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# Development of a Teacher Needs Survey to Support Students With Auditory Impairments

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A "needs" survey was developed for classroom teachers who have students with hearing disabilities including auditory processing disorders. The purpose was to provide a vehicle for teachers to communicate needed support to school speech-language pathologists and/or educational audiologists. Five focus groups, including speech-language pathologists, educational audiologists and a deaf education teacher, contributed to development of the survey. The survey was sent to 50 classroom teachers who have or have had a student with a documented auditory impairment in their classroom. A follow-up interview was conducted with participating teachers to assess the utility of the survey. Results indicated an overall rating of very good to excellent by all respondents. The "Teacher Needs Survey" appears to be successful in identifying and communicating the needs of teachers who have students with auditory impairments in their classrooms in a thorough, quick and simple format for the purpose of obtaining needed support.

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## Introduction

The passage of the Education for All Handicapped Children Act (PL 94-142) in 1975 opened the door for children with documented hearing impairment and auditory processing disorders to be educated in typical public school classrooms. As defined by this law, children with disabilities must be educated in the least restrictive environment which, for deaf and hard of hearing children or those with auditory processing disorders, is often the regular school classroom. In school age children it is estimated that the prevalence of hearing loss ranges from 16 to 50 per 1,000 (Niskar, Kieszak, Holmes, Estaban, Rubin & Brody, 1998; Bess, Dodd-Murphy, & Parker, 1998). Since 1985, the number of students with auditory impairments in the regular classroom has increased (Johnson, 2000). According to the United States Department of Education report of 2000, 84% of children with hearing impairments are served in the regular classroom for all or part of the school day. The majority of these children are fit with amplification (Lass, Woodford, & Pannbacker, 1989).

Changes in Special Education. In the 1990's, special education of children with disabilities embraced the inclusion movement (Johnson, Benson, & Seaton, 1997). The philosophy of inclusion accepts the importance of including all children with disabilities in academic and social activities. Children with disabilities are to be viewed as equal members of the typical classroom to be separated only when therapies or instruction can not occur in the regular classroom. Classroom teachers find themselves with children who present with a myriad of disabilities in their classrooms, sometimes for the entire school day. This would include the child with hearing loss or auditory processing disorders.

In the schools, the front line service provider for these teachers is most often the speech-language pathologist (SLP) (Lass et al., 1989). As a group, SLPs do not report having the necessary background, experience or expertise to support the

teachers. Surveys conducted in 1987-1989 asking SLPs and teachers to report their "knowledge of, exposure to and attitudes toward hearing aids and hearing aid wearers" show that although the former group have somewhat better ratings, both groups admit deficiencies in these areas (Lass, Tecca, & Woodford, 1987; Lass et al., 1989; Martin, Bernstein, Daly & Cody, 1988). Additionally, in a 1985 survey, Lass, Carlin and Woodford found some deficiencies in "knowledge of and exposure to hearing loss" in a group of special education teachers.

Limited Teacher Support. It is unlikely for most school districts to employ their own educational audiologist. In fact, most educational audiologists serve a large geographical area including many school districts (American-Speech-Language-Hearing Association, 1993; Johnson, 2000). SLPs in the local schools rely on educational audiologists to provide them with resources and information and to support the classroom teacher as well. This support can take the form of a consultation or a brief inservice to familiarize the teacher about hearing disability in general and its implications for the identified student in particular. The educational audiologist on average is reported to spend 10% or less of the workweek fulfilling consultative duties (Blair, Eudaly, & Benson, 1999). Some investigators (Strudthoff & Blair, 1998) have concluded that the current delivery system for imparting knowledge by audiologists is grossly inadequate, usually taking the form of the written report or school based meeting by personnel who may or may not have the required knowledge base.

It has been established that the SLP and teacher in the public school admit to being ill prepared to address the special needs of deaf and hard of hearing children and those with auditory processing disorders (Lass et al., 1985; Lass et al., 1987; Lass et al., 1989; Martin et al., 1988). To date, it is reported that the educational audiologist does not provide efficient and effective service delivery to the SLP and the teachers in the public schools (Blair et al., 1988).



The following project was conducted to develop a "needs survey" to be issued by SLPs and/or educational audiologists to teachers in public schools who have students presenting with documented auditory challenges including hearing loss and auditory processing disorders. The "Teacher Needs Survey: Support for Students with Auditory Impairments" (See Appendix) will enable teachers to communicate needed support to the SLP and/or the educational audiologist in a quick, simple and thorough format. This tool will promote efficient and effective delivery service from the educational audiologist to the SLP and the classroom teacher.

## Methods

### Participants

This project was conducted in two phases with different participant criteria for each phase. Phase One entailed the development of the survey. Participants in this phase were chosen from a group of professionals in the schools who had the responsibility of supporting and educating classroom teachers regarding the needs of the deaf and hard of students and those with auditory processing disorders in their classrooms. These professionals included school speech-language pathologists (SLP), educational audiologists and deaf education teachers. The participants in Phase One were limited to this group as it is these professionals who have the most knowledge about the special needs of hearing impaired students. They have first hand knowledge of the gaps in service delivery, the topic areas most necessary to support the teachers and finally the understanding of the implications a hearing impairment creates in the classroom. More SLPs were asked to participate than any other group as they are usual service providers in the public schools and they are reportedly ill prepared to fulfill this role (Lass et. al., 1989). Phase Two involved the survey review process. Only classroom teachers who had taught students with auditory challenges were invited to participate. As the main consumer of this survey, it was their opinions that determined the value of and the thoroughness of the survey, as well as the ease of its use.

In Phase One, 27 school professionals (all female) served as members in one of five focus groups: 21 speech-language pathologists (SLPs), five educational audiologists, and one deaf educator. Participants had a range of approximately one to 22 years of experience in the school setting and had worked with diverse school populations. All of the SLPs and the deaf educator worked in suburban school districts that are part of a regional consortium for deaf and hard of hearing students on the east side of Cuyahoga county in Ohio. The educational audiologists represented different regions in the state of Ohio. All served students with hearing impairments or auditory processing disorders. The majority of the SLPs had a small number of children with auditory challenges on their caseloads. Two of the SLPs had a large deaf and hard of hearing caseload. The deaf educator worked exclusively with deaf and hard of hearing children for half the school day and team-taught with a regular classroom teacher providing an inclusive educational setting for her students during the afternoons.

The five focus groups had the following distribution of school professionals:

- Group 1: 4 SLPs; 1 deaf education teacher
- Group 2: 5 educational audiologists
- Group 3: 4 SLPs
- Group 4: 3 SLPs
- Group 5: 10 SLPs

Phase Two included the involvement of sixteen regular education teachers (all female). These sixteen participants taught students ranging in age from 3 years to 18 years, across six school districts. Two of these participants taught preschoolers with special needs while the remaining taught in the typical public school classroom. Ten of the respondents worked in a school district that had the consortium day school for deaf and hard of hearing youngsters.

### Procedures

**Communication with school administrators:** Letters describing this project were sent to directors of pupil services and school principals in prospective participating school districts. The letter described the intent of the survey, the anticipated time commitment of individual staff members, appreciation for encouraging and supporting staff members to participate in the project and the opportunity to refuse participation in this project.

**Participant recruitment:** Members of the focus groups were recruited in the following ways: formal letter, personal communication at school, telephone contact, or e-mail. This was dependent on the level of familiarity, the frequency of contact during the workweek and the usual communication mode with the prospective focus group member. In most instances contacts were made with one group participant who would in turn contact others within that school district.

In addition, five educational audiologists were recruited as members of an impromptu focus group during attendance at an annual state meeting. In anticipation of this likelihood all materials were ready to proceed with a focus group that matched those that were held with prior planning.

For Phase Two, focus group members nominated fifty regular education teachers as potential reviewers of the finalized survey. These fifty teachers were sent materials and a solicitation for input (as described below). Twenty teachers responded; sixteen agreed to participate in this review.

**Phase One:** All focus groups met during an extended lunch hour that was authorized by a school administrator. As a gesture of appreciation for participation, the investigator provided lunch. Prior to the meeting, the agenda, sample survey and subject consent form was sent to each participant for review.

The "Teacher Needs Survey: Support for Students with Auditory Impairments" (described below) was edited during five focus group sessions. These sessions involved a highly structured, organized process that enabled participants to contribute openly with limited preparation or effort (Brader & Rossi, 1999; Davis, Bamford, Wilson, Ramkalawan, Forshaw, & Wright, 1997). Following each focus group meeting, modifications to the survey were made based on focus group outcomes. The survey continued to evolve with the comments generated from subsequent focus groups.



**Phase Two:** Following the fifth focus group's meeting, the final version of the survey (Appendix) was mailed to 50 regular education teachers, as mentioned earlier, with a descriptive cover letter, subject consent form and a self-addressed, stamped return envelope.

All 50 teachers were known to have experience teaching students with auditory challenges in their typical classrooms. As stated earlier participating SLPs from Phase One provided teachers' names with school addresses. Six teachers from one school district were not permitted to participate due to administrative restrictions. Four surveys were excluded due to incomplete information or the expressed desire of the respondent not to participate. Of the remaining 40 surveys, 16 (40%) fulfilled the requirements for inclusion in this project. The surveys were completed, in full, with names and contact numbers (fax, email, phone etc.) and follow-up interviews were conducted.

The follow-up interview was conducted at the respondent's preference in one of the following ways; email, voice mail, fax, telephone conversation, or in-person communication. This interview questioned the utility of the survey and the ease of its use.

The interview had six questions. Three questions regarding the clarity and utility of the survey asked for a yes/no or I don't know response. One question asked for an estimation of the amount of time that it took to complete the survey. One question asked for additions to the survey. The final question asked each respondent to assign an overall rating to the survey using a 5-point scale ranging from excellent to very poor. Each participant was sent a thank-you note upon conclusion of the interview.

**Instrument: Survey Development**

The survey was developed in stages. The author developed the first draft from a review of the literature and professional experience. Particular attention was given to format, design and content of previous surveys used for related information gathering. Survey categories were chosen based on a review of the literature as well as the author's extensive professional experience providing inservice training (in the educational setting) to SLPs, deaf educators, parents, classroom teachers, special education teachers and school administrators. Areas addressed in the survey included: introduction to amplification including hearing aid monitoring and management, implications of hearing loss on the communication process, facts regarding the student's particular hearing problem, strategies to improve room acoustics and overall communication and the legal aspects according to special education legislation. The original survey content did not greatly differ from the final survey. Modifications mostly involved improvements in survey instructions and explanations, clarity of survey topics and items, and survey organization. The impact of an auditory disorder to social/emotional development was added. Provisions were made allowing the respondents to add personal comments and request additional support. The final

survey consisted of 18 questions in a forced-choice format which included: very knowledgeable, somewhat knowledgeable, not knowledgeable, not applicable and inservice desired. The survey was divided into four sections including:

- Hearing Loss/Auditory Processing Disorder
- Technology
- Classroom Management
- Legal Issues

Each section had a space for individual comments and questions. At the end of the survey, the respondent is able to request a classroom observation to assess room acoustics, communication dynamics and technology use in the classroom.

**Data Analysis**

Post-survey interview responses from the 16 respondents were reviewed. Each response for the six interview questions was tallied. Analysis was made regarding the intentions of the survey, the clarity of directions, the ease of use, the time required for completion and an overall subjective rating.

**Results**

The purpose of this study was to develop a survey to assess the needs of teachers working in the inclusive (mainstream) educational environment with students with hearing impairments including auditory processing disorders. This section will discuss responses to the follow-up interview regarding views of the utility and value of the "Teacher Needs Survey: Support for Student with Auditory Impairments".

All participants responded affirmatively to questions 1 through 3: that is, they reported that 1) the intent of the survey was clearly stated, 2) the directions were easy to understand and 3) the format was easy to navigate. Question 4 asked for a time estimate in completing this survey.

As illustrated in Figure 1, the estimated time for survey completion ranged from 2 minutes to 15 minutes; the median was 10 minutes, and the mean response was 6.9 minutes.

**Figure 1. Time in minutes respondents estimated it took to complete the survey**

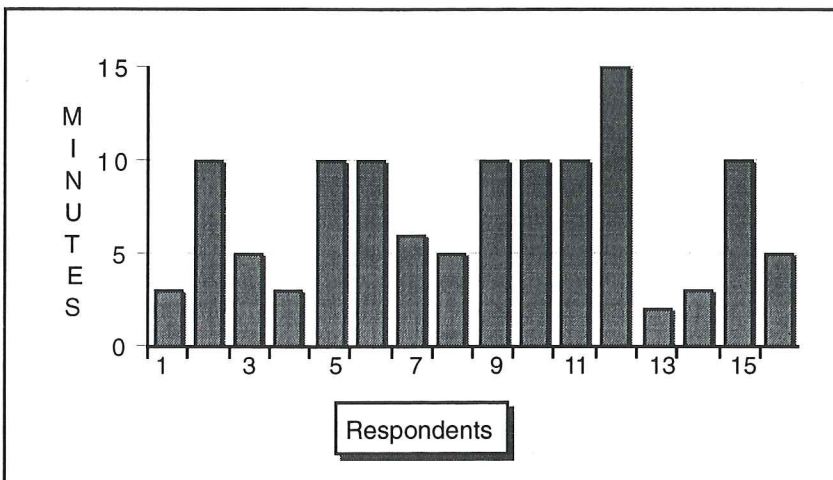




Figure 2. Survey rating scale..

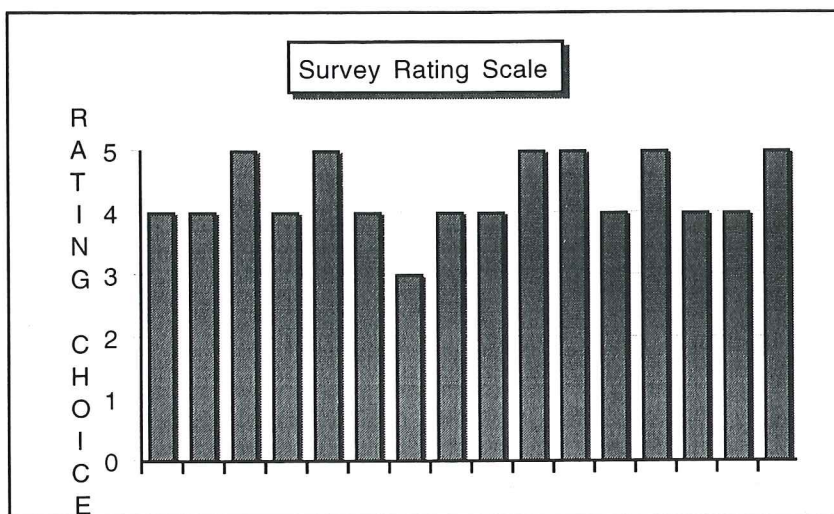
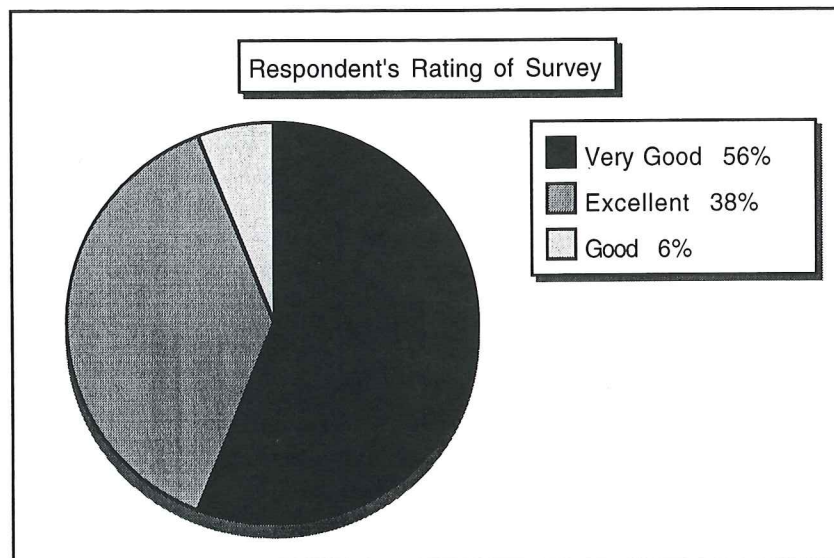


Figure 3. Responses to survey in percent.



Question 5 asked if anything should be included in the survey. Ten respondents said “no”, two wanted to know where to get help, one wanted more questions targeting children with multiple impairments, one wanted examples, one wanted more parent involvement and one wanted more questions targeting “classroom intentions”.

As depicted in Figures 2 and 3, the survey received an overall rating of excellent by 6 respondents, very good by 9 respondents and good by one respondent. Ninety-four percent of respondents found the survey to be excellent or very good. Six percent rated the survey good and 0% rated the survey poor or very poor.

**Discussion**

In this country’s public schools, increasing numbers of deaf and hard of hearing students and those with auditory processing

disorders are being educated in the regular classroom. Three laws, PL 101-476 (IDEA), PL 105-17 (IDEA amendment of 1997) and Section 504 (subpart D) of the Rehabilitation Act of 1973 protect the rights of hearing impaired children in all school related activities, both academic and non-academic. These laws provide stipulations that give all students the right to equal access to auditory information. This includes the provision of amplification devices including hearing aids and signal enhancement systems as well as the fitting, monitoring and management of these devices.

The classroom teacher is faced with the challenge of educating deaf and hard of hearing students and those with auditory processing disorders in the inclusive classroom setting. Encompassed in this challenge in accordance with the law is the daily monitoring and management of the student’s amplification system. Research has shown that although the teachers have a positive attitude towards having students with auditory disabilities in their classrooms (Luckner, 1991), they are not knowledgeable about those impairments and the ramifications on education or about amplification devices.

The purpose of this project was to develop a survey to assess the needs of teachers facing the challenge of teaching children who are deaf or hard of hearing or who have auditory processing disorders in the inclusive (mainstream) educational setting.

**Summary**

Survey respondents unanimously indicated that the survey goals were met. The survey is easy to understand, easy to navigate, relatively quick to complete, thorough in content, and overall is rated as very good to excellent. Based on these responses, it is anticipated that the “Teacher Needs Survey: Support for Students with Auditory Impairments” could provide classroom teachers with a vehicle to communicate needs to school speech/language pathologists and/or educational audiologists for the intent of receiving

support in an easy, quick and thorough format.

The purpose of this project was to develop a survey with a focus on survey utility and success. The returned completed surveys did offer valuable information regarding the respondents’ perceived knowledge and need in the area of childhood hearing impairment and subsequent implications in the educational arena. The 18 survey questions are categorized in areas including hearing impairment, technology, classroom management and legal issues. A review of the responses (N=16) indicates that teachers today continue to have a lack of knowledge in most areas with the greatest deficiencies in the areas of technology and legal issues. This is of concern as the teachers are legally obligated to manage auditory amplification systems and participate in the development and implementation of the education plan.

This survey could be used as a research tool to further

understand the deficiencies in teachers' knowledge regarding hearing impairments. This information could assist in education programming development at the college level and for continuing education. This could also assist educational audiologists in preparing school in-service training seminars and ultimately in the improvement of service delivery.

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## Teacher Needs Survey: Support For Students With Auditory Impairments

*To be issued by school speech/language pathologists (SLP) to teachers needing support with their education of deaf and hard of hearing students and those with auditory processing disorders. Completed surveys facilitate inservice development and training conducted by the SLP and/or the regional educational audiologist.*

**Please place a check mark by the statement that best describes your perceived knowledge and need. Add your questions/comments in the space under "other". Feel free to write comments in the margins. Return completed survey to your speech/language pathologist or school audiologist.**

<b>I Hearing Loss (HL) Auditory Processing Disorder (APD)</b>	Very Knowledgeable	Somewhat Knowledgeable	Not Knowledgeable	Not Applicable	Inservice Desired
Understanding (defining) the problem and related test results.					
How the HL/APD impacts listening in the classroom.					
How the HL/APD impacts listening in social situations.					
How the HL/APD impacts speech and language and social/emotional development					
Other Comments					
<b>II Technology</b>					
Types of hearing aids (HA). Benefits and limitations					
Cochlear Implants (CI)					
Audiological test procedure/instruments					
HA/ALD maintenance and trouble shooting					
Other Comments					

(continued)

## Development of a Teacher Needs Survey to Support Students With Auditory Impairments

<b>III Classroom management</b>	Very Knowledgeable	Somewhat Knowledgeable	Not Knowledgeable	Not Applicable	Inservice Desired
Strategies to improve room acoustics					
Strategies to repair communication: teacher-pupil/peer-peer					
Strategies to modify teaching					
Strategies to adapt materials including audio-visual equipment/computers					
Effective use of interpreter (sign language/oral/cued speech)					
Other Comments					
<b>IV Legal Issues</b>					
Model Policies and Procedures for ETR/IEP and 504 compliance					
American with Disabilities Act (ADA)					
IDEA/FAPE					
Daily record keeping for amplification use.					
Other/Comments					

I would like to schedule a classroom observation by the speech/language pathologist or educational audiologist to assess room acoustics, communication dynamics and technology use in my classroom.

Yes     No

Name \_\_\_\_\_ School \_\_\_\_\_

District \_\_\_\_\_ email \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

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