we ensure deaf and hard of hearing children have full and continuous access? How do we increase literacy? How do we create opportunities for direct communication with peers and adults across all learning environments? The answer: It depends.

Just as no two fingerprints are alike, no two students are alike. Each deaf or hard of hearing student has their unique way of interacting with their peers, parents, teachers, and the world. From how they express themselves to how they receive the expression of others, from how they experience and advocate for their rights to how they interact with each

Photos on pgs. 15 and 17 (center) and illustration courtesy of Scott Walsh
Additional photos by Matthew Vita, Laurent Clerc National Deaf Education Center

Left: When you have someone in your corner who pushes you, challenges you, and inspires you to grow—someone who sees beyond any obstacles and recognizes the incredible potential within you—nothing can stand in your way. Carmelina Hollingsworth, my project director for RMTC-DHH, has been that person for me.

other and their hearing friends, each student approaches each situation differently. A plethora of factors make a difference, of course, as hearing levels, communication modalities, and communication vary among students. Further these differences occur not just among students but even with the same student as that student goes about their day. Accessibility fluctuates constantly—environments change, communication partners change, and topics change. While it may be easy to navigate one environment or topic, a change in the setting, conversation, or communication partner can drastically impact a student's ability to receive, understand, and appropriately respond.

As educators, we often separate language learning into two domains: Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Learning Proficiency (CALP). BICS refers to everyday language that we use with each other. CALP is more complex language often used in academic settings. BICS serves students socially; CALP serves students academically. In traditional acquisition, a child develops BICS first and then develops CALP. This makes sense in that language usually develops first in the home, where everyday communication involves the child, parents, and siblings. Children have the capacity to learn any language (Marschark et al., 2006) as long as they have access. The brain doesn't care about modality, it just craves language (Kovelman et al., 2008). Since language learning progresses in both American Sign Language and English at the same rate, perhaps we can assume that BICS and CALP are synonymous in this progression as well.

While each deaf or hard of hearing student is unique, the single most important consideration for all deaf and hard of hearing students is **access**. Throughout their lives, access is key. Our students need access to the language-rich environments that surround them, especially at an early age. During the first years of life, the brain is constantly building new neurological pathways and strengthening existing pathways. Access determines whether these years are a catalyst to creating a solid foundation of language or a barrier for the rest of the child's life.

As educators we want to ensure students are immersed in a language-rich environment throughout the school day. This must start the moment students arrive in the classroom—or in the building's entrance way—and continue with every single interaction that occurs.

CREDIT: MATTHEW VITA

Above: Students need access to the language-rich environments that surround them, especially from an early age, whether at home, at school, or in the community.

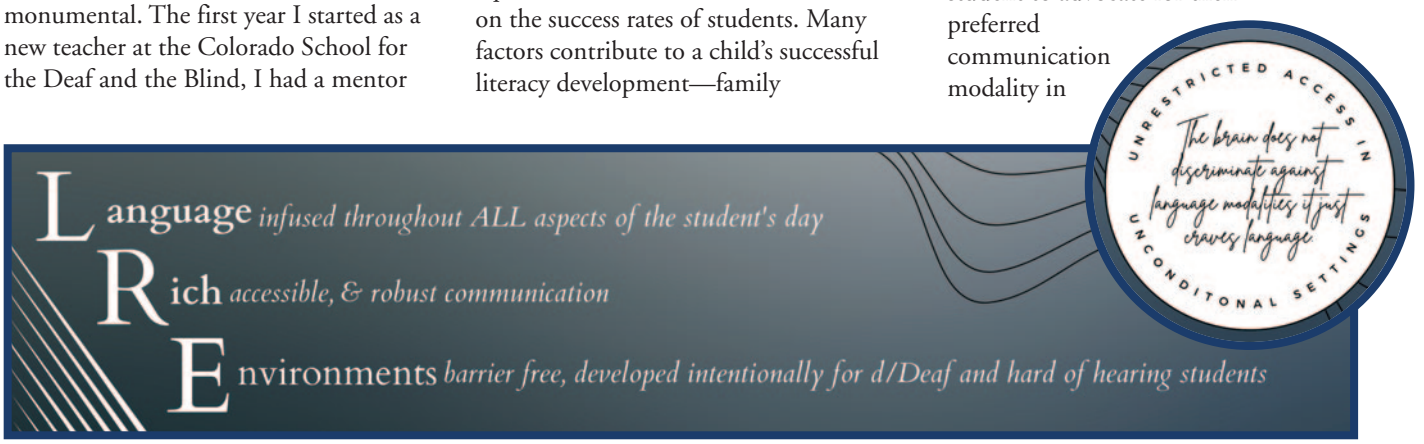
Interactions with students, both academic and social, are moments that allow students to build new language, practice familiar language, and scaffold the language that they know with their knowledge and experience to synthesize more complex language.

Looking at your students through the perspective of using interactions to build language rather than through the lens of teaching designated subjects shifts the mindset—and the effects can be monumental. The first year I started as a new teacher at the Colorado School for the Deaf and the Blind, I had a mentor teacher who met with me throughout the week. She advised me to teach in the moment—and in every moment. If a lesson took a turn from the intended path due to group discussion, she encouraged me to roll with it. These moments are hard to recreate, but when students are engaged, opportunities are rich with possibilities; teachers can teach, build, and scaffold new language as it unfolds in conversation.

However, language is more than a communication tool. Language leads to literacy, and literacy leads to meaningful engagement with the world, including directly to employment. Missing even a single part in the "language to literacy equation" can have detrimental effects on the success rates of students. Many factors contribute to a child's successful literacy development—family involvement, amplification, and the willingness of family members to learn and implement a new language. Still, "the single greatest risk faced by deaf [children] is inadequate exposure to a usable first language" (Gulati, 2023).

The most extreme result of lack of access is language deprivation. Language deprivation, or chronic lack of full access to language during the critical period of language acquisition, is completely preventable. In selecting what educators call a "communication mode," parents should have one objective: picking a language that is fully accessible, both receptively and expressively. Instead of entertaining the never-ending debate of determining which language is "correct" or "the best," instead of turning to the audiologist's recommendation or settling for whatever language the school may offer, parents should focus on their child and use the language that is most accessible for that child.

Children are different, linguistic environments are fluid, and the complexity of navigating these environments may result in the student choosing to use one form of communication in a given environment and a different form of communication in another. It is the student who must code switch and navigate between two languages, and it is the student who should be free to decide what is the most accessible communication at any given time. As educators, we need to be prepared for this and encourage the student to advocate for their preferred communication modality in



each setting.

Accessibility of language takes place on multiple levels and affects everything in the academic environment. Accessibility of language should be the prime determinant as parents and teachers face the question: *Where will students find themselves experiencing a language-rich environment?* An alternative to an all deaf classroom may be providing specially designed instruction through services to ensure a language-rich environment in all settings every day, wherever the student travels throughout their academic journey.

Language is all around us, but if a person cannot access it, it holds no value.

In addition to recognizing that each deaf or hard of hearing student is different and ensuring they have access to language, professionals must set the academic bar high. They must also recognize that hearing loss is only a piece of their students' identity; students come from different cultures, and they have different passions and skills. Deaf and hard of hearing students can do anything their hearing peers can do except hear, and they need to know this. They need to know that they are smart, they are capable, and their hearing level does not define or limit what they are capable of achieving. However, the foundation to all of this, and the foundation of their success, will depend on their acquisition of language.

Language, whether auditory or visual, is a shared need of everyone. It should be established based on the needs of the student, not on what's easily available for the school or the preferred modality of others. So, what can you, as an educator, do? Cultivate accessible language with your students during every possible moment. Be their fiercest advocate and let them know that they matter. And, above all else, believe in them; hold your expectations of them so high that they have no other option than to meet them. I am grateful for every one of the people in my life that believed in me, challenged me, and pushed me to become someone I never thought I would have an opportunity to become.

All deaf and hard of hearing children are different, but the accessibility to rich language that surrounds all of us is critical for everyone. Language is all around us, but if a person cannot access it, it holds no value.

Above: Walsh catches up with his former student, Jackson Swartzlander, who he taught while working as a teacher of the deaf in the public school system. **Below:** When teachers have high expectations of their students and believe they can succeed, then those students believe it, too!

CREDIT: MATTHEW VITA

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Creating Language-Rich Environments with Intentionality

at the Family Center on Deafness

By Jacqueline Wunderlich and Anthony W. Verdeja

Jacqueline Wunderlich, MA, BCBA, is the program manager for the Family Center on Deafness based in Largo, Florida. She received her bachelor's degree in psychology from Gallaudet University and her master's degree in special education from Ball State University. Wunderlich is deeply grateful to have the opportunity to serve the local Deaf community and to share her story here.

Anthony W. Verdeja, MJ, is the executive director of the Family Center on Deafness (FCD) based in Largo, Florida. He has been involved with the Deaf community professionally since 1991 and holds a Master of Jurisprudence, RID CI, CT, NIC, and NAD IV national certifications. Verdeja is grateful for the trust and respect of the Deaf community to lead FCD in serving the greater community of St. Petersburg, Florida.

The authors invite you to learn more about FCD at *www.fcdpinellas.org* and welcome questions and comments about this article at *jacqueline@fcdpinellas.org* and *anthony@fcdpinellas.org*, respectively.

The majority of deaf and hard of hearing children around the world are born to hearing parents, most of whom are not familiar with deafness or sign language. This can lead to language deprivation or delay and a lack of social interaction for these children. Below, article co-author Jacqueline Wunderlich shares her own story of growing up deaf, its impact, and how it influenced her work with the Family Center on Deafness (FCD) in Largo, Florida. The authors also share how FCD is collaborating with the local school district and other programs in order to empower the community's deaf and hard of hearing students and help provide them with language-rich environments in which to learn and grow.

Growing up I hated my hearing aids, but not for the reason you might assume. I constantly "forgot" to wear them or to change the batteries. I hid my bare ears under my hair so nobody would know. I got smarter as I got older and wore my hearing aids without turning them on (but my teachers figured that out). In sixth grade, I didn't wear my hearing aids at all. A bigger school meant it was harder for teachers to keep track of me, and it was easier for me to get away with not wearing them. I spent most of the year reading books under my desk rather than paying attention in class. I set a school record for the number of books I checked out from the school library that year.

I learned in school, but not what I was supposed to be learning. I didn't understand how to do

Photos courtesy of the Family Center on Deafness

Left: Youth and Family Support specialist Jasmine Hall works with an elementary student on improving his reading skills by connecting ASL and printed English words.

multiplication tables until college. I didn't have any idea what was going on in my classes, and yet I still would not wear my hearing aids. It wasn't because they were uncomfortable (even though they were). It wasn't because they were, paradoxically, both too loud and too quiet (which they were). It wasn't when other kids noticed my hearing aids, or how annoying it was to manage the FM system (even though it was), or even due to any other small indignities that happened daily. I hated my hearing aids because I hated taking them off. It still catches me off guard today, the roar and rush of sound when I turn on my hearing aids, and how, when I take them off, the world feels so still. As a child, that silence swallowed me up. In that moment, every time I was confronted with the stark reality that I am not and never will be hearing … to me, that meant being different, it meant failure, it meant never, ever fitting in. And so I chose not to wear my hearing aids at all.

When I became an adult and learned American Sign Language (ASL), my world exploded with possibility and language. Suddenly, hearing aids were simply an optional tool rather than *everything*. I put them on to listen to music, and I took them off whenever I wanted—sometimes for weeks, months, or years. I learned that deafness, which I had hidden from my entire life, was a source of belonging, inclusion, and joy.

Unfortunately, my story is all too common. Ninety to 95 percent of deaf and hard of hearing children are born to hearing parents, many of whom are not familiar with deafness or sign language (Hall et al., 2023). This lack of familiarity often results in environments in which children are unintentionally deprived of the language and social interactions essential for their development. These adverse childhood communication experiences, such as language deprivation and communication neglect, can have severe, lifelong consequences (Hall et al., 2023; Kushalnagar et al., 2020).

Florida's Tampa Bay region is home to the third largest population of deaf and hard of hearing individuals in the United States. Yet with the Florida School for the

Left: Program manager Jacqueline Wunderlich and Youth and Family Support specialist Jackie Haig give a presentation at the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine on the importance of language-rich environments in preventing language deprivation.

Deaf and the Blind situated just 200 miles away, most of these students are enrolled in mainstream public school settings just like I was, with non-signing and non-deaf peers. However, their stories don't have to mirror mine.

Family Center on Deafness and Deaf Community Cultural Wealth

In 1995, recognizing a dire need for support in the Tampa Bay region, Deaf community leaders, educators, and health professionals rallied together, setting the foundation for what would become FCD by 2003, and officially a 501(c)(3) organization by 2010. FCD is one of the only nonprofits of its kind nationally. Through support from the Juvenile Welfare Board of Pinellas County, FCD is able to actively collaborate with the local school district and other programs in order to empower deaf and hard of hearing students.

Today, FCD offers targeted educational and social support programs to deaf and hard of hearing individuals and their families, spanning from birth through high school graduation. These programs are grounded in the Deaf Community Cultural Wealth (DCCW) framework. DCCW changes the narrative from deficit-focused to emphasizing the rich cultural assets, values, and resources inherent within the Deaf community (Johnson et al., 2020). This works to actively dismantle the stigma and misconceptions often linked with deafness, not only for the students but for their families and the broader community. We show families firsthand that deafness is not an obstacle but instead an identity to embrace and celebrate. We champion the power of connection by cultivating an accessible, language-rich environment that presents limitless opportunities for students to enhance their communication, education, and independence. Through our programming, parents and children alike are introduced to the six forms of capital that comprise DCCW: aspirational, navigational, social, linguistic, familial, and resistant (Johnson et al., 2020).

Embracing the DCCW framework involves intentional actions and decisions that align with the values we champion. This is evident in our commitment to a staff composition that reflects the diversity of the community we serve. Approximately two-thirds of our team are deaf or hard of hearing.

Below: FCD staff and summer camp participants enjoy a book bus visit from our community partner and supporter, the Juvenile Welfare Board of Pinellas County.

Every staff member is proficient in ASL, with some also fluent in both English and Spanish, making them trilingual. This not only enriches our programs with a variety of perspectives but also demonstrates our commitment to the community in practice.

Charlie's Story

"Charlie" arrived at FCD with zero functional language and a traumatic history of abandonment and adoption.

Above: Volunteer Tatianna leads a scavenger hunt color-finding activity with deaf and hard of hearing toddlers and kids of deaf adults.

He was only 4 years old, but his family had already been told that he would not be successful in school and that he was not capable of learning. They believed that he had been severely impacted by language deprivation and that he would never be able to catch up or achieve proficiency in any language. Then Charlie's parents became engaged with FCD and set him on an extraordinary path of growth and discovery.

FCD's birth to 5 years old programming emphasizes embedding language learning opportunities into everyday experiences and community outings. We do this through initiatives such as the Shared Reading program and Promoting Language Acquisition for Youth (P.L.A.Y.) group programs. Within these settings, children like Charlie are surrounded by Deaf role models and take part in engaging activities designed to foster their language acquisition.

We are intentional about the way language is presented and utilized in our environments, mindful of its impact on children and their families. For example, deaf or hard of hearing staff may choose to use their voices at times to demonstrate that ASL and spoken language can coexist rather than seeing ASL as merely a lesser alternative. Conversely, hearing staff members sometimes prioritize signing over speaking, even in situations where vocal speech is the norm, to reinforce the importance and validity of ASL. This intentional approach to communication allows us to introduce families to the rich diversity of Deaf identities and Deaf culture. By leveraging familial capital, FCD encourages families to view their child's deafness not as a barrier but as a unique opportunity to strengthen their bond and grow together. Such meaningful engagement is critical for children's language acquisition and self-esteem. Ultimately, by exposing families to successful Deaf role models and demonstrating the effectiveness of ASL in a nonjudgmental environment, we open the door to families using ASL in other aspects of their lives. Building language is more than a one-time event, and it does not stop at age 5. With that spirit in mind, FCD intentionally creates language-rich environments for elementary, middle, and high school students as well.

Throughout elementary school, Charlie attended our Raising Expectations & Achievement of Children with Hearing Loss (R.E.A.C.H.) program that is focused on enhancing educational and developmental outcomes. It emphasizes cultural and linguistic enrichment, aiming to build a comprehensive development foundation for these students, their siblings, and hearing children of deaf adults (CODAs). The involvement of hearing siblings and CODAs has been critical to supporting families in ensuring everyone can have effective communication in all aspects of their lives. A fundamental goal of R.E.A.C.H. is to fill the gap in accessible extracurricular opportunities for deaf and hard of hearing students. Many mainstream deaf students historically have had limited access to activities that cater to their developmental needs due to communication barriers. R.E.A.C.H. addresses this by allowing the students to communicate directly with signing adults and Deaf role models. The program, which is a licensed child care center through Pinellas County, offers various activities, including life skills, social-emotional learning, tutoring, and Girl Scouts.

Beginning in middle school, our program allows students to dive more deeply into their interests. Weekly tutoring and support continue. Some students join Robotics club, while others choose to participate in Environmental

Club. Others learn about 3D printing, leisure activities, and life skills. Students begin participating in FCD's Deaf mentorship Learning Is For Everyone (L.I.F.E.) program, in which deaf and hard of hearing students are paired with Deaf adult role models and attend monthly outings together. Here, they are given guided and explicit instruction of self-advocacy, self-determination, and transitional skills through the example of our mentors and staff. This utilizes the navigational and aspirational capital of the Deaf community, encouraging the students to learn to successfully navigate the challenges of the hearing world and to continue dreaming big and realize they can achieve their dreams. The program also instills a sense of resilience and advocacy, teaching students to challenge societal perceptions of deafness and to advocate for their rights and needs. Charlie's participation in our program throughout middle school fostered his blossoming Deaf identity and language skills to prepare him for high school.

By high school, Charlie was initiating conversations, participating with others, and had made friends with his peers. He was once deemed incapable of learning, and yet with the incredible support and access to a language-rich environment, Charlie is now on the brink of graduating high school. Recently, he participated in a public speaking competition in which he discussed how he had overcome many challenges and remains optimistic about his future.

Samantha's Story

Not all FCD students join us as young as Charlie did. For example, consider the story of "Samantha." She was a sophomore drowning in her mainstream classroom. Her family had recently immigrated to Florida, and she was the only child in her class with hearing loss. Samantha had navigated her early education experiences with minimal support. By chance, she saw an FCD booth at a back-to-school event and discovered that there were services specifically for students like her. She began attending our after-school program and quickly began learning ASL. Samantha joined absolutely everything she could—Robotics, Academic Bowl, LIFE mentorship, driver's education, and more.

Part of creating a language-rich environment for Samantha meant acting with intentionality. Although infants can learn language solely through observation, this is not true for older children and adults. Samantha required explicit teaching of ASL, with FCD providing interpreters so she could have access to our programming as she learned. This was a turning point for Samantha and her academic performance soared, placing her in the top ranks of her class. Trilingual interpreters made it possible to support her family's acquisition of ASL, and her siblings were encouraged to join our summer camps. This meant that Samantha went home to a language-rich environment, too. Just like I was while growing up, Samantha was hungry for not only accessibility but for genuine inclusion—finding somewhere she truly belonged. We, at FCD, are so happy that she has found it in us.

Inclusion Makes the Difference

We believe that belonging is not just a feeling but a foundation for growth. It's the beauty of inclusion, where every student feels valued and sees themselves reflected in the staff and FCD community. FCD is a place where all deaf and hard of hearing individuals know they belong.

Author's note: The uppercase 'D' in "Deaf" is used to describe people who identify as culturally Deaf and are actively engaged with the Deaf community.

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Sarah Brandt, EdD, is the director of Outreach at The Children's Center for Communication/Beverly School for the Deaf in Beverly, Mass. Formerly a teacher of the deaf, Brandt promotes excellence in the availability and quality of educational and enriching services for learners of all ages who are deaf or deafdisabled, their families, and those who educate them.

Maddy Gibson, MEd, is a teacher of the deaf and reading specialist at The Children's Center for Communication/Beverly School for the Deaf in Beverly, Mass. Gibson develops and implements language and literacy plans for students who use American Sign Language, spoken English, and augmentative and alternative communication devices.

Across All Settings:

Fostering Environments Rich in Language Comprehension

By Sarah Brandt, Maddy Gibson, and Amy Szarkowski

In line with current recommendations (Garberoglio et al., 2019), the authors use the term 'deaf' inclusively to refer to audiologically deaf, culturally Deaf, and hard of hearing individuals, while 'deafdisabled' refers to those who are deaf, Deaf, or hard of hearing and have one or more disabilities.

For deaf children—as for all children—exposure to a language-rich environment is a cornerstone of developmental and educational opportunity. An environment rich in language promotes natural, direct, and responsive communication (Mugweni, 2019) and contributes to building a language comprehension foundation. Language comprehension is tied to literacy development, which in turn impacts life skills, independence, and postsecondary employment (Donnellan & Mathews, 2021).

Some deaf children acquire and apply language naturally through daily experiences, conversations, and interactions in an accessible first language. However, some deaf children, including those children who have experienced language deprivation (Hall et al., 2017), those with insufficient early language access (Szarkowski, 2018), and those who are deafdisabled (Guardino et al., 2022), may benefit from explicit strategies that transform language-rich environments into language comprehension-rich environments. These environments explicitly foster the development of language comprehension skills to support learners who do not yet possess the language foundation "to learn through language."

Professionals in our setting—The Children's Center for Communication/Beverly School for the Deaf (CCCBSD)—embed foundational language comprehension strategies within language-rich environments. This occurs in traditional classrooms as well as in a variety of other settings, such as therapeutic services, programs in related arts (e.g., art, music, physical education) and STEAM (science, technology, engineering, the arts, math), and community-based activities. Professionals in these

Photos courtesy of CCCBSD

Above: A student plays basketball during a schoolwide tournament, building both background knowledge and categorical understanding of sports-related concepts.

settings strive to make their learning environments not just language-rich but also rich in fostering the development of foundational language comprehension skills.

The Foundations of Language Comprehension

Language comprehension consists of many elements, such as understanding vocabulary, inferencing, and monitoring meaning (Oakhill et al., 2019). For learners without a strong language foundation, exposure to a language-rich environment may not be sufficient to develop these skills. For these learners, foundational language comprehension skills may need to be explicitly taught. According to DiPerri (2013), foundational language comprehension skills include:

- **Background knowledge**—The knowledge created as children experience the world, integrate and organize new knowledge, and develop critical thinking skills.
- **Negation skills**—The ability to say "no," identify when something is incorrect, or indicate if something does not make sense.
- **Categorical understanding**—The awareness of relationships among concepts, including significant attributes and identification of objects that contribute to them belonging or not belonging in the same group.

These foundational language comprehension skills are highly related to one another. For example, if students understand the categories "fruit" and "dessert" (*background knowledge*) and try brownies for the first time, they need to determine that brownies do not fit in the "fruit" category (*negation*) but share characteristics with other sweet food items, placing them in the "dessert" category (*categorical understanding*). This is how experiences become background knowledge.

Education professionals can use these

Amy Szarkowski, PhD, is a senior research fellow with the Institute for Community Inclusion at the University of Massachusetts Boston. She is a psychologist who specializes in supporting deaf children and their families. Recent work includes co-authoring a collection of articles on Family-Centered Early Intervention for children who are deaf or hard of hearing and their families (FCEI-DHH), published in the *Journal of Deaf Studies and Deaf Education*. She is a proud member of the Fostering Joy core team.

The authors welcome questions and comments about this article at *sarahbrandt@cccbsd.org*, *maddygibson@cccbsd.org*, and *amyszarkowski@umb.edu*.

Left: Language comprehension--and fun—are both a big part of physical therapy in the pool!

concepts to design environments rich in language comprehension to support all deaf learners. At CCCBSD, all professionals—including teachers, teaching assistants, related service providers/therapists, and specialists—participated in professional development on building language comprehension across contexts. The following examples illustrate how CCCBSD professionals supported students by fostering language comprehension-rich environments in a variety of settings.

Strengthening Negation
In Physical Therapy

Therapeutic service providers, including speech-language pathologists, occupational therapists, and physical therapists, bring unique discipline-specific knowledge to a child's educational team. While therapists typically address a child's goals related to their area of service, there are also benefits to addressing language comprehension skills during therapy; teachers can create opportunities for vocabulary growth, social connectedness, and community belonging (Gillon et al., 2020; Grajo & Gutman, 2019).

Eileen Tran, a physical therapist who supports CCCBSD students from 3-22 years of age, incorporates activities to strengthen the concept of negation in her practice, believing this is critical to student autonomy, independence, and safety. Given the complex physical needs of some of her students, hands-on support is often required. Tran fosters her students' ability to apply their negation skills by encouraging her students to indicate their preference for where and when activities take place or ask for a different or modified activity. For example, a student may be given the option to use a stander during a math activity or during reading or to select between the use of a treadmill or a stationary bike to complete an exercise routine. By giving the students more control over how and when they engage in physical therapy services, Tran promotes the development of a powerful skill that directly supports language comprehension among her deaf learners.

Focusing on Categorical Understanding
In Physical Education

Benefits of participation in related arts and STEAM include gains in vocabulary, comprehension, reasoning, creativity, critical thinking, collaboration, and interpersonal communication (Gordon et al., 2015; Wahyuningsih, 2020).

After learning about the role of foundational language comprehension, adaptive physical education teacher Shannon Morris focused on supporting the development of *categorical understanding* for her deaf students. "I knew we were doing a great job of introducing conceptual language through movement," she said, "but I wanted to find another way to provide access to literacy." To achieve this, she created a communication word wall that included laminated, removable cards with language and symbols related to adaptive physical education class. Each set of symbols is categorized by its function within an activity, such as requesting (e.g., wait, break, stop, go) or commenting (e.g., like, don't like). The word wall supports learners' *categorical understanding* by illustrating how various responses go together, and this understanding can then be applied throughout the class.

Developing Background Knowledge

In the Community

Community-based instruction promotes meaningful learning for students in authentic contexts and contributes to successful postsecondary outcomes (Walker et al., 2010). While this instruction is focused on the development of life skills, such as making purchases or promoting safety, helping students develop foundational language comprehension skills can also be embedded in community-based programs, such as transition.

Transition coordinator Alexandria Gullage designs community-based learning opportunities for students 14-22 years of age. She noted that learning about language comprehension was "insightful, comprehensive, and practical," particularly because it "highlighted the importance of considering academic content that will increase our students' independence." Gullage was struck by the importance of *background knowledge* for her transition-age students. "To support our students in the community, background knowledge must be built. One way to do this is through a thematic approach to instruction. For example, students explored a theme on retail stores and built background knowledge on different types of clothing." With this background knowledge, students engaged in tasks such as selecting clothing items based on an activity (e.g., job interview versus lunch with friends), clothing care (e.g., laundering and storing clothing), and clothes shopping (e.g., locating items in a store based on category). Gullage's experience illustrates that even in a nontraditional learning space like the community, students can address foundational language comprehension skills.

Above: A student in adaptive physical education class practices negation skills by making choices about preferred activities.

Above: While on a community outing to a farm, a student develops background knowledge that can support future learning opportunities.

Comprehension at the Foundation

Engaging the World

A solid foundation in language fosters the ability to understand and engage with the world. Without it, students face challenges in health outcomes, cognition, social-emotional skills, school readiness, and academic success (Hall et al., 2017). While many deaf learners acquire foundational language comprehension skills through daily interactions, this may not be true for all learners, particularly those with limited language

Right: A language comprehension-rich environment extends beyond the classroom, such as to instruction that occurs in the community.

access and those who are deafdisabled. For these students, foundational skills may need to be taught. Training educational professionals throughout the school to recognize opportunities for developing these skills promotes not just a language-rich environment but one that is language comprehension-rich.

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Choosing a School for the Deaf

When a Language-Rich Environment is the LRE

By Chelsea Hull and Connely Leis

"The limits of my language mean the limits of my world."
~ Ludwig Wittgenstein, Austrian philosopher

All parents of deaf or hard of hearing children face challenges as they strive to provide an environment rich in language for their child. For parents on active duty in the military, however, perhaps this challenge is most acute. Faced with decisions about their child's medical or educational needs, military families must act despite geographic separations, deployment requirements, and frequent moves. These families—required to enroll in the Exceptional Family Member Program—must also learn how to re-establish the child's medical and educational contacts each time they are re-assigned and, on top of all this, there is still the Individualized Education Program (IEP) to be completed!

Hands & Voices, the parent advocacy and support organization, has a Military Project that offers information and support to families in the military. The Military Project connects parents—who move an average of every two to three years—with each other to find answers to questions related to insurance, audiology services, sign language support, and educational programs. It also connects families to the Hands & Voices Advocacy, Support, and Training program, which equips parents with the knowledge and confidence they need to work through their child's IEP.

Photos courtesy of Chelsea Hull and Connely Leis

Chelsea Hull, MA, BEI, an active duty spouse, is co-founder of the Hands & Voices Military Project. She is Board for Evaluation of Interpreters (BEI)-certified for interpreting, as well as ASTra (Hands & Voices Advocacy, Support, and Training™) trained and certified. For 25 years, she has helped teach deaf and hard of hearing children, working as a teacher of the deaf, an American Sign Language interpreter, and an educational advocate. Hull's mother identified as deaf and inspired Hull's career in deaf education.

Connely Leis is an active duty Air Force spouse and a mother of three children. Her eldest, 8-year-old Tenley, is deaf; 7-year-old Cohen and 4-year-old Palmer are hearing. Their family is currently stationed in Baltimore, Maryland.

The authors welcome questions and comments about this article at *chelseasbusyhands@gmail.com* and *connelyleis@gmail.com*, respectively. If you are a military family seeking Individualized Education Program support, you can contact the ASTra program at *www.handsandvoices.org/astra/index.html*.

Above: Hull's journey of becoming a military wife and raising two children with autism, in addition to her upbringing as a CODA [child of a deaf adult], has inspired her to support military families within the Hands & Voices network.

Above right: The Leis family checks out a carnival hosted by ASD (2018). **Right:** Tenley's first day of preschool at age 2.

Chelsea Hull, cofounder of the Military Project, educational advocate, and one of the co-authors of this article, frequently discusses what the law calls "the least restrictive environment" (LRE) with parents. The LRE translates to where and how a child receives their education. Does the child belong in a public school classroom with hearing students? With an interpreter? With a special education teacher? In a special program? In a school for the deaf? When this difficult topic comes up, Hull tells parents to value conversations with other parents as much as conversations with professionals. Further, and perhaps most importantly, she advises parents to think of LRE not only as the least restrictive environment but also as the language-rich environment.

For one military family, the search for a language-rich environment was an enlightening journey that ended when their child entered preschool in a school for deaf students. After working with an audiology team that recommended hearing aid trials and a cochlear implant, the family made the decision to allow their daughter to continue her education in American Sign Language (ASL). They requested and received a special reassignment from the military, moved to Little Rock, Arkansas, and sent their daughter to the Arkansas School for the Deaf.

Below is their story.

... perhaps most importantly, [Hull] advises parents to think of LRE not only as the least restrictive environment but also as the language-rich environment.

Tenley's Story
As Told by Connely Leis

I credit our daughter's first service provider, Meg Mulone, with helping us to provide Tenley with the best support available. Tenley wore hearing aids and had a cochlear implant. The implant was not successful,

Left: Tenley (age 5), her siblings Cohen (age 3) and Palmer (age 1), and their parents (Connely and Ben) in 2021 on the Little Rock Air Force Base in front of a C-130 plane. **Right:** Tenley (left) poses for a photo with her friend, Liz (from MSD), at their dance recital in 2024.

however, and we did not have a good experience with her therapy services.We were told not to use sign language, to only use speech. However, Meg, who helped us with early intervention services and Tenley's Individualized Family Service Plan, explained that we did not have to follow what is often referred to as "the medical model" exactly. She showed us the research about language acquisition, and we learned that if children are not effortlessly immersed in some language in their early years, they may never learn any language well at all. Most importantly, Meg introduced us to culturally Deaf people and a flourishing Deaf community. I don't know what we would have done without Meg; as we say, the first deaf person we ever met was our own daughter.

We wanted the absolute best education for Tenley. Knowing that the statistics about deaf children born into hearing families are pretty devastating, our goal was not to become one of those statistics. We quickly decided that an interpreter in a school setting was not the route we wanted to take. Tenley didn't even have language to begin with, so how would she understand an interpreter? She needed to be surrounded by language, specifically the visual language of American Sign Language (ASL), and she needed to sign with ASL role models. That was our main goal.

We also wanted her to feel comfortable socially. The thought of her being the only deaf child in a school with only one signing adult who would handle all her educational and personal communications was too upsetting for me to even think about. My husband and I wanted Tenley to have friends with whom she could communicate directly, not through a professional interpreter. We wanted our daughter to have direct academic instruction and social interactions in a language she effortlessly understood. Tenley is now 8 years old, and we are certain that advocating for her to attend a school for the deaf is one of the wisest decisions we made for our daughter.

At the Arkansas School for the Deaf (ASD), Tenley had the best preschool teacher! Lynn Brooks had taught at ASD for more than 40 years, and we felt that she became an integral part of our family. Lynn hosted events for the Deaf community, invited us, and, like our early intervention teacher, gave us the encouragement we needed. When we talked with her and saw how Tenley was developing, we knew everything would be okay. We were astounded at how quickly Tenley's signs caught up with those of her Deaf peers who came from signing families.

We knew, of course, that as Tenley's parents, we needed to learn ASL, too. We also knew that our family needed to learn it. As of today, we've taken numerous sign language classes, some of them joined by extended family and friends. While Tenley was at ASD, we were provided with many supports, including sign language classes, opportunities to meet Deaf adults, attend Deaf homecoming games, and even join in on school field trips. The experiences were wonderful and enlightening. We sometimes felt awkward and out of place at some of

Left: Tenley enjoys playing soccer. In 2022, she played for a city recreation league, using an interpreter to communicate with the team.

the events because most of the attendees were deaf or hard of hearing, and almost everyone except us was skilled in ASL. Still, we realized that this is how you grow, and adjusting to the Deaf bilingual and bicultural community became easier the more we participated. Our goal is for Tenley to feel included, comfortable, and safe in her own home.

One special support I received from ASD was hands-on help with my signing. I loved this. If I didn't understand what my daughter was saying, I videoed her with my phone, sent the video quickly to ASD, and they sent me back a translation. I often joke that her teachers were probably sick of me because I had so many questions about ASL, but they knew I cared about proper language development, and they were always supportive.

Tenley is now a confident, strong-willed, and brave child. I love—and find it amazing—to pick her up from school and see her walking out with her classmates, signing with everyone, joking, laughing, and teasing. I enjoy going to performances, events, and games at her school. I love to have her deaf friends come over and see how they play, signing nonstop. Tenley will sign with people even if she knows they don't understand her. However, she will code-switch to easily understood gestures to get her point across. She makes hearing friends at parks and around the neighborhood. She plays on multiple hearing sports teams with an interpreter, and her teammates find the addition of a Deaf player, her sign language, and her interpreter fascinating if not a little intimidating. Tenley also enjoys playing with babies and toddlers; I delight in watching her sign to them. I treasure watching her grow, discover the world, and learn to advocate for herself.

I am fortunate to have received support from the Hands & Voices Military Project. It is difficult that, as a military family, we must move every three to four years. The military has a special plan for families like ours: the Exceptional Family Member Program. It is a lengthy and tedious process to be enrolled in the program; however, once enrolled, it allowed us to meet Tenley's educational and medical needs. Now she is at the Maryland School for the Deaf (MSD), and we are thankful for the large Deaf community here. Tenley orders drinks at the "signing Starbucks," goes to deaf-owned restaurants, and has deaf and hard of hearing friends who live nearby.

"Knowing that the statistics about deaf children born into hearing families are pretty devastating, our goal was not to become one of those statistics."

~ Connely Leis, Tenley's mother

There are times when I'm sure Tenley still feels left out. She still needs me to interpret for her every now and then. She is aware of how she is different from hearing people. However, I can say she is confident in her identity as a Deaf child. I don't think any of this would have been possible without putting her in two of our nation's schools for the deaf. Both ASD and MSD have provided an environment specially designed for her. Both schools had LREs—language-rich environments—that weren't even the slightest bit restrictive. With our support and the support of her teachers and friends, Tenley continues to flourish socially and educationally.

Learn more about the Hands & Voices Military Project, which provides specialized assistance to active duty and retired military families, at *www.handsandvoices.org/resources/military*. Military members can also join the private group on Facebook.

Employment Standards for Our Students' Interpreters: Lacking and Badly Needed

By Laurie A. Bolster, Leilani J. Johnson, and Marty M. Taylor

Interpreters are some of the most important people in the lives of our deaf and hard of hearing students, yet hiring and retention requirements are weak, variable, or nonexistent. Despite this, many school interpreters have become skillful and effective professionals driven by their desire for competence and sense of integrity. State employment standards, however, have created a national emergency regarding interpreting services for our students. Establishing and strengthening standards to ensure high quality interpreting services is an urgent need in public schools. This article is about what is happening in schools and what change is needed.

Many deaf and hard of hearing students require sign language interpreting services to access a free appropriate public education. Interpreters provide the communication bridge between our students and everyone else in the school environment—peers, teachers, coaches, administrative staff, and other personnel. The individualized nature of children's evolving language, communication goals, academic learning needs, and social-emotional maturity requires specialized knowledge and advanced interpreting skills, especially when interpreting for younger students. When interpreter knowledge and/or skills are deficient, our students are excluded from equitable participation in the language-rich environments of public schools, limiting their learning opportunities and social development.

When "sign language interpreting" is added to an Individualized Education Program (IEP), the educational team members, including the student's parents, assume effective communication is occurring. This includes access to teacher-driven lessons, after-school activities, peer interactions, and the services of speech-language pathologists, school nurses, and other professionals. Too often school interpreting is inadequate, and sometimes incomprehensible or even erroneous. Students who are supposed to be provided a ramp into language-rich environments instead face an additional barrier.

Photos courtesy of the University of Northern Colorado photography staff

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Above: Interpreters provide the communication bridge between students and their peers, teachers, coaches, administrative staff, and other personnel in the school.

In 2004, the revised IDEA added educational interpreters as one of 11 categories of related services personnel (or RSP, including audiologists, counselors, and speech-language pathologists). These professionals work alongside teachers supporting students. In 2024, interpreters are the only RSP group that is not held to commonly accepted professional standards. The major reason is that interpreters are typically not hired or compensated as professionals and, despite the law, K-12 interpreters are not expected to meet the employment standards required of other professionals in public schools.

North America's Professions *Built on Established Foundations*

RSPs require specific foundations that individuals must document and maintain to be recognized as members of that profession. The four foundations of professional endeavor are typically recognized as:

- Academic preparation
- Professional credentialing
- Continuing education
- Informed supervision and oversight

The first two foundations are necessary for entry-level professionals prior to being hired for the school environment. The next two foundations occur after interpreters are on the job. State education agencies are responsible for setting standards for hiring and retaining educational interpreters. By federal law, these standards are to be made publicly available.

In a 2021 national review of state education agencies' employment standards (Johnson et al., 2023), requirements varied widely among the 50 states and Washington, D.C. No state addressed all four foundations in their published standards. Six states had no published employment standard at all for school interpreters. Worse, states have exceptions allowing schools to hire individuals for our students who could not meet their state's minimum standard for interpreters.

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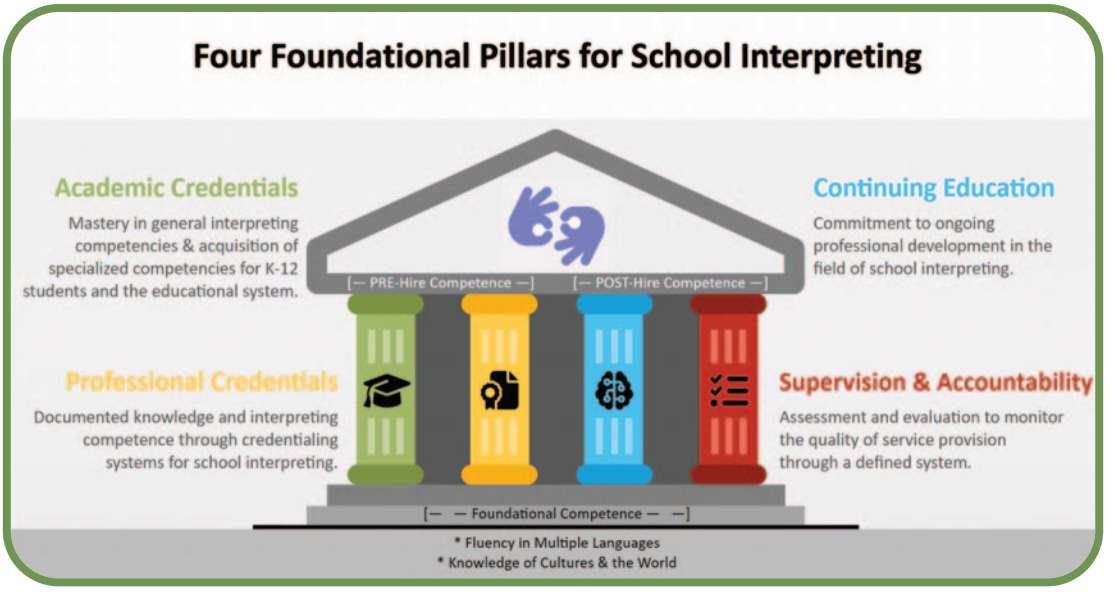
On behalf of the authors, Bolster welcomes questions and comments about this article at *LBolster@protonmail.com*.



CREDIT: EMILY G. GIRARDIN (2023)

Left: The four foundational pillars for school interpreting are pre-hire and post-hire requirements that individuals must document and maintain to be recognized as members of that profession.

Prior to Employment

Academic Preparation and Professional Credentials

School interpreters should be some of the highest qualified practitioners in the interpreting profession. Their educational interpreting coursework should include child and language development, the impact of a hearing loss, learning theory, teaching/tutoring strategies, and working as a team member within school systems. They should have advanced expressive and receptive American Sign Language (ASL) and English proficiencies and be able to move seamlessly between interpreting and transliterating to accommodate students' individual language abilities, complexity of course content, expectation of class participation, and relationships of individuals with whom they interact.

To effectively interpret throughout the school day, interpreters continually assess a child's overall language, comprehension and expression related to meaning and intent. Appropriately prepared interpreters can contribute these insights to the IEP team, make recommendations about communication that works well for the child, and identify issues that need further consideration.

Academic Credentials

A bachelor's degree, preferably in educational interpreting, is the minimum for a professional interpreter in a school setting. However, only three states required classroom interpreters to have a bachelor's degree in any discipline in 2021. Seven states required an associate's degree. Nine states specified a high school diploma or GED. Thirty-two states (including the District of Columbia) had no published minimum academic preparation required. This means that students in 41 states could have had an interpreter who was less academically prepared for specific course content than they were.

Professional Credentials

The Educational Interpreter Performance Assessment (EIPA) has both a knowledge test and a skill assessment, and it is the

Right: Interpreters should have advanced expressive and receptive ASL and English proficiencies and be able to move seamlessly between interpreting and transliterating to accommodate students' needs.

most common evaluative system in the United States specifically designed for K-12 school interpreters. [See EIPA sidebar.] Prior to beginning their work in schools, interpreters should demonstrate successful completion of the EIPA Written Test and a minimum average score of 4.0 on the 5-point skill assessment. However, in the 2021 count, only 19 states required successful completion of the EIPA Written Test, and 42 states required, or included as an option, the EIPA Skills Assessment in their published employment standards. An EIPA average score of 4.0 was specified by only 11 states; other states set an average score of 3.0 or 3.5 on the 5-point scale, which is utterly inadequate for full access to the language-rich academic environment.

On the Job

Continuing Education and Oversight

Continuing education and oversight are two commonly accepted aspects of professional life. Most educational professionals expect to take higher education coursework or professional training to maintain their credentials, as well as for retention and advancement in the workplace. This was not the case for school interpreters in 2021.

Continuing Education

Interpreters, like other professionals who work in education, should engage with and be supported in lifelong learning. They should be expected to meet standards like other RSPs to maintain and renew their credentials, as well as for retention and advancement in the school system. However, expectations for interpreters are highly variable regarding type, frequency, and substance and, as of 2021, 26 states (including Washington, D.C.) had no published requirements at all for continuing education.

Informed Supervision and Oversight

As most school interpreters are hired without having appropriate academic and professional interpreting foundations, they must receive informed supervision by a knowledgeable member of their field. However, no state has published a supervision and accountability system for school interpreters. Weirick (2021) found that only 23 percent of interpreters received any knowledgeable supervision, meaning 77 percent of the nation's interpreters work autonomously. They—and too often our deaf and hard of hearing students—are on their own.

When interpreter knowledge and/or skills are deficient, our students are excluded from equitable participation in the language-rich environments of public schools, limiting their learning opportunities and social development.

How Low Can the Bar Go?

In addition to missing or inadequate employment standards, some states take two other actions that have a harmful effect on our students.

First, most states permit schools to hire interpreters who cannot meet the state standards by calling them "temporary," "provisional," "emergency," or "developmental." Some systems allow that status to be renewed for years. When the renewals are finally exhausted, another unqualified person may be hired, basically to start their "on-the-job training." On-the-job training cannot "catch up" individuals who do not have the necessary knowledge and skill foundations to begin interpreting work; it simply lowers the bar for the entire workforce. Fitzmaurice (in Johnson et al., 2023) showed that in a state with no published standard, after five years of state-sponsored, free of charge workshops, classes, mentoring, and EIPA testing, the interpreting workforce showed negligible improvement in their interpreting skills and on average remained at well below acceptable competencies.

Second, instead of hiring qualified interpreters, schools sometimes reclassify interpreting positions as "sign language assistants," "communication aides," and "signing paraprofessionals." Regardless of the title, these individuals are assumed by others in the environment to function as interpreters. In fact, such "interpreting services" force deaf and hard of hearing students to make their own sense of whatever these non-professionals provide.

A Cautionary Tale

These types of practices have already resulted in a successful administrative complaint and lawsuit. In 2023, Miguel Luna Perez, from Michigan, sued the school district for monetary damages when he and his parents learned he was so poorly educated that he could not graduate with a high school diploma. The administrative complaint was settled when the school agreed to provide an additional year of schooling, but they fought the simultaneous ADA lawsuit—maintaining that Perez had no right to sue until all remedies under IDEA were resolved. The U.S. Supreme Court ultimately ruled against the school system, saying nothing in law prevented lawsuits under both IDEA and ADA simultaneously, and returned the case to the lower courts for financial resolution. Perez may still receive the compensation he asked for, but he is an adult now. His youth has passed. His right to access a language-rich environment for his first 12 years of education has been lost (RID/NAIE, 2023).

Left: Skilled school interpreters strengthen students in every way—in learning, information processing, interactive skills, and social-emotional maturity.

The case of Luna Perez shows how sub-standard interpreting services can continue for a student's entire public school life. The cumulative effect is deficient and fragmented access to communication, resulting in learning failures compounded year after year. This type of failure is generally invisible to school personnel and parents.

The Bottom Line
Our Students Deserve Better

Interpreters are critical. Skilled school interpreters strengthen students in every way—in learning, information processing, interactive skills, and social-emotional maturity. We must require that the state education agencies embrace and enforce standards for interpreters as they have for other RSPs; that means academic preparation and professional credentials prior to hiring, and continuing education and informed oversight once they are on the job.

In 2019, the National Association of Interpreters in Education (NAIE) published the *Professional Guidelines for Interpreting in Educational Settings* (*https://naiedu.org/guidelines/*) using the four foundations for school interpreters discussed in Johnson et al. (2018). The NAIE has advocated for standards that would ensure quality interpreting services for our students, but state education agencies are either unaware or have chosen to disregard them. NAIE now maintains a map of state education agencies' employment standards for the nation's school interpreters (*https://naiedu.org/state-standards/*).

Everyone—parents/caregivers, students, school personnel, and decision makers—concerned with the education of our deaf and hard of hearing students must take a stand. Without access provided by truly qualified interpreters, our students cannot take advantage of the language-rich school environments to which they are entitled. Not just their education—which is critical—but their cognitive and social development are also at stake.

Now, after decades of talking, it is time to act. There are some schools that employ highly qualified interpreters who perform as professional members of the educational team. We must demand states adopt the four foundations identified for school interpreters to make certain that level of interpreting service becomes the norm for all of our deaf and hard of hearing students.

Authors' note: This article is based on research published in 2023 in Complexities in Educational Interpreting: An Investigation into Patterns of Practice *(2nd ed.), which was co-authored with three other authors.*

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A Look at Interpreting Assessment: The EIPA

By Laurie A. Bolster, Leilani J. Johnson, and Marty M. Taylor

The Educational Interpreter Performance Assessment (EIPA) has a written and an interpreting skills component. The EIPA is psychometrically valid and reliable, having undergone continuous reviews and revisions over the last 30+ years to maintain reliability and validity.

The EIPA Written Test is pass/fail, measuring interpreters' knowledge of nine education-related topics. These are: child language development, culture, education, English, interpreting, linguistics, literacy and tutoring, professionalism, and technology. Each topic is scored 0-100 percent.

Analyzing approximately 800 interpreters' tests showed the mean scores ranged from 70-85 percent in the different categories (Johnson et al., 2023). Due to which topics an interpreter may have low scores in, it is imperative for those hiring interpreters to scrutinize applicants' scores *per category* to ensure they are appropriate to support a specific student's needs. If a student is struggling with English, for instance, an interpreter with a low score in English may not be able to effectively provide the support the student deserves and the parents expect.

The EIPA Performance Assessment measures 39 proficiencies in sign language and English, using a 5.0 Likert scale, in four categories (Vocabulary, Voice to Sign, Sign to Voice, and Overall Factors). Professionally prepared school interpreters should demonstrate a minimum overall average rating of 4.0 out of 5.0. This is the EIPA score needed to provide more equitable access to a language-rich environment. (See Cates, 2021; Fitzmaurice, 2017; Girardin, 2023; Schick et al., 2006; Williamson, 2020).

The averaging of the four EIPA skills categories to create the Overall Score is problematic. Frequently, an especially high rating in Vocabulary can pull the overall EIPA score up, even with unacceptably low ratings in Sign to Voice, Voice to Sign, and/or Overall Factors (e.g., message cohesion, coherence, and completeness). That average score might technically satisfy the state employment standard, but clearly vocabulary alone (e.g., knowing a lot of signs and words) will not create comprehensible messages for the student.

If Voice to Sign Interpreting (e.g., teacher talking to student) is weak, the person interpreting cannot reliably produce grammatically intact sentences and paragraphs, and the student receives less than meaningful information. If Sign to Voice Interpreting (e.g., student signing to teacher/others) is weak, it might be incorrect, incomplete, or sound odd. That can result in incongruous visual responses to the student from others, confusing and embarrassing them, and leading them to withdraw from further participation. The Overall Factors score documents the interpreter's level of knowledge and skills necessary to adapt language and information by delivering rich, conceptually intact equivalent messages to an individual student in a specific situation. And, in turn, these interpreters can do the same when the student is expected to interact with teachers, peers, and staff.

Readers are strongly encouraged to review the contrasting videos and written transcriptions comparing an interpreted message as conveyed at EIPA overall average scores of 2.5, 3.0, 3.5, and 4.0 at *https://eipa.boystown.org/eipa-levels-in-action.*

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Building Language and Literacy at the Same Time: Strategies for Classroom and Home

By Pamela Luft

As teachers, paraprofessionals, and parents, we recognize the importance of providing deaf and hard of hearing children with full access to the languages around them. Language is the primary means by which children acquire knowledge of the world and academic content to become successful adults. Additionally, it allows us to make and maintain friendships and to engage with others in working and participating in the community. We have also seen the poor outcomes that result when children don't have full access to language; reading and academic achievement remain far below intellectual capabilities.

To help our deaf and hard of hearing students attain grade-level skills, we can take advantage of the interrelationships between language and literacy and help students gain language and literacy skills at the same time. The Continuum of Reading Activities (described by French, 1999) provides us with strategies that allow us to advance students' language development and address core literacy standards (Ohio Department of Education, 2017; Reutzel & Cooter, 2019).

This continuum consists of four steps:

1. **Teacher-led reading aloud:** Teachers read to students using the students' preferred language and communication modality to engage them in the text.
2. **Shared reading:** Teachers ask students to read with them and share their decision making as they negotiate the text.

Photos by Matthew Vita, Laurent Clerc National Deaf Education Center

Left: Teacher-led read alouds help young students engage in the text.

3. **Guided reading:** Teachers divide text into segments. Students individually predict what will happen, then amend and discuss their predictions after reading each segment.
4. **Independent reading:** Students read independently across a range of genres and topics, with teachers offering occasional support, if needed.

When these steps are followed sequentially, they provide a gradual release of the teacher's involvement as students read with increasing independence (Hall et al., 2021). The interactive activities implicit in the Continuum have been effective in increasing students' reading independence, including the reading independence of students who struggle (Hall et al., 2021). The gradual release of teacher responsibility—often abbreviated GRR—includes:

- **Initially … explanation and modeling:** Teachers retain primary responsibility for demonstrating key skills but may probe and ask students to respond.
- **Then … guided practice:** Teachers begin to shift responsibility for learning, decoding, and comprehending to the students, providing additional explanation, modeling, scaffolding, and peer support as needed.
- **Finally … independent practice:** Students apply new skills and strategies without assistance from peers or teachers (Hall et al., 2021).

Language is the primary means by which children acquire knowledge of the world and academic content to become successful adults.

The four steps of the Continuum support the teacher's gradual move from guidance and modeling of skills and cognitive processes to sharing or supported reading and full student use of independent skills and strategies (see page 52). This process utilizes peer-to-peer and student-to-teacher interactions that promote full language fluency across all communication modalities and

Left: During shared reading, teachers ask students to read, sign with them, and share their decision making as they negotiate the text.

language preferences. At the same time, students' individual language, reading, and cognitive skills are strengthened and refined.

The Continuum supports all learners—those who are just beginning to read, those who struggle, those who are developing and maturing, and those with and without disabilities (Luft, 2023). The teacher-led activities support increasing amounts of shared and independent reading while also providing students with multiple opportunities for social learning and language use. As texts expand in length and content, activities based in the Continuum provide increasing linguistic and cognitive challenges, all of which are mediated and scaffolded through teacher and peer interactions.

Shared and guided reading prepares students to take leadership roles in expressing and discussing their skills and strategies while they become increasingly independent readers. As teachers combine these activities with interactive and dialogic bridging and directed reading and thinking activities, students build toward full independence, all the while expanding and refining their language skills and cognitive development.

Continuum strategies emphasize student participation and class-wide interaction to facilitate ongoing instructional engagement. These strategies provide increasing linguistic and cognitive challenges, all of which are mediated and scaffolded through teacher and peer interactions. These procedures should be applied equally to nonfiction as well as fiction to prepare students for textbook reading that will intensify after the third grade and that often are neglected (National Council of Teachers of English, 2023; Zakariya, 2015). These strategies can help students with mathematics, science, social studies, or social science texts. Collaboration among all teachers in the use of these strategies will allow for shared approaches that can increase student achievement in all academic areas. The use of student-centered topics of interest is an important means for increasing students' motivation and engagement (Wiggins & McTighe,

Right and far right: Shared and guided reading prepares students to take on leadership roles while they become increasingly independent readers.

Right: In independent reading, students read independently across a range of genres and topics with minimal teacher support.

2018).

Parents may provide similar activities at home. With guidance and encouragement from teachers, parents can begin with read-/think-alouds. As their children develop reading skills, parents can use shared and guided reading to discuss meanings. Families should be encouraged to talk with their children about their texts, even as the children become independent readers.

These strategies support the language and literacy development of deaf and hard of hearing children. They support meaningful and stimulating interactions through bridging and scaffolding, from beginning to well-established skills, and they are effective for deaf and hard of hearing students with and without disabilities. They allow them to engage socially with their peers, family members, teachers, and other adults to build language, reading, and cognitive skills—and to become successful adults.

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Continuum of Reading Activities: An In-Depth Look

By Pamela Luft

Step 1: Teacher-Led Read-/Sign-/Think-Alouds

Teachers present the text in their students' chosen language and communication mode and model targeted reading skills. When doing so, they ensure students have visual access to the text either through use of a big book or by using a classroom projection system. Teachers read aloud in spoken English or with a visual cueing system, or they can read by "signing aloud" in American Sign Language (ASL). Teachers may pause frequently, modeling how to use phonics or word families to make informed guesses to decode words. They present, explain, and demonstrate a variety of word- and phrase-level reading strategies that support comprehension of connected text (Fisher et al., 2011).

Teachers also model comprehension-checking strategies, periodically stopping, asking questions about word and passage meanings, and noting how their comprehension aligns with text comprehension up to this point. Teachers describe their own decision making using "think-aloud strategies." This has been shown to be effective with deaf and hard of hearing middle school students, including those with disabilities. Fisher et al. (2011) reported a statistically significant difference and large effect size in the use of think-alouds. They also increased teachers' awareness of students' use of reading strategies.

Step 2: Shared Reading/Signing

Teachers engage students through instructional bridging. They ask students to share their own think-aloud and decision-making processes and to give reasons for their choices. Individual students volunteer to read and demonstrate their read-/sign-/think-aloud skills. Rather than rely solely on volunteers, teachers may wish to call on students, who can ask for class help if unsure. Another strategy: fake mistakes! Teachers' "mistakes" are often extremely motivating in soliciting enthusiastic student "corrections," including from those who are otherwise very shy.

The shared reading classroom discussions provide further interaction experiences for students, reinforcing skills in providing details and abstract explanations of their strategies and rationales for decision-making and cognitive strategy

choice. These expand their linguistic abilities to use of increasingly complex syntactic relationships and semantic elements and simultaneously support advanced reading skill acquisition and refinement.

Step 3: Guided Reading

This step utilizes the Directed Reading Thinking Activity, also called DRTA (Stauffer, 1969; Stahl, 2008). Teachers divide a piece of connected text into segments based on the students' abilities. The teacher shows students the title and asks questions to prompt a discussion of experiential and text-based background knowledge. This increases students use of background experiences and related context to support word recognition and meaningful comprehension (Kyle & Cain, 2015; Marschark & Wauters, 2008; Schirmer, 2003; Schirmer et al., 2004). Teachers emphasize application of experiences and skills for comprehending the text to support students' increasing confidence; they do not review vocabulary.

After a conceptually focused introduction, students make a prediction about the book. Each student reads the first segment silently and then engages in class discussions related to their predictions of what will occur next. The teacher probes for further explanations and asks students to read aloud their evidence. Teachers do not ask comprehension questions; instead, they use the discussions to probe, scaffold, and support comprehension.

Step 4: Independent Reading

This is the ultimate goal. Students select materials and read across a range of genres, using their cognitive and linguistic resources to problem solve any comprehension challenges. Teachers support this process through the use of whole class reading selections, literature journals, literature circles, and reading workshops (Schleper, 2006; Tracey & Morrow, 2017). Peer and teacher feedback can help to verify individual comprehension and interpretations and offer opportunities to extend perspectives and insights. If needed, teachers provide individual attention and intervention to specific students or small groups. Teacher conferencing monitors and supports students' skill refinement.

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