Auditory Skill Development in a Total Communication Setting

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A total communication setting presents a challenging environment for the development of auditory skills, since the availability of manual communication, if not appropriately controlled, has the potential to inhibit auditory development. Only isolated listening activities completed daily or weekly are insufficient for developing a child's residual hearing. Ongoing auditory opportunities must be integrated into normal, daily activities if auditory information is to become meaningful. The responsibility for auditory skill development, therefore, belongs with the classroom teacher or other persons working with the child on an ongoing basis. The Kendall Demonstration Elementary School (KDES) on the Gallaudet College campus is addressing integration of auditory skill development in a total communication setting through development and implementation of the KDES Auditory Skill Development Guide (Guide). The Guide is intended for teacher use with resource assistance by an audiologist. The purpose of the present paper is: (a) to highlight some concerns surrounding auditory skill development in a total communication setting, (b) explain the contents and function of the KDES Auditory Skill Development Guide, (c) discuss implementation strategies successful at KDES, and (d) outline possible future directions.

As defined by the Conference of Executives of American Schools for the Deaf, total communication (TC) is "a philosophy incorporating the appropriate oral, manual, and aural modes of communication in order to ensure effective communication with and among hearing-impaired persons" (Pahz & Pahz, 1978, p. 10). This philosophy is currently being subscribed to nationwide in the education of hearing-impaired children. The above definition of TC, while outlining the channels which can be utilized in communicating with a hearing-impaired child, does not describe the degree to which each of these various communication channels should be used with each child. The nature of this definition, in fact, leaves so much room for interpretation that implementation of TC probably varies greatly from school to school and even from

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teacher to teacher. Individual interpretation of the philosophical guidelines of TC should not be criticized if, in each situation, they are interpreted appropriately to meet each child's specific communication needs. One of the prevailing misinterpretations of TC, however, is that all communication modalities (oral, aural, and manual) must be used simultaneously at all times. This misconception leads to inappropriate implementation of TC and could result in students not being given opportunities to develop individual communication modalities. Appropriate use of TC requires individualized communication strategies to meet each child's abilities and needs in a variety of isolated and combined communication situations. In a setting where TC is being appropriately utilized, it may, therefore, mean selecting individualized communication strategies for each child in the classroom. While for one child the use of manual communication may be necessary all or most of the time, for another child the use of manual cues may be appropriate only for reinforcement and clarification purposes.

A TC program presents a challenging environment for auditory development since "an environment in which all information can be obtained visually is not conducive to the development of auditory skills" (Boothroyd, 1970, p. 4). For audition to become a useful, active part of a student's communication patterns, opportunities for the use and development of audition must occur on an ongoing basis in the classroom. In a TC environment, however, teachers often come from training programs representing a variety of communication philosophies. Admittedly, many teachers feel unqualified in the areas of auditory training in general and, more specifically, in the area of auditory development in a setting where manual communication is also utilized. In addition, students with varying degrees of auditory functioning are often placed in the same classroom. Even for teachers who are comfortable with auditory training strategies, the successful implementation of appropriate strategies in such a classroom is a challenge.

At KDES a need emerged to focus on teacher training in understanding a structure and sequence to auditory development and integrating auditory skill development into the classroom routine. To address this need audiologists, teachers, and speech-language pathologists from Kendall and other schools met to discuss these aspects. The KDES Auditory Skill Development Guide (Guide) evolved from the aforementioned meeting. The Guide, currently being revised, is in its early stages of implementation at KDES. The aim of the Guide is to help teachers and others working with hearing-impaired students in a TC environment: (a) understand a structure and sequence to auditory development, (b) develop a child's auditory abilities in relation to this sequence, (c) set realistic goals for auditory development, and (d) find appropriate strategies and materials to implement goals.

KDES OVERVIEW

KDES is a program for children ages birth through fifteen with moderate through profound sensorineural losses. A parent-infant home-visit program is available for children ages birth through two years. The day program is divided into four instructional departments: preschool, primary, elementary, and middle school. A speech-language pathologist is housed within each department. A closely monitored mainstreaming program is also part of Kendall School.

Two audiologists and one electronics technician are available on a full-time basis to manage the audiological needs of KDES students. The audiologists are part of a larger network of support-service personnel including psychologists, counselors, social workers, nurses, occupational therapists, and diagnostic/prescriptive teachers who team to meet the needs of students enrolled in the KDES program. The role of the audiologist at KDES is an active one involving ongoing routine evaluation, hearing aid monitoring, coordination of an Ear-Nose-Throat (ENT) screening and treatment clinic, and auditory habilitation. The role of the audiologist in habilitation at KDES is primarily that of a resource person. Responsibilities include identifying a student's auditory functioning skills; imparting this information to persons working with the student (teachers, speech-language pathologists, and parents); coordinating and monitoring goal setting in the area of auditory development; and suggesting and demonstrating materials, strategies, and activities to implement the goals. The responsibility for direct implementation of auditory skill development at KDES, however, belongs to the classroom teacher.

OVERVIEW OF GUIDE

The KDES Auditory Skill Development Guide is designed as an information booklet. It is intended for use by teachers and parents with resource assistance by an audiologist or speech-language pathologist. Already available to teachers were numerous volumes of auditory training activities. These activities, however, seemed sufficient only in helping teachers determine the content of auditory training exclusive of the rationale, procedures, or sequence. For auditory skill development to be a viable, integrated part of routine teaching strategies, it is necessary for teachers to be trained in the procedures, rationale, and sequence so that the content will emerge more naturally. The contents and function of the following sections of the Guide will be discussed below.

Philosophy

The section of the Guide which addresses the philosophy of TC provides a foundation for understanding a sequence for auditory skill development. This section of the Guide explains the following three areas which are integral

to appropriate implementation of auditory skill development in a TC setting:
(a) the nature of auditory training, (b) variables that influence auditory development, and (c) the hierarchical nature of audition.

The first issue discussed is the nature of auditory training. The KDES Guide recommends that auditory skill development occur on an ongoing basis in the classroom with materials and language meaningful to the student. It tries to dispel the myth that auditory training is a set of isolated listening activities where a student is removed from the classroom to work with a specialist. The Guide does not imply that formal auditory training activities in a tutorial situation be completed daily. What it does imply, however, is that students be provided with ongoing opportunities to use residual hearing and that situations be structured to promote development of audition. Individual tutoring or drill activities designed to train a specific auditory skill are viewed as important; however, they are not the only strategies used to develop audition. The Guide stresses that when isolated activities are utilized they be meaningful to the student and integrated into the natural environment. While these concepts may seem obvious when considering auditory skill development in general, they are not obvious when considering auditory skill development in the context of a TC setting. The structuring of situations conducive to the use and development of audition will emerge naturally in a completely auditory environment; however, this process requires attention and planning in a TC setting.

Variables in the TC environment that influence sound perception are discussed in the second part of the philosophy section. Understanding of and attention to these variables is central to the structuring of an appropriate environment for the development of audition in a TC setting. Two types of variables are discussed in the Guide; namely, stimulus-related and environment-related variables. The following are described as stimulus-related variables:

- 1. Meaningfulness of stimuli
- 2. Familiarity with material
- 3. Size of response set
- 4. Content of response set
- 5. Limitations of grammar and syntax
- 6. Intensity of presentation
- 7. Rate of presentation
- 8. Redundancy

Environment-related variables include:

- 1. Amplification
- 2. Signal-to-noise ratio
- 3. Distance from sound source
- 4. Availability of speechreading cues
- 5. Availability of manual cues
- 6. Contextual support

While all of the above variables are influential in auditory skill development for children with a significant hearing loss, the availability of manual cues becomes one of the most influential factors to monitor in providing appropriate opportunities for a child to develop audition in a TC setting. By stressing how and when to use manual cues, the Guide assists educators in a TC environment to gain better understanding of auditory skill development strategies.

The hierarchical nature of audition is discussed in the third part of the philosophy section. This section includes the terminology and definitions of four levels of auditory functioning which are essentially hierarchical in nature. These terms are used throughout the Guide and are integral to describing a student's auditory abilities and potential. The auditory functioning hierarchy chosen for use in this Guide is based on terminology and definitions outlined by Erber. The hierarchy utilized is as follows:

- Detection is the ability to be aware of the presence or absence of sound.
 A detection response task requires a child to indicate only whether there is sound or no sound.
- Discrimination is the ability to perceive similarities and differences among two or more auditory stimuli. A discrimination response task requires a child to indicate if two or more sounds are perceived as the same or different.
- Recognition is the ability to identify a direct representation of an auditory stimulus. A recognition response task requires a child to label a sound by pointing, signing, writing, repeating, or drawing.
- 4. Comprehension is the ability to respond appropriately based on an auditory stimulus. A comprehension response task usually takes the form of following commands and answering questions.

Goal Setting

The process of goal setting in the area of auditory skill development at KDES is coordinated by the audiologist and incorporates the following components:

1. Formal² and informal³ audiologic evaluation

¹The terminology and definitions regarding the hierarchical nature of audition used throughout the KDES Guide are a modification of terms and definitions detailed by Norman Erber, Research Audiologist, Central Institute for the Deaf, while meeting at KDES for the initial development phase of the Guide during the Summer of 1979. Complete definitions are outlined by Erber (1977, p. 175).

²Formal audiologic evaluation includes appropriate tests as necessary from the following test

TAC - Test of Auditory Comprehension (Office of Los Angeles County Public Schools, 1976) Available from: Foreworks; P.O. Box 9747; North Hollywood, CA 91609.

- 2. Classroom observation by speech-language pathologist and teacher
- 3. Preliminary outlining of a student's auditory functioning on appropriate checklists and profile forms (recorded by the audiologist)
- Meeting of teacher, audiologist, and speech-language pathologist to discuss auditory functioning and to agree on appropriate goals

Depending on the age and auditory functioning abilities of each student, appropriate goals will be chosen from the following areas of the Guide: (a) Hearing Aid Use, (b) Readiness Skills for Listening Activities, and (c) Comprehension of Meaningful Auditory Information. The contents and functions of these goal-setting areas are described below.

Hearing aid use. Each student's hearing aid use skills are documented on a checklist (see Appendix A). The list is essentially hierarchical in nature, ranging from basic skills ("the child inserts earmolds with guidance"), to higher level skills ("the child knows battery size specific to her/his hearing aid"). Based on the needs of each student, appropriate goals are set from the items on the checklist.

Readiness skills for listening activities. This second area of goal setting applies to those students who have not yet established a consistent, conditioned response to sound (e.g., consistent localization response, dropping a block in a bucket, etc.). Two checklists were designed to plot the auditory functioning of a student who falls into this category. Checklist A in Appendix B is intended for the purpose of recording a child's spontaneous responses to sound. The completed checklist is used for providing parents and teachers with practical recommendations for structuring a meaningful auditory environment for their child.

Checklist B shown in Appendix C constitutes an outline of the major steps used in teaching a conditioned response to sound. A student's current level of functioning can be noted and appropriate goals set based on these checklist items. Establishing a conditioned response to sound provides the basis for structured listening activities including audiologic evaluation.

^{2.} PBK - Phonetically Balanced Word Lists - Kindergarten (Haskins, 1949).

WIPI - Word Intelligibility by Picture Identification (Ross & Lerman, 1971). Available from: Stanwix House, Inc.; 3020 Charters Ave.; Pittsburgh, PA 15204.

NU-CHIPS - Northwestern University Children's Perception of Speech (Elliot & Katz, 1980). Available from: Auditec of St. Louis, 402 Pasadena Ave.; St. Louis, MO 63119.

^{5.} MPTD - Monosyllabic Picture Test of Discrimination (Developed for KDES use).

^{6.} Same-Different Spondee Test (Developed for KDES use).

SERT - Sound Effects Recognition Test (Finitzo-Hieber, Matkin, Cherow, & Gerling, 1977). Available from: Auditec of St. Louis; 402 Pasadena Ave.; St. Louis, MO 63119.

³Informal audiological evaluation at KDES includes assessment of the following:

^{1.} Auditory vs. auditory/visual reception

^{2.} Open-set vs. closed-set reception

^{3.} Comprehension of familiar phrases (KDES Lists)

^{4.} Comprehension of short, connected passages

Comprehension of meaningful auditory information. This section of the Guide, wherein therapeutic goals are set forth, applies to students who demonstrate a conditioned response to sound. Eight goals are outlined that relate to auditory comprehension of speech and nonspeech stimuli (e.g., nonlinguistic sounds, familiar phrases, connected passages). An auditory profile (see Appendix D) is used to chart a student's auditory functioning abilities. The information reflected in the chart is used in establishing therapy goals. Goals are set in one or more of the areas after considering each student's current and potential needs. Communication functioning is also measured using combined auditory/visual (speechreading) cues. When appropriate, separate goals are established for combined auditory/speechreading skills.

For illustrative purposes, the auditory profiles for two students are presented in Figures 1 and 2. Both students are 12 years old, and have nearly identical severe-to-profound hearing losses.

Using the PBK word list (Haskins, 1949), a standard clinical test of discrimination ability, both students scored 0% correct indicating poor discrimination ability. On another clinical tool, the Word Intelligibility by Picture Identification (WIPI) (Ross & Lerman, 1971) task, student A and student B scored 52% and 60% correct (aided), respectively. Compared to the PBK

			Communk	cation Profile —	Auditory			
				Deg	ree of Loss			
Name: Student	A			Right □ mild	Le C		Key to profile:	
Age: 12				☐ moderal		_	+ has si	
School Year: 19	980-1981			☐ moderat		_	* develo	ol have skill ping skill
Classroom Teach	er: Ms. X			Severe SS severe-	orefound D	_	SP with s	peechreading
Hearing aid use g	oals completed:	Yes	No _X_	profoun		_		
	Nonlinguistic Sounds	Suprasegmental Features	Familiar Phrases	1 Critical Element	2 Critical Elements	4 Critical Elements	Connected Passages	Conversation
Detection	+	+	+	+	+	+	+	+
Discrimination	+	+	+	+	* /SP+	- /SP+	- /SP*	-
Identification	+	><	+	* /SP+	- /SP+	- /SP*	- /SP~	-
Comprehension	+	><	* /SP+	* /SP+	- /SP+	- /SP* *	- /SP-	-
is unable to id	entify words or phrases	closed sets. With an open- through audition alone. Wit militar phrases from an ope	h speechrezdin					

Figure 1. Auditory profile for student A.

scores, these results show some measurable discrimination ability but yield no significant difference between the two students. Using the typical descriptive terms associated with this test, both students demonstrate "fair" discrimination ability. In-depth auditory functioning evaluation, however, yields the following auditory profiles, revealing striking differences in their ability to comprehend auditory information.

Using auditory cues alone, student A is able to identify most familiar phrases and is beginning to show success in identifying simple vocabulary words. His success rate, however, is directly related to the vocabulary used and the size of the choice set. Using an open set, this student is not able to comprehend simple vocabulary words and familiar phrases through audition alone. The individual relies on the addition of speechreading cues for comprehension of words and most connected language.

			Communi	cation Profile —	Auditory			
					Degree of Loss	B		
Name: Student	В			Right □ m	id	Left	Key to profile:	
Age: 12					oderale	<u> </u>		s skill es not have skill
School Year: 1	980-1981				oderate-severe		• de	velaping skill th speechreading
Classroom Teach	ver: Ms. Y				vere-prolound	X	Sr un	iii speazinearing
Hearing ald use	goals completed:	Yes X	No	pr	olound			
	Nonlinguistic Sounds	Suprasegmental Features	Familier Phrases	1 Critical Element	2 Critical Elements	4 Critical Elements	Connected Passages	Conversation
Detection	+	+	+	+	+	+	+	+
Discrimination	+	+	+	+	+	+	•	+
Identification		$>\!<$	+	+	+ "	+	* /SP+	* /SP+
Comprehension	+	> <	+	+	+	+	* /SP+	* /SP*
	lory tests were performed and open-choice	rmed using a closed sets	set. Auditory/visual il					

Figure 2. Auditory profile for student B.

Student B also cannot correctly identify words from an open set using auditory cues alone (0% correct on PBK word list). However, with prior knowledge of what to listen for (closed set conditions), he can consistently identify complex phrases through audition alone. When speechreading cues

are added, this student demonstrates comprehension of stories, even with no prior knowledge of what to listen for. He is also able to participate in short, simple conversations by utilizing combined auditory and speechreading cues.

The auditory profiles for these two students illustrate the major differences that can be uncovered when using an in-depth auditory functioning evaluation. Accurate representation of auditory potential is essential for the goal-setting process.

ACTIVITIES REFERENCE SECTION

The purpose of this section of the Guide is to assist TC educators in locating ideas for implementing auditory skill development in the classroom. This section provides references to, as well as summaries of, published activities and activities developed by KDES teachers. Activity references and their summaries are categorized according to the goal-setting areas outlined in the KDES Guide.

IMPLEMENTATION STRATEGIES

The early implementation efforts of the Auditory Skill Development Guide in the KDES classroom have benefited from a close working relationship between the classroom teacher and the audiologist. The audiologist has been instrumental not only in the goal-setting process but in suggesting and demonstrating materials and strategies for use in the classroom. Since beginning implementation of this Guide during Fall 1979, increased student awareness of hearing aids as well as increased teacher awareness of student needs in the area of auditory skill development have been demonstrated.

Increased student awareness in the area of care and use of hearing aids has emerged following the integration of hearing aid awareness classes into the school program of some of the older students. The hearing aid awareness class is currently taught by the audiologist and is directed toward the goals outlined in the Hearing Aid Use Section of the Guide. This unit addresses such topics as: (a) hearing aid brand name, model number, and battery size; (b) proper earmold care; (c) hearing aid components and how they work; and (d) do's and don'ts of hearing aid care. The unit, concluding with a trip to a hearing aid dealer, not only helps the student to learn specific hearing aid use skills but also teaches important skills related to being an educated consumer.

Increased student responsibility for their hearing aids has been dramatically improved through implementation of a reinforcement system. With this system, points are deducted for loss/breakage of hearing aids, and points are earned for maintaining aids in proper working order. Prizes are earned at the end of a specified time period if a child has accumulated a designated number of points. Table 1 illustrates the influence of this system on increased student responsibility for their aids. The table summarizes the number of referrals to

Table 1	
Hearing Aid Loss/Breakage	Referrals
for Elementary Department	Students

Month	Number of Referrals (1979-80)	Number of Referrals (1980-81)	Percent Decrease in Referrals
November	12	4	67%
December	8	7	13%
January	14	4	71%
February	17	6	65%
Four-month			
total	51	21	59 %
Monthly average	12.75	5.25	59%
		nts in Department (1979-80) nts in Department (1980-81)	

the KDES hearing aid technician during a four-month period prior to initiation of the reinforcement system and for a four-month period during use of the system. As the table indicates, the occurrences of loss/breakage decreased an average of 59%.

Increased teacher understanding of auditory skill development in a TC environment has been accomplished through ongoing one-to-one contact between the audiologist and teachers. Individual rather than group in-service training has been most successful. The one-to-one contact provides opportunities for teachers to ask questions concerning their individual students, as well as discuss strategies specific to their classroom. A close working relationship between the audiologist and teacher also allows for ongoing discussion concerning the appropriateness of strategies being used with a child. Demonstration teaching by the audiologist has been well received by teachers at KDES as a means for understanding the philosophy of auditory skill development.

FUTURE DIRECTIONS

The concept of a communication laboratory is currently being discussed at KDES. The laboratory could serve many purposes, including: (a) a screening and assessment center for communication skills, (b) a working center for a child to concentrate on development of isolated or combined communication skills, (c) a centralized location for communication-related teaching materials, (d) a location for teachers and parents to view videotapes demonstrating

the implementation of various communication strategies, and (e) a telecommunications training center. The communication laboratory has the potential of providing assessment and activities for all modes of communication, not audition alone.

SUMMARY

While auditory skill development in a TC environment is both complex and challenging, a practical rationale and sequence for such development makes this issue approachable. The KDES Guide describes a rationale and sequence which is proving successful in training TC educators in methods to effectively integrate auditory skill development in their classrooms. Even in its early stages of implementation, teachers are beginning to demonstrate a working knowledge of the principles detailed in the guide and are becoming more independent in utilizing it effectively. Given that teachers are knowledgeable in how to appropriately integrate auditory development, TC can be used effectively to encourage rather than suppress the development of audition.

REFERENCES

- Boothroyd, A. (Ed.). Auditory training handbook. Northhampton, Ma.: Clarke School for the Deaf, 1970.
- Elliot, L., & Katz, D. Northwestern University children's perception of speech. St. Louis, Mo.: Auditec of St. Louis, 1980.
- Erber, N. Evaluating speech perception abilities in hearing impaired children. In Fred Bess (Ed.), Childhood deafness: Causation, assessment and management. New York, N.Y.: Grune & Stratton, Inc., 1977.
- Finitzo-Hieber, T., Matkin, N., Cherow, E., & Gerling, I. Sound effects recognition test. St. Louis, Mo.: Auditec of St. Louis, 1977.
- Haskins, H. A phonetically balanced test of speech discrimination for children. Unpublished masters thesis, Northwestern University, 1949.
- Kendall Demonstration Elementary School. Same-different spondee test. Unpublished.
- Kendall Demonstration Elementary School. Monosyllabic picture test of discrimination. Unpublished.
- Los Angeles County Public Schools. Test of auditory comprehension. Hollywood, Ca.: Foreworks, 1976.
- Pahz, J., & Pahz, C. Total communication: The meaning behind the movement to expand educational opportunities for deaf children. New York, N.Y.: Charles Thomas, 1978.
- Ross, M., & Lerman, J. Word intelligibility by picture identification. Pittsburgh, Pa.: Stanwix House, Inc., 1971.

APPENDIX A

HEARING AID USE

Name:	Key: + has skill
Age:	
School Year:	★ emerging skill
,	NA - not applicable
1. The child wears the hearing aid for this	rty minutes to one hour daily.
2. The child wears the hearing aid for one	e to three hours daily.
3. The child wears the hearing aid throug	shout most of the day.
4. The child inserts earmold with guidance	ce.
5. The child inserts earmold without help	ı .
6. The child takes off hearing aid approp	riately.
7. The child puts hearing aid into harness	s (body aid only).
8. The child puts on harness (body aid or	nly).
9. The child places hearing aid on ear (ea	r level aid only).
10. The child tests hearing aid battery with	h minimal assistance.
11. The child tests hearing aid battery with	h no assistance.
12. The child determines when hearing aid	battery is dead.
13. The child changes the hearing aid batte	ery.
14. The child sets the hearing aid volume to	to a predesignated level.
15. The child appropriately manages the o	on/off control of the hearing aid.
16. The child is aware of the need to clean	n earmold.
17. The child informs adult when hearing	aid is not working.
18. The child wears hearing aid to school	daily.
19. The child knows brand name and mod	del number of her/his hearing aid.
20. The child knows battery size specific to	o her/his hearing aid.
nents: Goals: _	

APPENDIX B

CHECKLIST A: SPONTANEOUS RESPONSES TO SOUND

Name:	Key:
Age:	displays believed
School Year:	- does not display behavior
l. The child demonstrates the following responses to loud sounds:	quiets turns head startles searches blinks other
2. The child demonstrates the following responses to soft sounds:	quiets turns head startles searches blinks other
 The child communicates an interest in environmental auditory stimuli, e.g., says, "I heard that," points to ears, demonstrates excitement or interest, localizes. 	smiles
4. The child communicates an interest in speech stimuli, e.g., says, "I heard that," points to ears, demonstrates excitement or interest, localizes.	
5. The child requests amplification or put the hearing aid on without assistance.	<u></u>
The child protests when the hearing aid is removed.	d
7. The child shows enjoyment of toys/ob jects which produce sound.	<u></u>
8. The child requests activities which concern listening.	
The child responds appropriately to her/his name.	
Comments:	Recommendations:

APPENDIX C

CHECKLIST B: DEVELOPMENT OF A CONDITIONED RESPONSE

Name: _		Кеу:	+ has skill
Age:			- does not have skill
School Yo	ear:		★ emerging skill
1	. The child cooperates for conditioning a	ctivities.	
2.	. With simultaneous modeling, the child panied by visual or tactile cues.	responds to an aud	ditory stimulus accom-
3.	With simultaneous modeling, the child r	responds to an audit	ory stimulus.
4.	With guidance (i.e., assisting child to cla child responds to an auditory stimulus.	ap hands, drop a blo	ck in a bucket, etc) the
5.	With intermittent guidance, the child re-	sponds to an audito	ry stimulus.
6.	. The child responds consistently to an au	aditory stimulus with	nout additional cues.
NOTE:	Refer to the Activity Reference Section sponse to Sound.	- Methods for Train	ning a Conditioned Re-
Comment	ds: Go	oals:	

APPENDIX D

FORM FOR RECORDING PROFILE

Key to profile:
+ has skill
- does not have skill

* developing skill
SP with speechreading

	Nonlinguistic Sounds	Suprasegmental Features	Familiar Phrases	1 Critical Element	2 Critical Elements	4 Critical Elements	Connected Passages	Familiar 1 Critical 2 Critical 4 Critical Connected Conversation Phrases Element Elements Elements
Detection								
Discrimination								
Identification		\bigvee						
Comprehension		\bigvee						