Product Use Guidelines for Students with Hearing Loss

BENEFITS

Students who are hard of hearing often experience delays in language acquisition and reading development, typically because their exposure to spoken language and other forms of auditory input is limited by their hearing deficit. Even with the assistance of amplification devices or cochlear implants, these students often require direct language instruction, and many continue to struggle with language and reading.

Originally designed for students with language learning impairments related to auditory processing disorders, the Fast ForWord product has proven effective for improving the language and literacy skills of a wide range of students, including those who have a hearing loss. For example, in a study conducted at The Listening Center of Johns Hopkins University, children with cochlear implants demonstrated improved language, auditory processing, and communications skills after eight weeks of Fast ForWord product use.[1]

As a valuable part of a well-designed intervention program, the Fast ForWord product builds skills in memory, attention, processing, and sequencing—cognitive skills applicable to all learning.

While other cognitive skill-building programs attack similar skills, they generally focus on the visual domain. In contrast, the Fast ForWord product builds cognitive skills in the context of auditory stimuli that are relevant to spoken language. It provides the intensive, structured auditory and linguistic stimulation these students need to develop oral language and literacy skills.

The exercises follow a carefully sequenced progression, first building skills in the sounds and structures of oral language, and then making the connection to written language.

- Students begin with an age-appropriate foundational component that builds skills in sound discrimination, sound sequencing, phoneme isolation, word identification, language structures, and following directions.
- They progress to the next component which introduces letter-sound relationships while continuing to build language and listening skills.
- Finally, they move on to the program's reading components, which focus on phonological awareness, decoding, vocabulary, and reading comprehension skills.

[1] Schopmeyer, B., Mellon, N., Dobaj, H., Grant, G., and Niparko, J.K. (2000). Use of Fast ForWord to enhance language development in children with cochlear implants. Annals of Otology, Rhinology & Laryngology, 185 (Supplement), 95-98.

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BEST PRACTICES

To ensure the best outcome for each student, it is important to address individual learning and behavioral needs. For students with hearing loss, some of those considerations will relate to the student's hearing profile and the use of hearing aids or a cochlear implant.

Consider Sound Input Options

Hearing aids and cochlear implants vary in technology, and procedures for computer and tablet audio interfaces are frequently updated. Therefore, consult the student's audiologist or otologist about the appropriate method for audio input to the student's hearing aid or implant. Do not place over-the-ear headphones over hearing aids or use ear buds.

Set Appropriate Expectations

Consider a student's audiogram when interpreting performance on each exercise, and adjust expectations accordingly. Students can only learn those sounds they can hear.

- For example, a student with a severe hearing loss for high frequencies may be unable to hear fricative sounds such as /s/, /sh/, /f/, and /v/, and therefore may be unable to identify some of the stimuli in the syllable, word, and sentence level exercises.

Monitor the student's Fast ForWord Progress Report and be prepared to adjust the training to best meet the student's efforts and to maintain a high level of motivation. Students who are hard of hearing often require 50% more time to complete a Fast ForWord component. While individual needs will vary, clinicians have found the following duration guidelines to be useful in setting expectations:

- 90 minutes per day, 5 days per week, for 6 to 11 weeks
- 50 minutes per day, 5 days per week, for 9 to 15 weeks
- 40 minutes per day, 5 days per week, for 14 to 20 weeks
- 30 minutes per day, 5 days per week, for 18 to 24 weeks

Schedule long breaks such as family vacations between components whenever possible. Taking mid-component breaks of 3 weeks or longer can reduce the product's effectiveness.

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Provide Extra Support

Students with hearing loss often struggle with sequencing frequency-modulated tonal sweeps in Sky Gym, Jumper Gym, and Ocean Explorer.

- Encourage use of the built-in Help mode, which lets the student listen to each combination of sweeps and learn to hear the differences.
- Relate the auditory "up" and "down" sound sweeps to physical or kinetic cues.
- Practice sequencing offline, by orally presenting sequences of sounds or words for the student to repeat.

Students with hearing loss often struggle with following increasingly complex directions in Space Commander, Cosmic Reader, and Mission Control.

- Practice similar activities offline, and make sure that the student is familiar with the vocabulary (for example, shapes, colors, sizes, and spatial terms).
- Boost motivation by giving extra rewards for progress on these exercises.

Students with hearing loss often struggle with identifying the target syllable in a minimal pair in Hoop Nut, Bioacoustics Lab, and Tomb Trek.

- Students with cochlear implants may have difficulty with /b/ and /d/ alternatives.
- Students with high frequency hearing loss may have difficulty with /f/ and /v/ alternatives.

Consider Other Factors

For a student with congenital deafness who has cochlear implants, many clinicians recommend allowing at least 18 months to adjust to the implants before starting Fast ForWord product use.

Students who are hard of hearing may have other health or learning issues. It is important to know whether a student with a hearing loss also has a language learning disorder, or some other comorbid condition that could affect intervention decisions.

To successfully complete a Fast ForWord exercise session, a student must be able to focus for 10 minutes without being distracted. Eventually they should be able to complete three 10-minute sessions per day to fulfill the minimum Fast ForWord component schedule. Students who cannot do this may need intervention to address attention deficits. A student who has no language or is minimally communicative may not be a good candidate.

To assess whether a student is a good candidate for the Fast ForWord product, spend one or more sessions on the exercise demos and assess whether or not the student:

- hears and distinguishes the early level stimuli,
- understands what is expected in each task, and
- performs the task independently or with coaching.

How long it takes for a student to complete a Fast ForWord component depends upon multiple factors, including the degree of hearing loss, age at onset/diagnosis/intervention, prior auditory training, and co-occurring conditions.

- While it is important to respect each student's individual needs and abilities, it is generally true that students benefit more when they complete the Fast ForWord components more rapidly. Interventions and motivational supports should be used to help students progress as quickly as possible
- Motivation can wane if a student spends many weeks on a component. This may occur because the student has progressed to more challenging levels and finds these more frustrating. Or it may simply be that the novelty has worn off. Be prepared to provide additional coaching and motivational support in later weeks.