



Auditory Verbal Strategies to Build Listening and Spoken Language Skills



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Introduction

There are many factors that have changed the outcomes for children who are born deaf or hard of hearing today. Two of the main factors affecting outcomes for these children are Universal Newborn Hearing Screening and advances in hearing technology.

Hearing loss can have life long effects on a child's development when not identified, diagnosed and treated at an early age. Advances in brain imaging have made it possible for scientist to identify a sensitive period for the development of central auditory pathways in the brain (Sharma et al, 2009). The first three years of life have been shown to be the time of maximal plasticity for the central pathways in the brain. Early detection of hearing loss is critical if a young child is to reach their full potential in life.

While most developing countries have adopted some sort of newborn hearing screening (e.g. United States, Canada, United Kingdom, Australia, and Europe), Newborn hearing screenings in developing countries is in its infancy (Kamal, 2013) as there are many economical and logistical obstacles to overcome.

According to the World Health Organization, there are 32 million children (birth-14 years of age) in the world with disabling (defined as 30dB or greater) hearing loss (WHO, 2012). Statistics in the United States from the National Institute on Deafness and Other Communication Disorders reflect that 90% of the babies who fail their newborn hearing screening are born to hearing parents (Mitchell & Karchmer, 2004). When presented with a complete and clear understanding of communication approaches available to their family, 85% of parents of children who are deaf or hard of hearing will choose a listening and spoken language approach (Brown, 2006). Newborn hearing screenings across the world have created an unprecedented need for professionals skilled in spoken language outcomes to work with children who are deaf or hard of hearing and their families.

Parents who are told of their child's hearing loss are often at a loss in determining their next steps. These parents do not often envision a future for their child which includes their child learning to listen and talk. Their perception is often that the only option their child has is to learn sign language. While sign language has clearly been demonstrated as a beneficial means of communication for children with hearing loss, it is not the only option available. While teaching children who are deaf or hard of hearing to listen and speak is by no means a new concept, the advent of digital hearing aids and cochlear implants has provided children with access to speech sounds that, in the past, were often not available to those with a severe to profound hearing loss.

In the US, the Early Hearing Detection and Intervention Act of 2010 was established to ensure every newborn is screened for hearing loss by one month of age, identified by 3 months of age and receiving appropriate early intervention services by 6 months of age (<http://www.infanthearing.org/components/>). Detection of the hearing loss is not effective, however, if children are not fit early and appropriately with amplification. Left undetected and untreated, even mild or unilateral hearing loss can cause delays in speech and language development followed by lags in academic achievement (Yoshinaga-Itano, et al, 1998).

While UNHS and early access to appropriate technology are two key factors in the ability of a child to learn to listen and talk, there is a critical third key component. This component is the family's access to trained professionals.

The Listening and Spoken Language Specialist (LSLS) is a professional trained in Auditory-Verbal strategies and techniques who supports the parent as the primary teacher of their child. The LSLS guides and coaches parents to develop their child's listening and spoken language skills so their child may have the opportunity to learn alongside their hearing peers at the earliest possible age. The LSLS works in partnership with parents to achieve the best possible outcomes for each individual child (Cole & Flexer, 2007). The LSLS has the designation of either an Auditory-Verbal Therapist (LSLS Cert. AVT) or an Auditory-Verbal Educator (LSLS Cert. AVEd). The particular designation depends on the setting in which the LSLS provides services. Each designation has Guiding Principles that can be accessed through the certifying organization, the Alexander Graham Bell Academy for Listening and Spoken Language: (<http://www.listeningandspokenlanguage.org/AcademyDocument.aspx?id=541>).

The LSLS coaches and guides families to develop their child's listening and spoken languages skills through the implementation of specific strategies and techniques. The terms "strategies" and "techniques" are often used together, but they do not mean the same thing. A *strategy* is a specific plan utilized to achieve a goal. It is a plan to move from Point A to Point B. In order to choose the correct listening and spoken language strategy, the therapist must be able to continuously analyze the child's strengths and needs, anticipate the child's response, and implement the correct strategy *at the correct time* while helping the parent to develop this skill as well. Knowledge of a variety of the listening and spoken language strategies is the first step in a learning trajectory. A professional must not only know which strategy to use to reach a determined goal, but must have the ability to model for parents and other professionals, and the ability to coach the appropriate use of the strategy. A *technique* is the way a professional goes about using the strategies. A technique is a way of presenting information or a style of teaching that may vary from therapist to therapist and teacher to teacher. There are many techniques that a LSLS may utilize that are not considered strategies. Two examples of techniques are the use of Experience Books and planning sessions around the daily routines and experiences of a particular child and family.

The work presented here is focused on auditory-verbal strategies to develop listening and spoken language skills in children who are deaf or hard of hearing.

How to Use this Resource

This resource was written for a professional audience although parents will benefit from it as well. Listening and spoken language strategies are referred to consistently in the field of listening and spoken language, but not defined in one body of work. This is an attempt to consolidate strategies in one resource with research references to further define and explain the strategy. Terms were utilized that the authors felt were most commonly understood in the professional field. A professional may refer to each strategy as needed when working with a particular child or family. This is not an exhaustive body of work and is not intended as a sole means to educate professionals who are unfamiliar with listening and spoken language development.

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Auditory Closure

Definition: *Auditory Closure* is when a speaker begins a song, rhyme, or sentence and then stops talking in order to encourage the child to fill in a verbal response.

How is this strategy done?

To utilize *auditory closure*, begin a song, rhyme or sentence and then stop and look expectantly at the child and wait for them to vocalize a response.

In its purest sense, auditory closure refers to the ability of a listener to decode information that was not heard completely or was distorted in some way and to fill in the missing information (Ferre, 2006). As a listening and spoken language strategy, *auditory closure* takes advantage of the redundancy of familiar language in order to encourage a child use expressive language.

Why is this strategy important?

Auditory closure affords the adult opportunities to informally assess the child's expressive language skills. Typically, if the child knows the word that has been left out, the child will naturally fill in the word or phrase.

Auditory closure can help an adult avoid the trap of a constant flow of questions directed at the child. An adult can change a question into a statement to encourage the child to respond. For example, when looking at photos, "Who's that?" becomes "I see _____".

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ attention to speaker
- ✓ response from child
- ✓ turn-taking skills
- ✓ child's use of spontaneous language
- ✓ expressive language expansion

Discussion

Auditory Closure assists parents and teachers to improve a child's ability to use contextual information, to fill in the blank, to gain more information, or to clarify information. The ability to fill in missing or distorted portions of the auditory signal helps a child understand the whole message in difficult listening situations such as background noise, speakers with regional dialects, quiet speakers or with someone who mumbles (Ferre, 2006). A child with hearing loss often does not have the necessary language or life experience that enables them to "fill in the gaps" of missed or inferred information (Beck, 2011; Cole & Flexer, 2007). This skill can be addressed at a very young age through the use of *auditory closure*. Familiar nursery rhymes or songs may initially be one of the best ways to utilize *auditory closure* as long as the child has been exposed to the song or rhyme enough times to be able to meet with success when *auditory closure* is used. This strategy can be employed with familiar books as well. During a story, the adult pauses to see if the child will fill in the blank.

Adults who work with a child who is deaf or hard of hearing may sometimes fall in to the trap of a barrage of questions directed to child in order to gather data on the child's expressive language skills. Data collection on a child's language skills can be accomplished in a much more natural method by using *auditory closure*. This strategy helps to make the exchange much more conversational in nature.

Auditory closure should be utilized when the adult believes the child has the ability to meet with success.

Example

Mom and her toddler are in the car and sing the familiar song of "Twinkle, Twinkle Little Star".

Mom begins: "Twinkle, Twinkle Little "(and stops)

Toddler: "star!"

Mom: "How I wonder what "(and stops)

Toddler: "you are"

This turn-taking goes on for the remainder of the song with the mom paying particular attention to the number of words the child is able to fill in.

An adult and child share a book.

Adult: "Oh look; I see a _____" (and points to a zebra)

Child: "horse!"

Adult: "It does look like a horse, but try again. It's a _____."

Child: no response

Adult can give the beginning sound of the word: "A z _____"

Child: "zebra"

Adult: "That's right. I see a zebra running across the field".

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Auditory First

Definition: Auditory First is an attitude as well as a set of conditions that will enable the child to have better access to speech and language.

How is this strategy done?

An *auditory first* attitude is achieved when the following conditions are met:

- Ideally a newly identified child should be seen every 4 to 6 weeks until a full audiogram is complete. From that point they should be seen every 3 months until the age of 3 when the child is typically seen every 6 months as recommended by the AG Bell Academy (Flexer, Madell & Hewitt, 2014.)
- Child wears hearing technology ALL waking hours
- Daily listening checks performed to assess the child's current listening ability and to ensure equipment functions properly
- Batteries are charged and backup batteries are available
- Backup coils/wires are available for cochlear implant users
- Magnet sites of cochlear implant users are checked regularly to ensure there is no irritation or swelling
- Hearing equipment is listened to both with and without FM connection to check for clarity

Ensure equipment functions at the optimum by doing a visual "check" of equipment:

- Ear molds fit properly and are free of wax and moisture
- Tubing is secure in ear mold
- No visible cracks, pinches, or tears in cables of cochlear implants or tubing of hearing aids

The conditions listed above are prerequisites to ensure auditory access. However, it is also important to be mindful of how to present information to a child learning to listen and speak as the goal is to build auditory skills!

Always think:

- Was the child given the best opportunity for hearing sound **before** they were expected to respond?
- Did the speaker avoid giving any visual information until the child had a chance to hear and process information?
- Does the child's behavior have anything to do with a change in their hearing?

Why is this strategy important?

A child's auditory system, in its earliest stages of development, depends on stimulation from an environment that is full of meaningful auditory input. A child with hearing loss who has had early and consistent access to speech will have better outcomes in auditory based communication than a child who has not had early and consistent access to speech. For the child with hearing loss, those that have the earliest access to the speech signal through their amplification will have better outcomes in auditory based communication. (Sininger, Grimes, & Christensen, 2010).

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ self-advocacy skills for hearing equipment
- ✓ attention to auditory signal first and foremost
- ✓ a mindset of listening in the parent and child
- ✓ integration of listening into the child's personality (Pollack et. al, 1997)

Discussion

In typical development, an infant starts to differentiate phonetic aspects of their native language from phonetic aspects of non-native languages around seven months (Kuhl, et al. 2005). As the child continues to develop, there is a critical period for language development that extends through the first six years. After this time, a child's ability to acquire language declines gradually. This critical period of development is also referred to as a time of maximal neuroplasticity. Neuroplasticity refers to structural and functional changes in the brain that are brought about by training and experience. The brain changes in response to these experiences, the peak point referred to as the critical period (Sharma, Dorman & Spahr, 2002). The effect of experiences during the critical period will result in behavior which is reflective of the particular environment of the child. For example, if the child does not have meaningful auditory exposure during the critical period, there may be a reduced effect on building auditory skills or, in some instances, no effect at all. When the critical period has passed, the brain may not be able to make big changes in neuronal connectivity. (Mundkur, 2005).

Example

A mother brings her 12-month-old child in for their scheduled therapy session. The mother reports that little Johnny has been "off" all morning and she can't figure out why. During a listening check of the equipment, the therapist finds that one of Johnny's hearing aids is not functional. She decides to take this time to talk to the mother about her continued development of an "auditory first" attitude. Oftentimes children who are deaf or hard of hearing display changes in behavior when their equipment does not function properly or when they may have wax, fluid, or developing/resolving ear infections. A person with an auditory first attitude will be sensitive to these cues and take appropriate action.

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Auditory Sandwich

Definition: Through the use of the **Auditory Sandwich**, information is presented through listening before the introduction of visual or other support information is given to a child. When visual information is needed to assist in comprehension, the information is then put back in to the auditory only presentation. The **Auditory Sandwich** is also referred to as the Listening Sandwich.

How is this strategy done?

The *auditory sandwich* follows this formula:

- 1) Auditory input is given first to ensure the focus is on listening to gain meaning
- 2) Visual/tactile input is added, when appropriate (may be eye gaze, pointing, showing a toy, etc.)
- 3) Auditory input is repeated again without the visual input

It is important to remember that a child may need to listen for 2-3 times prior to the presentation of visual/tactile information. The main point is to give the child the opportunity to learn through listening alone. Always remember to put the information back in to the auditory only presentation after the visual cue is given to ensure the last presentation has been successfully processed through audition alone.

Why is this strategy important?

The *auditory sandwich* is based on the premise that children who are deaf or hard of hearing need to learn to trust their hearing and rely on auditory input to learn spoken language. This emphasis on listening helps to strengthen the development of audition. Many aspects of speech (especially the suprasegmentals such as pitch, duration and intensity; as well as the difference between voiced/voiceless sound pairs) are not visible on the face or mouth, they are therefore best taught through listening (Listen Learn and Talk, Cochlear Limited, 2005). Visual cues are beneficial in only 30% of speech sounds in running discourse (Cole & Flexer, 2007).

The purpose of the auditory sandwich is to encourage comprehension and communication through the child's auditory abilities. Therefore, it is important to lead with auditory input, support the message with visual, or in some cases, kinesthetic input, and follow up with the auditory input only again. The addition of the auditory signal after visual support reinforces the importance of listening.

This strategy allows information to be gathered about the child's auditory abilities alone. If the child does not respond with the initial auditory input and consistently needs visual support, a discussion with the child's audiologist is recommended.

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ suprasegmentals of speech
- ✓ attention to auditory input and the speaker
- ✓ parents' belief that the child is able to gain information through listening alone
- ✓ ability to process language through audition

Discussion

Through the use of the *auditory sandwich*, the child develops and learns to recognize auditory patterns. The most natural way to develop spoken language with appropriate rate, rhythm and intonation is to learn through listening (Listen Learn and Talk, Cochlear Limited, 2005).

As with many strategies, the *auditory sandwich* is most effective when used with proper *wait time* and the expectation that the child is able to take in auditory information but may also need a visual/tactile cue at first to link meaning to sound. Oftentimes visual information is presented to a child prior to giving adequate opportunity for the child to listen first, which causes visual skills to be reinforced instead of auditory skills. By reinforcing audition, the *auditory sandwich* will bring attention to the targeted verbal input and give the child the necessary repetition and reinforcement they need for auditory learning.

It is the “rule of thumb” to use three auditory strategies before giving visual input. If three attempts to use audition do not result in the desired respond, additional input (visual or tactile) is given, followed by audition again. (Estabrooks, 2006)

Example

Adult: “It’s time to go outside. Let’s get your coat!” (auditory input first)

Child: no response

Adult: (rephrasing and attempting again): “Where’s your coat?”

Child: no response

Adult: (providing another opportunity to listen only) “Get your coat!”

Child: no response

Adult: “I see your coat!” (giving visual information by shifting eye gaze to child’s coat hanging on a hook)

Child: makes move to get coat

Adult: “Let’s get your coat!”

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Expectant Look

Definition: The **Expectant Look** is a non-verbal signal given to a child to indicate a response is expected.

How is this strategy done?

The *expectant look* can include any one of these physical cues or all of the cues in combination:

- Raised eyebrows
- Direct eye contact with the child
- Lean in towards the child
- Slight tilt of the head

Why is this strategy important?

Communication is a two-way street and an expectant look lets a child know that they are a partner in the exchange of information. While the expectant look is a non-verbal cue, it helps a child learn valuable turn-taking skills for conversation. The *expectant look* is meant to elicit participation from a child and send a clear signal that a response is expected (Cole & Flexer, 2007; Talbot 2002).

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ attention to speaker
- ✓ response from child
- ✓ turn-taking skills
- ✓ expressive language expansion

Discussion

The *expectant look* can be used alone or in combination with other listening and spoken language strategies. The message this strategy delivers to the child is two-fold:

1. I expect you to listen when I speak
2. I expect you to respond

The *expectant look* places social pressure on a child to give some sort of response. Communicative competence is an end goal of listening and spoken language and includes the ability to express wants and needs in a way that is socially acceptable (Gleason, 2005). As a child's language grows, an *expectant look* can also signal that the communication partner is engaged and is looking for more information. In this way, the *expectant look* can encourage longer utterances and expand language without the need to interrupt the child's thought process or the flow of the conversation. Often an adult's interruption of a child's utterances can encourage less talk from a child instead of more.

Example

A child has indicated to their parent they would like more to drink.

Parent: Holds her hand on the lid of the sippee cup and gives the child an expectant look.

Child: Looks at the parent, but gives no response.

Parent: Leans in towards the child and then gives an *expectant look*.

Child: vocalizes

Parent: "You could say 'open'".

Child: attempts the word "open"

Parent: Accepts attempt if it is at expected level and says, "Here you go! I opened the cup"

It is snack time in a preschool. The teacher has several choices of snacks available for the students.

Teacher: "Please let me know what you would like for snack today". She turns and looks expectantly at Tommy.

Tommy: "cookies"

The teacher knows the child is capable of a much longer sentence and this has been modeled in the past, so she merely gives the child an *expectant look* as if to say, "I need more information from you!"

Tommy: "I want cookies"

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Joint Attention

Definition: Joint Attention is the ability for two or more people to share a common focus (Woods & Wetherby, 2008).

How is this strategy done?

Joint attention occurs when an adult follows the eye gaze of an infant or child and comments on whatever the child watches. *Joint attention* can also occur when an adult attempts to gain an infant or child's attention to an object or activity (initiation of joint attention).

Joint attention is also referred to as shared attention.

Why is this strategy important?

Communication is most successful when people share a common focus or topic of discussion (Cole & Flexer, 2012). This begins in infancy when a parent follows a child's lead and talks about what is important to the child. *Joint Attention* establishes that the communication partners are focused on to the same object, action, or event. *Joint attention* is important for all babies as this strategy links concrete examples to the words heard.

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ attention to auditory input: When joint attention is established, the child is in the proper position for auditory only input as the child's gaze is on an object or an activity and not the face of the speaker.
- ✓ build social cognition (Mundy & Newell, 2007)
- ✓ assist development of theory of mind (Gavrilov et al., 2012)
- ✓ increase language development (Brooks & Meltzoff, 2005)

Discussion

Joint attention is a building block for social competence and is classified as a basic form of communication (Gavrilov et al., 2012). A child begins to establish *joint attention* between the ages of 6-9 months of age, although a parent or caregiver can certainly take advantage of a child's eye gaze and input receptive language from birth. *Joint Attention* allows caregivers to provide language to match the child's thoughts and to bathe the child in language. When caregivers encourage *joint attention* and label what a child focuses on, the child's vocabulary increases at a faster rate (Gleason, 2005). *Joint attention* is most effective when words are provided based on the child's interest and the label is given in the moment when joint attention is naturally established, rather than if the adult attempts to constantly redirect the child's attention. (Tomasello, 2005).

Joint attention with a child who is deaf or hard of hearing helps to establish context to ensure the message is clear. When a child and adult share visual focus on a particular object, the child is in an "auditory only" position and the adult has the opportunity to build both auditory skills and language skills at the same time.

Example

A mother feeds her baby a bottle and pays close attention to where her baby's eye gaze falls:

Baby: Gazes into her mother's eyes

Mother: "Hello there, Anna. You are a beautiful little girl!"

Baby: Changes eye gaze to her bottle

Mother: "You see your bottle. You were hungry, weren't you?"

Baby: Gazes back to mother

Mother: " You found mommy again! I love you."

During circle time in a preschool classroom, the teacher begins to sing the weather song to indicate that it is time to talk about the day's weather. Several of the children turn their gaze to the weather pictures that the teacher has on a board and other children look out the window. By monitoring the children's eye gazes, the teacher can assess which children seem to be indicating their awareness of what she is referring to at this point.

Teacher: "What weather do you see outside today Henry?"

Henry: Looks directly at the picture of the rain (indicating *joint attention*) but does not give a verbal response.

Since it is raining outside, the teacher knows that Henry has receptive knowledge of this concept and must decide if Henry is capable of a verbal response or needs additional support. One response from the teacher could be:

Teacher: "Henry, I see you looking at the picture of rain. Can you tell me the weather today?"

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Motherese

Definition: Motherese is the singsong voice that parents naturally use when speaking to very young babies. Motherese is also referred to as parentese, baby talk, or child directed speech.

How is this strategy done?

Motherese is characterized by short sentences that are usually repetitive and have a slower rate of speech. *Motherese* uses a singsong voice and exaggerated intonations with an abundance of variation in duration, pitch and intensity, which are called the suprasegmentals of speech. The pitch of the speaker is typically an octave higher than usual (Gopnik, Meltzoff, Kuhl 1999).

Caregivers are often positioned face-to-face with their child to create direct eye contact, so caregivers of children who are deaf or hard of hearing should be mindful to also create times when the child receives auditory input only.

Why is this strategy important?

Babies love *motherese*! It acts as an acoustic hook to capture and hold a baby's attention even if motherese is in another language (Gopnik, Meltzoff, Kuhl 1999).

Motherese seems to be a universal language that all adults use and all babies respond to equally, often with body movement which matches the intonation of the speaker (Gopnik, Meltzoff, Kuhl 1999).

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ attention to speaker
- ✓ repertoire of vowel sounds
- ✓ cooing
- ✓ response from child
- ✓ social-emotional development of baby (Bergeson-Dana, 2012)
- ✓ turn-taking skills

Discussion

Research on *motherese* indicates that it helps babies with typical hearing to ‘crack the code’ of language (Gopnik, Meltzoff, Kuhl, 1999; Bergeson-Dana, 2012). Some research reports parents of a child who is deaf or hard of hearing often use less *motherese* than parents of a child with typical hearing (Bergeson-Dana, 2012). This may mean the child who is deaf or hard of hearing, who already receives less auditory experience, may not have the richness in the language provided by *motherese*. This may not be because they do not have auditory access, but because the parent may be hesitant to use *motherese*.

One of the aspects of *motherese* is the elongation of vowels, which is important to consider when working with a child who is deaf or hard of hearing as vowel sounds are typically the most audible for a child who is properly diagnosed and amplified.

Motherese usually decreases by the time of the child’s first birthday, which is unfortunate for a child who is deaf or hard of hearing as *motherese* so naturally utilizes the suprasegmentals (duration, intensity and pitch) of speech.

Motherese should be encouraged for every child, regardless of the child’s auditory access. Activities that naturally incorporate *motherese* are: repetitive books that are rich in intonation (Brown Bear, Brown Bear by Eric Carle for example), nursery rhymes and songs. Acoustic highlighting is a component found in *motherese*.

Example

Motherese is best understood when it is heard. Follow the link below to a YouTube video of a mother engaged in *motherese* with her infant.

<https://www.youtube.com/watch?v=eZclOL7vIQQ>

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Repetition

Definition: Repetition is an indirect or informal language stimulation technique where a targeted sound, word, phrase or sentence is said more than one time (Weybright, 1984).

How is this strategy done?

There are two types of *repetition*:

- an adult repeats back what a child has said, but models correct articulation, vocabulary usage or grammatical structure
- an adult simply repeats the command or statement for a second time after appropriate wait time, in an effort to give the child another chance to hear and respond

Why is this strategy important?

When an adult utilizes *repetition* to either model correct articulation or restate what was said, the child has another opportunity to hear the proper pronunciation of the word or the targeted vocabulary. This affords the child the chance to practise use of their auditory feedback loop to match the adult's model or to listen again to the intended message. Repetition is a valuable strategy that exposes a child naturally to the grammar of their native language. Trelease (2006) says "Grammar is more caught than taught, and the way you catch it is the same way you catch the flu: you're exposed to it." (p.40). When a child has multiple opportunities to hear proper grammar, it is more likely proper grammar will develop.

Repetition is a valuable strategy to consider during everyday routines and interactions such as diaper time, peek-a-boo, story and song time. These times provide a regularity of language for a child, which acts as a springboard for learning (Cole & Flexer, 2007).

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ auditory feedback loop
- ✓ receptive language
- ✓ ability to follow commands when the child is given another chance to hear previously stated information
- ✓ expressive language
- ✓ knowledge of proper grammatical structures

Discussion

Repetition gives a child repeated opportunities to learn. A child who is deaf or hard of hearing needs to be exposed to language in multiple occasions within meaningful contexts in order to increase receptive language skills. In the early stages of language development, it appears parents naturally use *repetition* with their child in order to give positive feedback to communication attempts. Parents repeat back to their child what they have heard them say to confirm, model, prompt and often to correct (Hart & Risley, 1995).

Sound is all around and *repetition* of important sounds in a child's life links sound to meaning and words. A knock on a door comes to mean that someone is on the other side and eventually the word "knock" has meaning as well when it is paired with the sound. This connection arises through *repetition* (Ernst, 2012). Parents should be cautioned, however, it is not just the number of words heard by a child that helps grow vocabulary, but the breadth of the words that are used as well. A baby will listen longer to sounds and words they hear regularly (Suskind, 2015).

One must be careful, however, not to use *repetition* too frequently as a child's listening and language abilities increase. The overuse of *repetition* can send an incorrect message to a child that they do not need to listen the first time, for surely the adult will repeat the information! The adult must determine before using *repetition* whether the child had adequate opportunity to hear the stimulus. Background noise, distance, and complexity of language should be taken into consideration to decide if a child has the adequate auditory access to properly respond to the stimulus. Before an adult uses *repetition*, other strategies such as wait time, expectant look and optimal position should be considered.

Example

The therapist and parent target carrier phrases with the child. They have decided to work on 'I want _____' and will use the child's train set. The therapist has coached mom to gather all the trains into a box that mom will hold.

Therapist: "I want the Thomas train, please. What would you like?" (directed to mom)

Mom: "I want the James train. What would you like?" (directed to child)

Child: "dus!"

Therapist: "Mom, acoustically highlight the /b/ sound for him and prompt by 'you could say I want the bus'

Child: "want dus"

Mom: "You want the bus! Here you go. Here's the bus"

Therapist and mom discuss other daily routines where mom can input the "I want ____" phrase using repetition.

References

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Self Talk/Parallel Talk

Definition: **Self-Talk** and **Parallel Talk** are indirect language stimulation techniques that do not require a response from the child.

Self-Talk: an adult talks to the child about what the adult sees, does, or hears at any particular moment in time.

Parallel Talk: an adult talks to the child about what the child does, hears or sees at any particular moment in time.

How is this strategy done?

Self-talk is often described as a narration of one's day. This means an adult talks about their actions as they perform various daily tasks.

Parallel talk is narration of the actions of another person, typically that of the child.

The adult follows the child's lead and describes in short phrases of 3-6 words what the child sees, hears, or touches (*parallel talk*) or what the adult sees, hears or touches (*self-talk*). (Weybright, 1985).

Why is this strategy important?

This strategy provides an abundant source of language input for the child who is deaf or hard of hearing. It challenges the adult who is with the child to remember the need for exposure to new vocabulary and grammatical structures throughout the child's day. A child's rate of vocabulary growth is directly related to the amount of time a parent has spent talking to that child (Hart & Risley, 1999).

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ parents' ability to interact with their child
- ✓ receptive language
- ✓ expressive language
- ✓ ability to use grammatically correct structures
- ✓ conversational skills (Raver et al, 2012)

Discussion

Play is the primary mode of learning and social exchange for a young child. Adults have the opportunity to use *self-talk* and *parallel talk* during play and daily routines, to model vocabulary, grammar, and social interactions. Since a child needs to hear language in order to learn it, adults who utilize *self-talk* and *parallel talk* become natural language models for their child and increase a child's exposure to language. Remember, "Grammar is more caught than taught." (Trelease, 2006)

When these strategies are utilized during meaningful interactions, the experience of what the child can see, touch, or manipulate is enhanced by simultaneous spoken language input from an adult (Ling, 1989). *Parallel talk* and *self-talk* provide opportunities to directly label materials and actions which will help increase vocabulary for a young child. The child is able to link the object or action with words heard which increases the likelihood that the spoken word will have meaning attached to it. The key to these strategies is the adult does not require the child to answer direct questions or produce comments. Instead, joint attention, which is a basic component of conversation, is created between the adult and child and discussion relates directly to the objects and actions at hand. Adults must also remember to keep their comments within the child's syntactical level.

Hart & Risley's landmark study points to the link between literacy success in school and the amount of talk a child heard before the age of three. The parents that reached the highest number of words spoken to their child were those who had the tendency to narrate their day (Hart & Risley, 1995).

Example

Self-Talk (the adult talks about what they do)

"I'm putting on my coat. It is cold outside. I will zip my coat."

"I'm washing my hands. First, I'll turn on the water. Now, I'll get some soap. ..."

"I like blue blocks. I am building with blue blocks"

Parallel Talk (the adult talks about what the child does)

A child and her caregiver are playing with baby dolls:

Caregiver: "You are hugging your baby. What a lovely baby!"

"Now you are putting your baby in her bed. She must be tired"

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Wait Time

Definition: **Wait time** is the pause used between an adult's interaction with a child and the child's expected response that allows the child time to process the auditory information and formulate a response (Dickson, 2010).

How is this strategy done?

When engaged in vocal play or conversations, communication partners practise waiting for a response from the child before taking another turn themselves. This pause signals to the child that they are supposed to say, or do, something (Winkelkotter & Srinivasan, 2012). When information is repeated without proper *wait time*, a child learns they don't have to listen the first time. They are also denied the opportunity to trust their own hearing! When using wait time, before a command or comment is repeated:

- Count to 8
- Look expectantly at the child
- Lean in toward the child (as if to hear them, indicating an expected response)
- Practise patience!

Why is this strategy important?

The ability to remain quiet for appropriate times and durations facilitates verbal interactions. Adults must provide ample wait time for the child to respond before the adult gives the answer, asks another question, or repeats what was said. This means the adult *waits* long enough for the child to process the auditory message and then respond to it. Adults must leave "empty space" to signal to the child that it is their turn to contribute something to the back and forth volley that becomes conversation.

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ length of a response
- ✓ speaker's confidence
- ✓ likelihood of a response from child
- ✓ communicative intent
- ✓ turn-taking skills (Cole & Flexer, 2007)

Discussion

Wait time is perhaps the most underutilized, but one of the most important skills to develop in a teacher, therapist, or parent. Purposeful pauses (*wait time*) teach children how to engage in conversational turn taking when the speaker sends a message that a response is expected. Sometimes in an effort to input as much language as possible, the chance for the child to respond is forgotten. Teachers, therapists, and parents must learn how to be comfortable with silence!

Any auditory information that is presented; whether a new action, sound, word, or phrase; should be followed by *wait time*. Extended pauses after the presentation of information allow the listener time to process and also allow the adult to consider whether clarification or repetition is necessary before another conversational turn is taken. An adult who thinks diagnostically will wait for a child's response in order to determine an appropriate next step. The adult may choose to model the desired response or use a variety of prompting techniques to build toward the desired response (Garber & Nevins, 2012).

Example

A child wants to play with playdoh, but cannot open the container. The child hands the container to the adult without any vocalization.

Adult: Looks at child while placing hand on lid and *waits*...

Child: Looks at adult

Adult: *Waits* some more while looking expectantly at child

Child: vocalizes

Adult: depending on the expected response of the child, vocalization alone may be accepted. If more is expected, the adult could say "What should I do?" and *waits* again

Child: no response

Adult: "You could say 'open!'" and then *waits*

Child: "Open"

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Whisper

Definition: A **Whisper** is accomplished when the speaker turns off the voice and reduces the suprasegmental of intensity. Whispering is a form of acoustic highlighting.

How is this strategy done?

In order to whisper, a person uses their breath to speak softly without the use of the vocal cords. This affects the suprasegmental of intensity (loudness) which gives extra power to consonant sounds.

Why is this strategy important?

In the English language, vowels carry the power of speech as well as the prosody (Ling, 1989) while consonants carry the meaning, or intelligibility, of speech. The vowel sounds can often overpower the less intense consonant sounds which makes them more difficult to hear for a child with hearing loss. A *whisper* can make the consonants easier to hear (more acoustically salient) and give the child a chance to focus on the consonant sound as opposed to the vowel sound.

This Auditory Verbal strategy helps build the following Listening and Spoken Language skills:

- ✓ auditory attention
- ✓ auditory accessibility
- ✓ auditory feedback loop

Discussion

The voice can be used in many in different ways to capture the attention of listeners. Children are much more interested in listening to a storyteller who uses their voice to intrigue the listener. A *whisper* can add an element of surprise and call attention to the speaker. Children will often lean in and focus on what is being said when a *whisper* is utilized correctly. It may take a few repetitions, but the *whisper* will cue the child to focus intently on the speaker's message. A *whisper* also allows the higher frequency sounds of speech to be heard more clearly.

Try a whisper for a word that a child has misarticulated and see if the child is able to change that error after the word or sound has been whispered.

Example

Child: "I saw two cat"

Adult: "Hmmm. There were two? Listen.....I saw two *cats*" (whisper only the word *cats*)

Give the child a chance to repeat the phrase including "cats" with the /s/ sound on the end

References

Ling, D. (1989). *Foundations of spoken language for hearing-impaired children*. Washington, DC: Alexander Graham Bell Association for the Deaf.

Part II

Strategies to be added in the future include:

Acoustic Highlighting

Auditory Bombardment

Ask “What did you hear?”

Expand/Extend

Open Ended Questions

Optimal Position

Sabotage