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Profile of North Carolina K–12 hearing-impaired students and their parents/caregivers

Whitener, Betty Chester, Ed.D.

The University of North Carolina at Greensboro, 1991

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PROFILE OF NORTH CAROLINA K-12 HEARING-IMPAIRED STUDENTS AND THEIR PARENTS/CAREGIVERS

by

Betty Chester Whitener

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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1991

Approved by

Elizabeth A. Bowles
Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The Universtiy of North Carolina at Greensboro.

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WHITENER, BETTY CHESTER, Ed.D. Profile of North Carolina K-12 Hearing-Impaired Students and Their Parents/Caregivers. (1991) Directed by Dr. Edgar H. Shroyer. 114 pages.

This study reports the findings of a survey conducted to create a profile of North Carolina hearing-impaired students and their parents or caregivers. A total of 1329 questionnaires were distributed through public and residential schools. Responses were received from 557 (42%) of the parents/caregivers and included 80 (86%) out of 93 counties identified in Certified Headcount for Special Education (1988) as having hearing-impaired students in North Carolina. Findings from the questionnaires included: personal information about parents or caregivers and their hearing-impaired students in North Carolina public and residential Schools for the Deaf. Also included were expectations the parents had for their hearing-impaired students, parental evaluations of support services and acknowledgement of outstanding features of programs and services for parents and their hearing-impaired children in North Carolina schools. Among the notable findings was the fact that 243 (43%) of the parents indicated that their hearing-impaired children were below or well below grade level in school, yet 381 (68%) indicated that they expect their hearing-impaired children to attend college. The findings provide an overview of hearing-impaired students in public and residential schools in North Carolina, as opposed to samples of national data concerning hearing-impaired students. The information should prove valuable to those working with hearing-impaired students in North Carolina and provide guidelines that will enable counties to provide maximum educational opportunities. It should serve

as impetus for additional research into hearing-impaired programs in North Carolina.

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My sincere appreciation goes to the parents and caregivers who so generously took time to complete and return the questionnaires for this study.

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Special appreciation goes my husband Paul, to my children Paula and Ethan, and to my mother, who have supported and encouraged me while forgiving my neglect of them. I dedicate this dissertation to them and to my first grandchild, Robbie Elizabeth Crowell, who has brought such joy to my life for the past 19 months.

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CHAPTER I

INTRODUCTION

Background of the Problem

The extent of the debate on the status of public schools that occurred during the 1980s was unprecedented in the history of education in the United States (Gross & Gross, 1985). Numerous reports by commissions, committees, and task forces at local, state, and national levels were published (Boyer, 1983; The National Commission on Excellence in Education, 1983). The education of hearing-impaired children and adolescents, who comprise the largest single population of school-age handicapped persons in the United States (Ross, Brackett, & Maxon, 1982), has been influenced by the educational reform movements (Paul & Quigley, 1990). The term hearing impairment is a generic term covering all degrees of hearing loss, regardless of when and how it was sustained. Within the past 25 years, two committees at the national level have evaluated the quality of education of hearing-impaired students in the United States. A committee within the Department of Health, Education, and Welfare (HEW) reported its findings in 1965 (Babbidge Committee Report), and more recently, Congress established the Commission of Education of the Deaf (CED) through the Education of the Deaf Act of 1986.

Although there was some progress in the period between the reports of these two national committees, the first few lines of the CED report (1988) to Congress state, "The present status of education for persons who are deaf in the United States is unsatisfactory. Unacceptably so. This is the primary and inescapable conclusion of the Commission of Education of the Deaf" (viii).

Cole (1988) stated:

> Without a systematic way to accumulate and increase knowledge about education . . . little change and improvement will actually occur. Only with good ongoing educational research can education have a recognized and growing base of knowledge. Such a knowledge base is the foundation of our profession, the source of our expertise as educators. As our knowledge grows we get better as a profession at educating each generation of students. (p. 4)

To advance and apply knowledge, it is important for researchers to provide an adequate description of the population under study (Paul and Quigley, 1990). The CED information on quality of education of hearing-impaired students in the report was reported collectively on a national basis rather than state by state by state.

A search for descriptive information on hearing-impaired students in the state of North Carolina revealed mainly quantitative data: number of students, ages, nationalities, and locations of educational facilities. Communications with members of the North Carolina Department of Public Instruction in Raleigh provided similar quantitative data. Both Odell Clanton, Student Information Management, and Helen Boyle, Consultant, Hearing and Visually Impaired Programs in 1989, stated that no qualitative information concerning hearing-impaired students in North Carolina is available on a statewide basis. The three superintendents of North Carolina Schools for the Deaf in 1989 - Rance Henderson, Western North Carolina; Ronald F. Wilson, Central North Carolina; and Elmer Dillingham, Eastern North Carolina- all concurred with the assessment by Boyle and Odell. The three superintendents eagerly offered suggestions as to the different kinds of information which might be valuable to school administrators. Art Mines, Executive Director of Beginnings for Parents of Hearing Impaired Children in Durham, North Carolina, also made suggestions regarding information which would be useful to programs and administrators concerned with educating hearing impaired students.

Paul and Quigley (1990) contend that to generalize about the education of hearing-impaired students, there needs to be at least agreement that the research and scholarly findings are based on samples drawn from the same population. Quigley and Kretschmer (1982) stated:

> Much of the confusion in research and practice in the education of deaf children arises from incomplete descriptions of the populations under consideration and from generalization of findings to dissimilar populations. (p. 5)

A search of the literature failed to identify any studies that provided complete descriptions of the hearing-impaired students in specific states; thus, qualitative information may not be available. The more specific the information is, both qualitative and quantitative, the better the opportunity to provide the best educational opportunities for hearing-impaired children. Based on existing research and personal communications with program administrators in North Carolina, there appears to be need for qualitative data which applies specifically to hearing-impaired students in North Carolina. Thus, the purpose of this study was to gather data from parents/caregivers of hearing-impaired children in public and residential schools throughout North Carolina and to develop a profile based on the findings.

Statement of the Problem

A search of the literature for information concerning the education of hearing-impaired students in North Carolina revealed mainly quantitative data: numbers and ages of students, location of educational facilities, and race (Certified Headcount for Special Education, 1988). Communications with members of the North Carolina State Department of Public Instruction in Raleigh added more quantitative information. As reported in the introduction, Helen Boyle, Consultant, Hearing and Visually Impaired Programs in 1989, and Odell Clanton, Student Information Manager, stated that little qualitative information regarding hearing-impaired students in North Carolina's educational programs is available and suggested that such information would certainly prove valuable. The three superintendents of North Carolina Schools for the Deaf concurred. Art Mines, Executive Director of Beginnings for Parents of Hearing Impaired Children, also made suggestions as to information which might be useful to those working with hearing-impaired children. The problem that exists is that most of the available research refers to hearing-impaired students and their parents/caregivers throughout the United States and may not be applicable to North Carolina. No literature was found regarding the hearing-impaired students and their parents/caregivers in North Carolina. There needs to be information characteristic of hearing impaired students and their parents/caregivers in North Carolina alone.

This data should assist parents and educators in North Carolina in their efforts to improve the programs and services available to hearing-impaired students in public and residential schools.

Purpose of the Study

The purpose of this study was to collect data to create a profile of parents of hearing-impaired students in North Carolina and of their hearing-impaired students in public and residential schools in North Carolina. Paul and Quigley (1990) contend that knowledge in education should be systematically acquired and applied, stating that to generalize about the education of hearing-impaired students, there needs to be at least agreement that the research and scholarly findings are based on samples drawn from the same population. Quigley and Kretschmer (1982) stated that much of the confusion in research and practice in the education of deaf children arises from incomplete descriptions of the populations under consideration and from generalizations of findings to dissimilar populations.

A few descriptive variables have been found to influence the educational achievement of hearing-impaired students: (1) age at onset of hearing loss; (2) degree of hearing impairment; (3) the hearing status, level of involvement, and communicative ability of the parents/caregivers; (4) intelligence; and (5) socioeconomic status. Few investigations provide complete descriptions of the hearing-impaired subjects in these terms (Paul & Quigley, 1990).

Findings show that emotional and psychological attitudes of parents/caregivers toward their hearing-impaired children have a significant impact on the educational achievement of the children (Meadow, 1980; Schlesinger & Meadow, 1976). Quigley and Paul (1990) note that a number of studies have shown that mothers treat their deaf children differently (1) from their other children who are hearing, (2) from deaf mothers with deaf children, and (3) from other hearing mothers with hearing children. They suggest that familial interaction is without doubt influential in educational success and that more research is needed in the area of familial interactions.

No literature was found to provide a current profile of North Carolina hearing-impaired students and their parents or caregivers. One logical source of information pertinent to education of hearing-impaired children is their parents or caregivers. Questionnaires directed to parents of children with hearing impairments could create a profile which will provide valuable quantitative and qualitative data. Such findings will assist educators in those schools in North Carolina that provide programs for hearing-impaired students in the provision of more satisfactory educational programs.

Use of Questionnaire Technique

The mailed questionnaire technique is used extensively in educational evaluation and research studies. The technique is well established as a way of collecting information (Lockhart 1984). According to Alreck and Settle (1985), there are many survey research projects that require mailing to special populations, including those with some particular condition or attribute. Nachmias and Nachmias (1987) point out that the mail questionnaire is regarded as an impersonal survey method but agree that under certain conditions and for a number of research purposes, an impersonal method of data collection might be found useful.

One advantage of the mail questionnaire is that it permits wider geographic contact with minimal cost. Cost, as well as laws protecting the privacy of individuals involved, sometimes makes interviewing prohibitive (Nachmias 1987). Nachmias and Nachmias also discuss other advantages of the mail questionnaire. They propose that it reduces biasing errors that might result from personal characteristics of interviewers and from variabilities in their skills. Also, the mail questionnaire offers greater anonymity to the participants and allows them more time to consider their answers or to consult documents or other people when necessary. Lockhart (1984) agrees that data collection from mailed questionnaires has several advantages over other forms of collection. He discusses two advantages: the data are collected at the respondents' convenience but within a prescribed time period, and the data can be copied and distributed to all prospective participants without modification.

Berdie, Anderson, and Niebuhr (1986) contend that when response rate may be seriously impaired without anonymity, the use of mail surveys is recommended.

A disadvantage of a mail questionnaire, according to Nachmias and Nachmias (1987), is that it is often difficult to obtain an adequate response rate. They report that for many mail surveys, the typical response rate is between 20 and 40 percent. Lockhart (1984) reports that the lowest percent of return in the studies he investigated was 35 percent. Nachmias and Nachmias (1987) report that there is some evidence that response rates on mail questionnaires have been declining.

Discussion on nonrespondents is necessary in conjunction with low response rate. Nachmias and Nachmias propose that researchers who use mail questionnaires almost always face the problem of how to estimate the effect the nonrespondents may have on their findings. Berdie, Anderson, and Niebuhr (1986) offer helpful thoughts on this subject. Their studies on whether low response rates actually do bias questionnaire data offer this argument:

> Most studies to determine if questionnaire respondents differ from nonrespondents have assumed that a continuum of bias exists from early respondents through late respondents to nonrespondents. This assumption has been questioned in research designed specifically to test it. (p. 17)

Clouding the issue according to Berdie, Anderson, and Niebuhr, is the question, "How do we know who are nonrespondents?" The authors explain:

> A nonrespondent typically has been defined as someone from whom no data are collected, whereas some researchers refuse to count someone as a respondent unless he or she answers each and every question on the questionnaire. More enlightened researchers have have concluded that it is much more useful to think about response rates in terms of individual items rather than questionnaires. This approach allows use of all data obtained even though some information comes from partially completed questionnaires. (p. 17)

They suggest that in certain studies there is little reason to assume that nonrespondents differ from respondents on dimensions relevant to the study.

Alreck and Settle (1985) contend that surveys, as any other kind of work, will inevitably contain mistakes, errors, and oversights along the way, but argue that " these are not reason to forego a survey project until it can be performed perfectly" (p. 8). They suggest:

> It is never advisable to denigrate or discard survey results simply because some small mistakes were made during the process. Minor errors and inadequacies should not be allowed to throw a dense shadow of doubt over the entire range of survey results. Rather, they should be treated for what they are: things that may require some modification in interpretation and reliance on the survey findings. (p. 8)

According to Alreck and Settle (1985):

> Survey results should be treated as another body of evidence or set of indications. Survey results have to be evaluated in the light of experience, common sense, and other information. Human perception and judgment will always be required . (p. 8)

Questionnaire users must consider the response-rate problem as it uniquely applies to their own situation. What obstacles can be anticipated that lead to nonresponse? Berdie, Anderson, and Niebuhr (1986) report that one author found that over 40 percent of the nonrespondents in his study had moved, could not be contacted, or were deceased. They contend that it is doubtful, therefore, that many of his "nonrespondents" ever received a questionnaire.

In this study of hearing-impaired children throughout North Carolina, there was no way to confirm that the nonrespondents received questionnaires. To protect the privacy of the parents and children, the names of the respondents were not sent to the researcher; therefore, reliance was put on administrators of programs for the hearing impaired to distribute the questionnaires. Most coordinators graciously agreed to cooperate, but there was no way to know for sure whether the parents received the questionnaires and no sure way to follow up. Also, for various reasons several of the children were not in the district they were reported to be in the previous year, which caused the numbers reported in the Certified Headcount for Special Education (1988) to vary, considerably in some instances, from the numbers received from the districts one year earlier. Situations such as these made it impossible to calculate how many nonresponders did not even receive a questionnaire. In light of limitation associated with mailed questionnaires, the return of 557 (42%) of questionnaires is considered sufficient to develop a realistic profile of hearing-impaired students in North Carolina.

Definitions of Terms

1. Commission on Education of the Deaf. A national advisory group established by the Congress of the United States to study the present status of education of hearing-impaired individuals in this country.
2. Day programs. Educational programs in which hearing-impaired students attend classes during the day and return home after school.
3. Deaf culture. A closed group of individuals with its own organization, values, customs, social structures, attitudes, and language (American Sign Language). (The word deaf is capitalized when referring to the deaf culture or community.)
4. Deafness. Condition of a person with a severe to profound hearing impairment in the better unaided ear who is dependent on vision for language and communication, even with the use of amplification systems.
5. Degree of hearing impairment. The five categories of hearing impairment are as follows: slight (27 to 40 dB), mild (41 to 55 dB), moderate (56 to 70 dB), severe (71 to 90 dB), and extreme or profound (91 dB and greater).
6. Early identification. The identification of individuals with hearing impairments as early as possible, preferably at birth or during the first year of life.
7. Hard of hearing. Traditionally, the description of an individual with a hearing loss ranging from slight up to and including the moderate level. (See Degree of hearing impairment.)
8. Hearing impairment. A generic term that refers to all degrees of hearing loss.

9. <u>Mainstreaming</u>. Moving students from a special education program in a residential school to programs in public schools.
10. <u>Psychology of deafness</u>. The notion that there are certain behavioral traits that are uniquely attributed to deafness, suggesting that the behavior and thinking processes of deaf persons are different from those of a general population.
11. <u>Residential School for the Deaf</u>. Special schools for hearing-impaired students only. Students can live in dorms or commute to the schools.
12. <u>Sensorineural</u>. Hearing impairment due to problems with the sense organ and/or the auditory nerve.
13. <u>Simultaneous communication</u>. The use of manual communication and speech in a simultaneous manner.
14. <u>Total communication</u>. An educational philosophy that supports the use of sign language, lip reading, residual hearing, and speech in instruction to meet the individual needs of hearing-impaired students.

CHAPTER II

REVIEW OF THE LITERATURE

Background

The first few lines of the Commission on Education of the Deaf (1988), a committee established by Congress, reported, "The present status of education for persons who are deaf in the United States is unsatisfactory. Unacceptably so. This is the primary and unescapable conclusion of the Commission of Education of the Deaf" (viii). Considering the fact that hearing impaired students comprise the largest single population of school-age handicapped persons in the United States (Ross, Brackett, & Maxon, 1982), this problem is intensified. In an investigation of the circumstances involved in the education of hearing-impaired students, it is relevant to note the legislation which gave action to the concept of educating hearing-impaired children in various settings. On November 29, 1975, President Gerald Ford signed The Education for All Handicapped Children Act (P.L. 94-142, 1975), which became effective October 1, 1977.

With this Act the United States took the necessary step to ensure that all handicapped children, including hearing-impaired children, would receive a free appropriate public education (Moores, 1987). The Act called for nondiscriminatory testing, assurance of an annual individualized educational plan (IEP), and provision of services in the least restrictive environment (LRE) appropriate to each child's needs (Harvey and Siantz, 1979). Through PL 94-142, parents have the legal right to participate in the formulation of the IEP and the option of accepting or rejecting an IEP or any of its parts. Procedures for resolution have been developed for cases in which differences of opinion arise (Moores, 1987). The rules and regulations for implementation of the law, viewed in some areas as the "mainstreaming law," were published on August 23, 1977, by the Department of Health, Education, and Welfare (Brill, MacNeil, & Newman, 1986). The Act states:

> To the maximum extent appropriate, handicapped children, including children in private or public institutions or other care facilities, are educated with children who are not handicapped.
>
> Special classes, separate schooling, or other removal of handicapped children from the regular environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (Brill et al, p. 65)

While the law was intended to guarantee equal education to the handicapped, the wording of the law left it open to various definitions which have required legal interpretations. One of the most publicized examples is Rowley vs. the Hendrick Hudson Board of Education and the Commissioner of Education of the State of New York (1979), a case in which the parents of an eight year old deaf child requested that the school district provide her with a sign language interpreter in order to enable her to have the same educational opportunity as her classmates. Without an interpreter, Amy, a proficient lip reader, could understand only fifty-nine percent of what was being offered to her under her Individualized Education Program. The school district maintained that PL 94-142 mandates the provision of adequate, not necessarily optimal, services. The U. S. Supreme Court ruled that the law did not impose on the states any greater educational standard than would be necessary to make access to education meaningful (Schildroth and Karchmer, 1986). The Court stated:

> Insofar as a State is required to provide a handicapped child with a "free appropriate public education, we hold that it satisfies this requirement by providing personalized instruction with sufficient support service to permit the child to benefit educationally from that instruction. Such instruction and services must be provided at public expense, must meet the State's educational standards, must approximate grade levels used in the State's educational standards, must approximate grade levels used the State's regular education, and must comport with the child's IEP. In addition, the IEP, and therefore the personalized instruction, should be formulated in accordance with the requirements of the Act and, if the child is being educated in the regular classrooms of the public educational system, should be reasonably calculated to enable the child to achieve passing marks and advance from grade to grade. (Silva, 1982, p. 243)

Silva explains that while the Court did not set a standard for determining when sufficient access has been provided to "confer some educational benefit upon the child," it did maintain that the Act does not require a "state to maximize the potential of each handicapped child commensurate with the opportunity provided other children" (p. 245). According to Silva, the Court affirmed that Congress did not impose upon the state any greater educational standard than would be necessary to make "sufficient" access meaningful and concluded that it would not be feasible to establish one standard of measure to determine if benefit is being conferred on the handicapped child.

Douglas Watson (1987), Director, Rehabilitation Research and Training Center on Deafness and Hearing Impairment, University of Arkansas, reports that dramatic changes have occurred in education and rehabilitation programming practices with hearing-impaired children during the past 20 years (Watson, 1987). Legislative focus has been on assisting these students to expand individual potential for inclusion in, rather than exclusion from, the larger society (Corthell & Van Boskirk, 1984). Arthur Schildroth, Gallaudet University Research Institute's Center for Assessment and Demographic Studies, reports that data from the Annual Survey of Hearing Impaired Children and Youth (1988) indicate a gradual shift in the educational placements of hearing-impaired students over the past ten years. Fewer of these students are being enrolled in special schools and more are being placed in local schools, i.e., the mainstream setting (p. 61). Watson (1987) suggests the impact of legislation is apparent in the increase in the proportion of hearing-impaired students enrolled in mainstream and/or day schools and classes, from one-third in the early 1970's to two-thirds in the mid-1980's.

Since legislators have felt it necessary to leave interpretations of appropriate programs in the "least restrictive environment" (LRE) up to individual states and local education units, the law remains varied and often nebulous (Salem & Fell, 1988). A questionnaire survey (1987) was conducted to determine the impact that PL 94-142 has had on residential schools for the deaf. One question on the survey asked administrators to write a brief statement on the interpretation of PL 94-142 in their state. Some responded that the least restrictive environment was the local educational agency (LEA). According to Salem & Fell, other comments by administrators varied extremely, including such statements as these:

1. LRE for hearing-impaired youth is the same as with all special education categories. LRE "should be close at home."
2. The state level people see the school for the deaf at the bottom of the ladder as far as placement options. However, many of the LEA's see it at the top because of the low incidence rate.
3. LRE is mainstreaming; placing in public schools with some hearing children.
4. Placement in public school programs--frequently--in very small, newly established programs, with a wide range of ages and learning abilities and levels of hearing.
5. They tend to go along with the federal philosophy of considering residential placement as the most restrictive.
6. Officially there is a continuum of placement options, with the regular classroom as the least restrictive and the residential school as the most restrictive. However, we receive good support from both the state and local level.
7. Geographical proximity to students who are not handicapped.
8. LRE is pre-determined to be the local school district of whatever size and program quality. (p. 69)

In the survey, when administrators were asked how hearing-impaired students were placed, they gave such responses as these:

1. There must be proof that the child is not succeeding in local programs before residential or center school placement is advocated.
2. The best test is documented failure at the LEA. Our state's interpretation is that all handicapped children should be enrolled in their LEA first if this is appropriate, then it is the responsibility of the LEA to document and refer.
3. The interpretations are varied but basically if a child is no administrative problem in public school he stays in the LEA. If a problem exists or one is anticipated, the school for the deaf is contacted. Too often the child is not sent to a residential school until his most productive educational years are lost. (Salem & Fell, 1988, p. 69)

Salem and Fell also reported that concerning liberal placement of choices of educational programs, some responded in this manner:

1. With grudging acceptance of the role of our school.
2. Per Madeline Will, but they are sensitive to reality and a continued need role for the state school.
3. According to needs of the individual child.

> 4. Speaking for myself only, interpret as environment providing most freedom and still seeing student performing successfully, academically and socially.
> 5. That [the interpretation] is not consistent. . . we have residential and day programs. (pp.69-70)

Parent wishes are honored, according to the survey:

> 1. State follows "guidelines" but parents. . . may utilize the parent option to ignore LEA recommendations.
> 2. . . . has allowed parents to make the first choice of which environment they think is least restrictive; however, the state Department of Education seems to feel the public school provides the least restrictive.
> 3. . . . the LRE appears to be the place where parents think the child will be best educated. (p. 69)

Some states reported little or no interpretation of the Law. Salem and Fell's survey (1988) concluded:

> 1. Most residential schools for the deaf have declined not only in the numbers of hearing-impaired children they serve, but also in the perceived importance of the role those schools play in the total educational environment. . . . A pending by-product of the reduced enrollment might be a reduction in the variety of services and programs offered hearing-impaired children in residential schools.
> 2. Most parents of children enrolled in residential schools for the deaf continued to support those schools, with more than 80 percent reportedly preferring their children continue in that placement.
> 3. The number of preschoolers entering residential schools increased for the 1987-88 school year. (p. 70)

The survey shows that P.L. 94-142, without question, has forced change upon residential schools for the deaf. Many administrators of residential schools for the deaf view the current interpretation of least restrictive environment as having a negative impact on the education of hearing-impaired students. Salem and Fell report that in states where mainstreaming has become an end, rather than a means to an end, the residential school has suffered, and according to many administrators of residential schools, so have educational services to deaf children.

Types of Programs

The growth of options, especially in public school programs, creates a great deal of confusion over terminology, making it even more difficult for different school systems to accurately interpret reports. Moores (1987) offers the following definitions as a simple way of classifying the most common types of programs:

> 1. Residential schools. In residential school programs, there are facilities to house students as well as to educate them. Children within commuting distance generally attend on a day basis, and those living farther away stay at school on a residential basis, at least during weekdays. In recent years approximately 40 percent of students in residential schools for the deaf have attended on a day basis.
> 2. Day schools. In larger metropolitan areas, programs may be established in separate day schools for the deaf. Children commute to them daily, and hearing children are not enrolled.
> 3. Day classes. Day class programs are classes for the hearing impaired established in a public school building in which the majority of children have normal hearing. Instruction may be in completely self-contained classes, or children may spend part or most of their time in regular classrooms.
> 4. Resource rooms. Most resource rooms are planned so that children spend most of their day in regular classes, returning to the special class for additional attention, usually in English and in particular academic areas. Whereas day class programs tend to have several classes in one school, with homogeneous grouping of children, in a resource room the teacher is generally expected to provide individualized services to students varying in age, hearing loss, and academic achievement.
> 5. Itinerant programs. In itinerant programs, children attend regular classes full time and receive support services from an "itinerant" teacher, who may work with children from several different schools. The support services vary from daily to weekly lessons, depending on a child's individual needs. (p. 18)

Parental Reaction to a Child's Hearing Impairment

Parents react in complex ways when they suspect or hear confirmed some degree of hearing impairment in their children. Dr. Kampfe (1989), assistant professor in the Division of Rehabilitation Counseling in the Department of Medical and Allied Health Professions of the School of Medicine at the University of North Carolina at Chapel Hill, reports that "learning that one's child is deaf can be described as the loss or death of a parent's dreams for a normal child." (p. 255). This mourning is considered a catalyst for growth, a process that helps parents shed broken dreams and generate realistic new hopes for their child (Kampfe, 1989; Solnit & Stark, 1961; Moses, 1985; Mindel & Feldman, 1987). They go through such stages as shock, followed by realization and often accompanied by guilt, anger, and/or depression (Moses, 1985; Seligman, 1985; Mindel & Feldman, 1987). Parents often blame themselves for their child's deafness. Some blame poor prenatal care or family history; others perceive the deafness as punishment (Moses, 1985; Mindel & Feldman, 1987; Kampfe, 1989). Guilt often causes parents to become preoccupied with discovering the cause, blaming the other parent, overdedication to and overprotection of the child, and/or rejection of the child (Solnit & Stark, 1961; Stream & Stream, 1978; Luterman, 1979, 1984; Kampfe, 1989).

Anger, sense of unfairness, because of problems with communication and demands on time, energy, money, and frustration, is often directed toward the child or other members of the family, as well as toward those professionals who are attempting to work with the child (Mindel & Vernon, 1971; Moses, 1985; Mindel & Feldman, 1987; Kampfe, 1989).

Denial and depression are other ways of dealing with information that one's child is hearing impaired. Denial sometimes occurs before diagnosis when parents can assume their child's symptoms are the result of variables such as stubbornness or tendency to speak late (Mindel & Feldman, (1987). Sometimes denial happens after diagnosis when parents are attempting to escape their feelings about deafness or to deal with the reality of the facts (Shontz, 1965; Luterman 1979, 1984; Mitchell, 1981). Depression often follows and remains until parents display a willingness to confront reality and take action toward intervention. If parents cannot work through the mourning process, they may never reach a state of constructive action (Mitchell, 1981; Moses, 1985; Mindel & Feldman, 1987).

Parental perceptions of their child's hearing impairment vary according to a variety of factors, such as parental age, gender and ethnic background, and experience with deafness (Schlesinger & Meadow, 1972; Kampfe, 1989). Personal resources such as personality, coping strategies and attitudes might also act as moderators (Mindel & Vernon, 1971; Mindel & Feldman, 1987). Persons who are super- sensitive or who prefer to be independent have more problems coping, as do those who over-identify with their child. Education and finances also have an impact. Parents who attach extreme importance on education might be more stressed than those who deemphasize it (Mitchell, 1981; Luterman, 1984; Mindel & Feldman, 1987). Expectations concerning vocations and marriage are other factors which parents often agonize over (Kampfe, 1989).

Support from family, society and service agencies might moderate parental perceptions of the hearing loss (Buboly & Whiren, 1984; Luterman, 1984). Availability of services may condition parents' views of the child's loss. When no appropriate programs are available locally, relocation of the child or the family can prove particularly disruptive (Mitchell, 1981; Luterman, 1984). Quality of services available is also very important. Too much or too little, inaccurate or biased information, and lack of a central source of information, appear confusing or disjointed, adding to the distress of parents.

Age at loss and degree of impairment create their own problems which parents are not prepared to deal with (Mindel & Vernon, 1971). The length of time between the first suspicion of deafness and the actual diagnosis may also make a difference. Although most parents feel the event is devastating (Mitchell, 1981), those who have suspected the deafness for quite some time may feel relief when their child is finally diagnosed (Gregory, 1976; Luterman, 1979; Mitchell, 1981). Social standards and culture might also affect the way parents deal with their hearing-impaired children. Cultures that accept only perfection might have very different parental views of the child's deafness than those who are more accepting (Mitchell, 1981; Moses, 1985).

Other parents of deaf children can provide valuable support. Having access to these individuals seems to help parents accept their own child's deafness (Mindel & Feldman, 1987).

Kampfe (1989) states that most of the literature regarding parental response is based on theory rather than research finding, so no definitive statements can be made; however, the literature is still invaluable to parents who are searching for answers.

Watson (1987), Director, Rehabilitation Research and Training Center on Deafness and Hearing Impairment, University of Arkansas, summarizes that although hearing-impaired students comprise the largest single population of school-age handicapped persons in the United States, the field of education for these students presently lacks an organized body of knowledge from which to generate adequate answers and strategies. Watson proposes that early educational preparation which provides students with the basic skills required to develop their potential is essential. He also mentions a report on a Transition Project in Arkansas which stresses the importance of the role of parents in the success of hearing-impaired students. The report states:

> Informed, supportive parents are an integral part of a handicapped child's education program. Never are the parents more important to the decision making and programming process than at the secondary level. It is absolutely essential that parents be made aware of post school options for the young adult. (p. 347)

Report of the National Task Force on the Integration of Hearing-Impaired Students (1990) also stresses the parent role. It reports that parent education and training enables parents to make more informed decisions and to be more actively involved in their child's education, thereby enhancing the educational achievement of hearing-impaired students. Since a majority of hearing-impaired children have hearing parents, these parents can benefit from parent education programs which will aid them in performing an effective job of raising their children. As their children grow, parents' needs will change. They will have questions about educational programming, where and how their children should be educated, how to increase their children's social skills, and how to include their children in recreation and extracurricular activities. This report offers invaluable information for parents of hearing-impaired children and for any who work with hearing-impaired children. A priceless North Carolina based source of information is Beginnings for Parents of Hearing Impaired Children (Birth-18), based in Durham, North Carolina.

Placement Considerations

If hearing-impaired children are to be successfully integrated into public schools, school systems must give attention to individuals. They must provide special care in placement, particular attention to behavioral problems, both social and academic, and adequate support systems. Great concern over these points was evident in the literature. Dubow (1977) points out that when states or local programs attempt to implement the procedures outlined in PL 94-142 by emphasizing the education of the handicapped with the nonhandicapped, they may ignore the nature and severity of the hearing-impaired child's handicap. Analysis convinced Ling, Ling, & Pflaster (1977) that "No single form of education is best for all hearing-impaired children" (p.204). Research points out numerous variables which should be considered in preparation of the Individualized Education Program (IEP). Pflaster (1980), through five tests, identified several major and minor factors worth consideration. She found that other variables in addition to "chronological age, level of hearing, and early intervention are related to a hearing-impaired child's performance in the regular classroom." (p. 79) She recommends that before educational placements are made, intrinsic factors, including communicative, linguistic, and personality behaviors, should be identified and assessed, along with extrinsic factors relating to attitudes of parents, teachers, and administrators.

Turnbull, Paul, and Cruickshank (1977) emphasize that special care should be taken in deciding programs for hearing-impaired children since they have so much at stake in the mainstream process. Wood and Hirshoren (1981) contend that educators must concern themselves with several critical areas when making decisions regarding placement of these children. Guralnick (1978) insists that equality does not mean sameness; it means appropriateness. Northcott (1985), who wrote and introduced the landmark policy statement by the Council on Education of the Deaf in 1974, agrees. She points out that "it is useful to remind ourselves that for some students, the least restrictive environment may be the special class taught by a certified teacher of the deaf" (p. 3). She also suggests several advantages and disadvantages that should be considered when preparing each child's IEP prior to integrating him in a regular class.

Advantages of Mainstreaming

1. The similarities between hearing and hearing-impaired children are greater than their differences.
2. The development of a close association with those who hear begins in an unselfconscious way.
3. The child is not further handicapped by abnormal surroundings.
4. The child's perception of himself is based on comparison with hearing peers and enhances coping skills in an integrated society.
5. Functional language is presented via normal, clear speech; the setting provides excellent models in addition to daily practice opportunities for imitation.

> 6. Development of good speech attitudes is enhanced along with motivation to use speech to compete for attention and assistance from teachers and peers.
> 7. Comparison with hearing peers gives a realistic perception of the full range of abilities beyond a deficit in communication skills.
> 8. There is reduction of undesirable personality traits which stem from social and academic isolation: grimaces, rigidity of thinking, emotional immaturity.
> 9. Parents receive a clearer picture of the child's abilities and limitations through comparison observation.
>
> ### Disadvantages of Mainstreaming
>
> 1. Daily competition with hearing children places greater strain and stress on the personality. If the family is not in a strongly supportive role, the child's frustration may exceed his tolerance to withstand such competition.
> 2. Social rejection may occur on the basis of the student's inability to communicate normally and irrespective of other personality traits.
> 3. Opportunity to participate in extracurricular activities at school may be restricted.
> 4. Placement may be unrealistic and related to ego needs of parents rather than the child's ability to be assimilated in the environment of the regular classroom. (Northcott, 1985, pp. 3-6)

A considerable amount of the literature emphasizes the significance of assigning students to suitable programs (Greenberg, 1986; Northcott, 1985; Reich, Hambelton, & Houldin, 1977; Farrugia & Austin, 1980).

Adversaries of Integration of Hearing-Impaired Students

Despite the type of program hearing-impaired students are integrated in, they frequently demonstrate behavior problems. A probable cause of some behavior problems is the face that hearing parents of deaf students do not speak the same language as their children; therefore, the children have no hearing-impaired persons to relate to (Northcott, 1985). This point is used in arguments for residential schools for the deaf; however, Mertens (1989) indicates that academic performance is possibly enhanced by attendance in public schools. At the same time, "social and emotional development may be adversely affected" (Reich, Hambelton, & Houldin, 1977, p. 34). Kaufman (1980), Superintendent of the Colorado School for the Deaf and Blind, reports that students who come to his school from mainstreamed schools often come with psychological problems, including drug addiction, that have never been identified. He notes that a greater percentage of those students require "deep and protracted counseling, drug programs, alcohol programs, etc., than ever before" (p. 5).

Farrugia and Austin (1980) found that the literature concerning the differences in an integrated approach and the residential approach to the education of hearing-impaired students often seem to be of a negative nature. Mertens (1989) found some of the same negative attitude. She reports that mainstreamed hearing-impaired students with negative attitudes felt that some teachers had lower expectations of them than they had of their hearing classmates. Some hearing-impaired students even felt that teachers "couldn't care less" about hearing-impaired students. Greenberg (1986) shares a brief conversation which she says indicates the emotion expressed by the adversaries of the mainstream programs:

> "You know the old sign for mainstreaming: two S-palms down opening to 'stream outward from the body. The one we now use starts the old way but then becomes the sign for 'oppressed'."
>
> "What does that signify?"
>
> "It signifies the hearing kids pushing a deaf kid down." (p. 3)

According to Greenberg, this is characteristic of the attitudes expressed by most teachers and administrators in residential schools.

She reports that when talking with school personnel, administrators, tutor/interpreters, and hearing-impaired students who have been mainstreamed, she found that few were happy about mainstreaming. Even those who had cheered the program as a new deal for deaf persons ten years ago were far from satisfied. She also contends that mainstreaming isolates: the hearing parents of deaf children typically do not learn American Sign Language, and most schools have very few hearing-impaired children; therefore, children have no one to talk to if they do not have teachers and classmates who can sign. Greenberg (1986) adds that the principal reason for mainstreaming handicapped students, including hearing-impaired students, into the regular classroom was that the social benefits of such integration would be immediate and positive for both segments of the student body. She contends that this has not happened. Webster (1985) agrees by stating, "Deafness by its very nature isolates. We should think carefully, in whatever steps we take, that we do not reinforce that process" (p.6).

A concern of Greenberg (1986) is that hearing-impaired students live on the fringes. She calls the isolation of deaf children a paradox, contending that many mainstreamed applicants to Gallaudet seem to lack the self-assurance common in students from residential schools. Also, in spite of their exposure to hearing students, these students lack self-confidence in communicating with either hearing or deaf people. Similar findings are documented by Farrugia and Austin (1980) . They report that studies indicate that while academic benefits are often incurred by integrated students, adjustment problems, lower self-image, and poor peer acceptance are greater for integrated hearing-impaired students than for students of residential settings.

At Gallaudet, Mertens (1989) investigated the reasons why hearing-impaired students described their high school experiences as either positive or negative. He collected data on 49 hearing-impaired undergraduate students at Gallaudet who were asked to describe their high school experiences on an open-ended questionnaire. He found that graduates of residential programs described their social experiences significantly more positively than graduates of mainstream programs. Their reasons included their teachers' ability to sign, opportunities to socialize with friends, and participation in after-school activities. Positive feelings in mainstream programs were associated with such factors as availability of supportive services, ability to voice and lipread, parent involvement, encouragement of interaction, and deaf awareness by the teachers. Mainstream students who had the benefit of supportive services reported different perceptions of supportiveness relative to academic environment and teachers' expectations than did those who had no such services in high schools.

Antia (1985) states that a major purpose for educating hearing-impaired children with their normal-hearing peers is to promote the socialization process. Data gathered in a traditional anthropological study by Hemwall (1979) suggested that everyone involved in mainstreaming- students, teachers, administrators, and even parents- were preoccupied with the possibility of failure and the related pressure to succeed. A mainstreamed student could not just choose to fail academically or socially; the implications of failure were deeper.

Each person perceived failure as a reflection on his or her abilities. The pressures were an enormous burden on everyone in the program, but little help was offered in coping with this perceived pressure to succeed. How the social and academic aspects of mainstreaming are interwoven and cannot be separated easily are also discussed in Hemwall's (1979).

To prepare a hearing-impaired student for mainstreaming requires methods of improving academic skills but must also be accompanied by an understanding of the social context in which the student operates. The study illustrated that the use of ethnography as a tool for evaluation can provide an exceedingly rich and complex body of information. The important benefit provided by ethnography is that it helps to avoid oversimplified assessments and evaluations and shows that ethnography can create the basis for more fair and useful recommendations in the area of education for the hearing impaired.

Several studies (La Greca, 1979; Geoffrion, 1982; Asher & Taylor, 1981; Vandell & George, 1981; Antia, 1982) on the social-emotional characteristics of integrated hearing-impaired students offer information concerning how the students are affected by mainstreaming:

1. The Deaf child and the mainstreaming is accepted by his hearing peers.
2. Deaf students in intermediate grades are not accepted by peers.
3. Deaf students in the mainstream experience lower self-concepts than deaf students in residential schools.
4. Deaf students are better accepted than hard-of hearing students.
5. Hard-of-hearing students in public schools have academic advantages in public schools over deaf students.
6. Thirty-two percent more public school hearing-impaired students have adjustment problems.
7. Students with deaf parents had over-all better adjustment in the educational setting.

8. Students with hearing parents in day classes ranked lowest on the self-image measurement.

9. Integration is beneficial to academic and language development.

10. Personal and social problems may be increased by mainstreaming students.

Farrugia and Austin (1980) find the "speculative explanation for these findings directly related to the social isolation and social rejection that the deaf student appears to experience in the company of hearing peers" (p. 539).

Saur, et al., (1986) present another study on behavioral problems. They started the study with the problem that social integration is the least understood or resolved issue concerning mainstreaming hearing-impaired children. They noted that class participation of mainstreamed hearing-impaired students is hindered by their being isolated in various ways from their hearing peers. Contending that the benefit of learning to deal effectively with normally hearing peers has been one of the major justifications of mainstreaming, they proposed that "the benefits can be offset by the reality of social rejection, antipathy, and the overt cruelty of the young toward someone who is, or is perceived as, different" (p. 325). They argued that regular class placement itself is not synonymous with mainstreaming and that placing a hearing impaired individual in the regular classroom and providing him with resources and support does not assure adequate mainstreaming.

The focus of their study was to look at students who are successfully mainstreamed in a naturalistic environment, one neither geared to their special needs nor easily amenable to change, and to study the effective compensation and adaptation on the part of students and on support personnel. They studied classroom experiences as well as social events of their subjects. From their observations they formulated three hypotheses which represent areas of concern for future research:

> Hypothesis 1: The participation of hearing-impaired students in the activities and discussion of the regular classroom is adversely affected by (a) the fast pace of discussion and the number of persons who take part in the discussion, (b) language and cultural barriers, and (c) traditional use of space that may isolate hearing-impaired students from group interaction. Instructors may facilitate the participation of both normally hearing and hearing-impaired students by effective classroom management.
>
> Hypothesis 2: The relationship between hearing-impaired children in the classroom is dependent on their becoming comfortable in each others' presence. This is gained through shared experiences in the classroom context. It can also be gained when persons who use different modes of communication learn to use an interpreter to the best advantage.
>
> Hypothesis 3: Mainstreaming is successful when hearing-impaired students feel fully able to function as students in the classroom and when their needs for support are met without setting them apart from other students. This success is most likely dependent on the attitudes, maturity, and self-acceptance of the students themselves along with the sensitivity and concern of the instructors and other class members. (p. 327)

The dimensions identified in the study were participation, relationships, and feelings. Saur, et al.'s study (1986) asserted that "the participation of mainstreamed, hearing-impaired students is hindered by their being isolated spacially, temporally, and culturally from the class" (p. 325). The study also found that relationships in the mainstreamed classroom "depend on the mutual interactive competence of normally hearing and hearing-impaired persons" (p. 325). The feelings of mainstreamed students seem to depend on their acceptance of their hearing loss as well as their acceptance by others in the classroom.

Other literature also deals with behavioral patterns. Hymes (1974) defines social competence as the ability to understand and use the culturally accepted and contextually specific behavior patterns of an environment. Penman, et al., (1981) find that social competence begins at birth in the initial interactions of infants with their caregivers. Severe handicapping conditions disrupt the development of social competence and reduce both the perceived and actual ability of severely handicapped children to understand and use the accepted patterns of social behavior (Beckman, 1983). Antia (1985) reports that the literature indicates two techniques that promote social integration: teaching social communication skills and planning opportunities for interaction with peers in appropriate mainstreamed situations. The uniqueness of deaf people is acknowledged by Moores (1987):

> Without minimizing the constraints imposed on an individual by deafness, it is also possible to view deafness as a social or cultural condition. Rather than thinking of a deaf person primarily as someone with a defect, it is more beneficial to think of that person as an individual with a unique pattern of characteristics, one of which is deafness. (p. 4)
>
> Although deafness undeniably involves restrictions and accommodations, it also can be perceived in a social context. The more deafness is approached as a social condition, the greater will be the child's chances for healthy overall development. (p. 29)

Bishop (1979) contends that most deaf people do not, need not, and wish not to live exclusively in a hearing world. He feels that concepts of least restrictive environment and accessibility embedded in the laws emphasize what is considered best by and for the hearing-impaired person, rather than what is socially most comfortable and least costly to the community and its institutions. He calls mainstreaming one alternative process for educating hearing-impaired students; however, he says that it is a process, not a goal. He suggests that physical integration can be accomplished by placing separate schools for deaf and hearing on the same campus, by placing a class or classes for the deaf in a school for the hearing, or by placing individual deaf students in classes with normally hearing children. Physical integration does not mean that there will be academic or social integration. The amount of academic or social integration will depend upon the nature and the extent of the gap between the student's performance and expectations in the classroom.

It is important to remember that the goal of academic, personal/social, and communications development is to prepare the individual to function in the home, the school, the community, and in the world of work. Journalist Paul O'Connor (1990) reported in May that the mother of a developmentally disabled boy spoke to the North Carolina General Assembly about this point. The article in Lenoir News-Topic reported that this mother stated that her child is fortunate in that he has two well-educated parents and has been enrolled in an existing special program. She contended that he, in all probability, will develop to his full potential and be able to care for himself. That will amount to a terrific accomplishment, the mother said, but it will also be a tremendous saving for the state. Other children, she feared, will not be so lucky, and when they are adults, they, according to state estimates, will cost the state $55,000 a year in current dollars to be treated in institutions. While the mother was pleading for funds for special programs, she also rang the human worth bell, as well.

Gonzales (1980) concludes that clearly there is nothing in this nation's history to suggest that the mere presence of legislation designed to bring equal rights to the handicapped will make this suddenly happen. Nor is there evidence that it will happen in those modes that many now anticipate, including mainstreaming.

Support Systems

Much of the chance for success of the integrated student will depend on his or her support system. The fact that many teachers of handicapped children will feel poorly equipped to meet the needs of hearing-impaired students is stated by Bishop (1979). Teachers expressed tremendous discomfort about the presence of the hearing-impaired students; their anxiety, reported by Hemwall (1979) seemed to center around disciplining the students and communicating with the students. Bishop points out that the law states:

> Each state educational agency shall carry out activities to ensure that teachers and administrators in all public agencies (a) are fully informed about their responsibilities for implementing Section 121a.550 (pertaining to Least Restrictive Environment), and (b) are provided with technical assistance and training necessary to assist them in the effort. (p. 26)

Much of the literature alludes to support systems which, by law, should be available. The coordinator for the Integration Program of the Boston School for the Deaf in Massachusetts, Sister Anne Conway (1980), contends that support services provided to hearing-impaired mainstreamed students are largely dependent on an administration's view of curriculum. Conway attests that in an educational system dedicated to excellence, the school committee, superintendent, and principal must allow flexibility to ensure realistic goals and sequential development of concepts. Also, teachers must have resource personnel and materials made available. The more special training and help the teacher has the more effective she will be as a teacher of hearing-impaired children. Conway points out that "until the concept of Case Manager is universally implemented, some students will be treading water in the mainstream, unsure of their resources" (p. 383). She contends that support personnel in offices labeled Guidance, Speech, Therapy, Learning Disabilities, Resource Room and/or Learning Center should act as facilitators in the integrating of hearing-impaired students and the support curriculum should be comprehensive, creative, flexible, and realistic.

Bishop (1979) says that regular classes, the primary educational environment for normally hearing students, are one of several educational environments which can serve students with hearing impairments. Mainstreaming has proven to be an effective educational process for some youngsters. For others, it has been less than satisfactory. Gonzales (1980) adds that, in some cases, a student with a profound hearing-impairment can be totally integrated with minimal support. In other examples, a student with a moderate loss may need to remain in a self-contained classroom with a great deal of support. Placement in a failing situation for any hearing-impaired student must not be tolerated.

Moores (1987) proposes that educators of the deaf will continue to attend to sociocultural and communication factors as well as academic achievement, but they must be aware of the push for achievement in basic academic subject matter: math, science, English, and social studies. He says that since academic achievement of hearing children is on the upswing, educators of the deaf must help their students improve in academic achievement merely to maintain their position in relation to hearing children. Unfortunately, to be judged successful academically, deaf students must improve in school achievement at a faster rate than the hearing, a task that will challenge the field to its utmost. If this is to happen, a reorientation and retraining of teachers and teacher educators is needed. The major thrust must be the development of teachers who possess the same teaching skills as traditional teachers of the deaf along with more expertise in specific content areas.

Bishop (1979) notes that teachers, administrators, and special educators suddenly, and without preparation, are finding themselves caught-up in the movement to mainstream hearing-impaired children. Frequently they are compelled by parents and the law to make decisions about how to best educate hearing-impaired students in a mainstreamed environment. They are required to develop an individualized education program for each student, describing what the student will accomplish. In the midst of this unfamiliar situation an interpreter is requested for one student, aural/oral rehabilitation or cued speech for another, notetaking and/or tutor for still another. Then when one seeks assistance from professionals experienced with the deaf, one may well be faced with conflicting counsel. This challenge is confusing and frustrating.

Causes of Hearing Impairment

Paul and Quigley (1990) classify hearing impairments as "exogenous (having a cause outside of the body) or endogenous (having a cause within the body), and sustained during prenatal (before birth), perinatal (during birth), or postnatal (after birth) periods. They list rubella (German measles) and heredity as two common causes of deafness sustained during the prenatal period. According to Paul and Quigley, rubella accounts for nearly 10% of the hearing impairments and is often the cause of other handicapping conditions, and heredity of some nature accounts for 40%-60% of prenatal hearing impairments. They describe heredity as one of the most interesting and least understood causes of deafness.

Paul and Quigley (1990) list prematurity, pregnancy complications, trauma, sexually transmitted diseases, and blood type (Rh) incompatibility as some perinatal period causes of hearing impairments. Morgan (1987) states that hypoxia (oxygen deprivation) and prematurity (birth before nine months) are probably the most suspected causes of perinatal sensorineural hearing impairment. He also says, "These circumstances are most often beyond the control of those in attendance" (p.45).

Paul and Quigley (1990) list various causes of hearing impairment during the postnatal period: bacterial and viral infections, injury, and even heredity. Otitis media, a bacterial infection in the middle ear, is the most common cause of conductive hearing impairment according to Morgan (1987). Brown (1986) identifies meningitis as the most frequent postnatal cause of hearing impairment in school-age children.

Incidence of Hearing Impairment

Paul and Quigley (1990) state that "it is difficult to identify the exact number and the characteristics of hearing-impaired students in the general population, in general education, or in special education programs (p. 44). They mention that about 8% of the general population has some degree of hearing impairment, including 1% who are severely to profoundly hearing-impaired. Paul and Quigley report:

> Based on an annual survey conducted by the Center for Demographic and Assessment Studies (CADS) at Gallaudet University, it is estimated that in 1982 there were about 68,000 hearing-impaired students between the ages of 6 and 17 who were receiving some sort of special education services. (p.45)

According to Ries (1986), "It appears that males and blacks were proportionately overrepresented among these hearing impaired students" (p.29). About 23,000 of these students were categorized as deaf, that is, with profound hearing impairment. The other students had lesser degrees of hearing impairment. The overwhelming majority of students in the survey, according to Paul and Quigley (1990), had severe to profound hearing losses.

Paul and Quigley report: "The findings of the CADS survey may not be representative of hearing-impaired students in the general population, in general education programs, or of all students receiving special services" (p. 45). For example, most hearing-impaired children in general education programs have mild to moderate losses, but many of these children have not been identified (Ross et al., 1982). Paul and Quigley also remind that since it is difficult to determine type of special educational service, it is possible that the students in the survey overrepresent those students with profound hearing impairments who are receiving full-time special educational services.

CHAPTER III

PROCEDURE

Subjects

The subjects were parents/caregivers of hearing-impaired students in K-12 public and residential educational systems in North Carolina. The numbers (1329) and locations (from 80 counties) of hearing-impaired students in public schools were taken from Certified Headcount for Special Education (December 1988), a headcount received by Odell Clanton, Student Information Manager for the North Carolina State Department of Education in Raleigh (North Carolina Department of Public Instruction.)

Instrument

A pilot survey was conducted with the assistance of fifteen volunteer parents/caregivers of hearing-impaired children in Caldwell County schools. They first received questionnaires and letters explaining the purpose of the survey. Then, after reading the questionnaires, they met with the designer of the questionnaire to ask questions and make suggestions. Questionnaires were also sent to the three superintendents of the North Carolina Schools for the Deaf in Morganton, Greensboro, and Wilson, and to Art Mines, Executive Director of Beginnings for Parents of Hearing-Impaired Children in Durham, North Carolina, for their examination. Mr. Mines assisted in further testing the questionnaire by administering it to one of the personnel at

Beginnings who was hearing impaired and another who had a hearing-impaired child. Suggestions and comments from everyone who assisted in the field tests were considered before construction of the final instrument (See Appendix A).

Procedure

Cover letters (See Appendix B) accompanying questionnaires were sent to administrators of exceptional children programs in all North Carolina public schools identified as having programs for hearing impaired students and to superintendents of the three residential schools for hearing-impaired students. The letters explained the purpose of the study and requested that administrators cooperate in distributing the questionnaires to parents or caregivers of hearing-impaired students or send information identifying persons who might legally distribute the questionnaires. Identical questionnaires were sent to the three North Carolina Residential Schools, where superintendents graciously agreed to send the letters to parents or caregivers in their schools (See Appendix B). Since the responses were voluntary and anonymous, there was limited opportunity to follow up on the questionnaires; also, some students counted in private schools participate in public school programs too, and vice versa. The cover letter requested that those who received the questionnaire but chose not to participate in the survey return the questionnaire. This assisted in analysis of non-respondents. A stamped self-addressed envelope was enclosed with the letter/questionnaire to encourage response.

While the number of the sample was not assured from the beginning, the method of sampling offered a realistic profile of the total North Carolina hearing-impaired education situation. Out of the 1329 that were mailed, 557 (42%) were returned with sufficient information to be included. Responses were received from 80 of the 93 counties in North Carolina identified in Certified Headcount for Special Education (1988) as having programs for hearing-impaired students. Data came from both public and residential schools for the deaf. Two hundred nine (209) questionnaires were returned by parents/caregivers whose children attended residential schools and four hundred sixty-four (464) questionnaires were returned by parents who had children in public school programs. Of the 667 questionnaires returned, 116 were not sufficiently completed to use for information.

About three months after the questionnaires were sent out, the three residential schools for the deaf were contacted in follow-up efforts since they were the only schools that could be positively reached. Analysis of the data began about six months after the letters/questionnaires were first sent out.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to collect data to create a profile of hearing-impaired students in public and residential schools in North Carolina. This chapter presents the compiled data. Parents/caregivers were asked to respond to the questions by indicating the appropriate choice or choices by writing in their own responses. They were also directed to omit any questions which did not apply. Of the 1329 questionnaires sent out, 557 were returned with sufficient information to use. The data is presented below. Totals of each section vary considerably due to the instructions which asked those completing questionnaires to indicate more than one answer if applicable. In some cases, participants were instructed to skip questions which did not apply and in other instances some participants simply left questions blank. (Totals below indicate total number of responses.)

Parental Information

A. Who is completing this questionnaire?

a. father	55	e. foster parent	1	h. father/mother	18
b. mother	443	f. grandparent	14	i. mother/stpfthr	1
c. step-father	3	g. other	8	j. mother/other	1
d. step-mother	10			Total	<u>554</u>

B. Who is (are) the other caretaker(s) in the family?

a. father	285	e. foster parent	0
b. mother	40	f. grandparent	42
c. step-father	43	g. other	36
d. step-mother	6	h. listed no one else	118

Total 570

C. What is the highest grade completed by the person(s) completing this questionnaire?

elementary	21	high school/college	7
junior high	35	junior high/high	2
high school	305		
college	198		

Total 568

D. What are your occupations?

professional	171
service	58
manufacturing	85
homemaker	159
other	78

Total 551

E. What was the approximate family income in 1989?

a. \$8,000-\$15,000	151	e. \$30,000-\$37,000	61
b. \$15,000-\$23,000	95	f. \$37,000-\$44,000	39
c. \$23,000-\$30,000	78	g. \$44,000+	91
		h. less than \$8,000	9

Total 524

F. Please check which most accurately identifies you.

White	398
Black	134
American Indian	6

Hispanic surname	2	
Asian	0	
Other	2	
No response	6	Total 548

G. In what county of North Carolina do you live?

Alamance	8	Alexander	2	Anson	2
Avery	1	Beaufort	9	Bertie	2
Bladen	1	Brunswick	6	Buncombe	38
Burke	13	Cabarrus	4	Caldwell	15
Carteret	4	Caswell	1	Catawba	2
Chatam	4	Cleveland	9	Columbus	4
Craven	10	Cumberland	31	Currituck	2
Dare	2	Davidson	15	Duplin	9
Durham	4	Edgecombe	2	Forsyth	15
Gaston	15	Granville	3	Guilford	22
Halifax	6	Harnett	6	Haywood	1
Henderson	9	Hertford	1	Hoke	2
Hyde	1	Iredell	11	Johnston	4
Lee	13	Lenoir	2	Lincoln	6
Madison	2	Martin	2	McDowell	3
Mecklenburg	15	Moore	8	Nash	4
New Hanover	17	North Hampton	6	Onslow	3
Orange	1	Pasquotank	1	Person	3
Pitt	6	Polk	2	Randolf	17
Richmond	8	Robeson	6	Rockingham	4
Rowan	8	Rutherford	3	Sampson	9

Scotland	3	Stanley	4	Stokes	2
Surry	6	Swain	3	Transylvannia	2
Union	2	Vance	3	Wake	44
Warren	1	Washington	1	Watauga	1
Wayne	9	Wilkes	9	Wilson	9
Yadkin	3	Yancy	1	Total	<u>508</u>

H. Why do you live in this area?

a. hometown	301	b. job opportunities	130
c. educational opportunities	71	d. other	123
e. no response	6	Total	<u>631</u>

I. How many children do you have?

a. 1-101 b. 2-208 c. 3-134 d. 4-57 e. other-42

J. What is the hearing status of those completing this questionnaire? *** (See definition below.)

normal hearing	486	
slight hearing loss	25	
moderate hearing loss	10	
severe hearing loss	15	
profound hearing loss	5	
no response	16	Total <u>557</u>

***Degrees of hearing loss as defined by the Conference of Educational Administrators Serving the Deaf (CEASD).

a. Mild- (Level I)- 35-54 dB- Do not routinely require special class/school placement; do not routinely require speech of hearing assistance.

b. Moderate- (Level II)- 55-69 dB- Occasionally requires special class/school placement; routinely requires special speech, hearing, and language assistance.

c. Severe- (Level III)- 70-89 dB- Routinely requires special class/school placement and special speech, hearing, language, and educational assistance.

d. Profound- (Level IV)- 90 dB and beyond- Routinely requires special class/school placement and speech, hearing, language, and educational assistance.

K. Other than your hearing-impaired child, what has been your experience with hearing-impaired persons?

family member	134		
friend	137		
co-worker	37		
neighbor	32		
other	206		
no response	100	Total	557

Participants who had no hearing loss were directed to disregard the next two questions. Those who had a hearing loss were asked to answer the following questions.

L. What type of educational program did you attend?

public school	44		
private school	4		
residential school	7		
mainstream	1		
other	6	Total	62

M. At what age did you lose your hearing?

birth	12		
1-41 months	5		
8-11 years	4		
25-28 years	4		
38-47 years	3		
56 years	1	Total	29

Child Information

A. What was the cause of your child's hearing loss?

a. heredity	64	c. prematurity	38	e. RH factor	3
b. reubella	7	d. meningitis	73	f. unknown	201
g. other	96	h. no response	94	Total	576

C. What recommendation did the person who diagnosed the hearing loss make?

a. get second opinion	136
b. private program	30
c. residential school for the deaf	71
d. pre-school satellite program	188
e. regular classroom with support services	92
f. regular classroom in public school but in self-contained class	46
g. itinerant programs	11
h. parent counseling and guidance in individual or group therapy	37
i. other	88
j. no response	55
Total	754

D. If you got a second opinion, from whom?

a. family doctor	38	d. ear, nose, throat doctor	218
b. audiologist	237	e. psychologist	17
c. speech therapist	65	f. other	22
		g. no response	165
		Total	762

E. If you did not follow the suggestion made, what action did you take?

a. private program	6
b. residential school for the deaf	24
c. pre-school satellite program	43
d. regular classroom with support services	18
e. regular classroom in public school but in self-contained class	14
f. itinerant programs	7
g. parent counseling and guidance in individual or group therapy	10
h. other	10
i. no response	439
Total	828

F. What type of program is your hearing-impaired child in presently?

a. residential (day only 61) or residential	148
b. mainstream: self-contained	195
c. mainstream: partially	81
d. mainstream: totally	110
e. pre-school satellite of residential program	78
f. resource services	91

g. other	41
h. no response	23
Total	767

G. If your child has been in different programs, please indicate how long for all that apply.

a. residential day 24; residential	17
b. mainstream: self-contained	53
c. mainstream: partially	40
d. mainstream: totally	34
e. pre-school satellite of a residential program	108
f. resource services	27
g. other	50
h. no response	323
Total	652

H. What approach do you use for communication with your hearing-impaired child?

a. Auditory/Verbal	60
b. Cued Speech	22
c. Oral	109
d. Total communication	266
e. Some combination of the above	75
f. Other	69
g. No response	49
Total	650

I. What communication approach is used in educating your hearing-impaired child?

a. Auditory/Verbal	64	d. Total communication	265
b. Cued Speech	20	e. Some combination of the above	105
c. Oral	62	f. Other	42
		h. No response	63
		Total	<u>621</u>

Parental Expectations

A. What educational expectations do you have for your child after high school?

a. college	381	d. go to work	41
b. technical training	64	e. sheltered workshop	8
c. vocational training	60	f. other	84
		g. no response	22
		Total	<u>660</u>

B. What other expectations do you have for your hearing-impaired child? (Circle any that apply.)

a. marriage	277	d. self-sufficient lifestyle	390
b. stay single	30	e. other	89
c. live at home	41	g. no response	22
		Total	<u>849</u>

Educational/Clinical Services

A. How soon after your child was identified as having a hearing loss did you initiate some type of action toward managing the situation?

a. 0-6 months	448	c. 13-18 months	24

b. 7-12 months	33	d. other__ months	25
		e. no response	40
		Total	570

B. How long after you asked for special services did you receive assistance?

a. 0-3 months	376	d. other	23
b. 4-6 months	60	e. no response	64
c. 10-12 months	24	Total	547

C. If there was a delay from suspicion to diagnosis, did any of these professionals contribute to that delay through

	MISINFORMATION	MISDIAGNOSIS?
a. pediatrician		109
b. family practice doctor		29
c. ear, nose, throat doctor		47
d. audiologist		37
e. social worker		21
f. psychologist		7
g. other		33
h. no response		369
	Total	652

D. Who first assisted you in finding a program of study for your child?

a. doctor	95	e. audiologist	245
b. advocacy group	17	f. psychologist	7
c. social services	42	g. other	104
d. teacher	142	h. no response	33
		Total	685

E. Who assisted you most in finding a program of study for your child?

a. doctor	66	d. teacher	183	g. other	117
b. advocacy group	14	e. audiologist	215	h. no response	36
c. social services	35	f. psychologist	10	Total	676

F. Were you informed of all the educational approaches:

Auditory/Verbal, Cued Speech, Oral, Total Communication?

Yes	357	No	112	Total	469

G. On what level is your child achieving?

a. grade level	197	c. slightly below grade level	179
b. above grade level	75	d. extremely below grade level	64
		e. no response	54
		Total	623

H. How would you rate the support services you have received?

a. excellent	252	b. average	212	c. poor	51
d. other	9	e. no response	44	Total	619

The two final questions on the questionnaire elicited qualitative data limited to North Carolina hearing-impaired students and their parents or caregivers. Responses were sincere, varied, and extremely informative.

Parent Recommendations

Provision of Services

The need for a centralized source of unbiased information for parents or caregivers was high on the list of recommendations made by those returning questionnaires. Many expressed the need to have accessible written material on what services are available to the parents. One parent stated, "Let people know there is a program in the school for these children. We did not know until our child was halfway through kindergarten." Another parent said:

> My daughter's attending the Preschool for the hearing impaired has been a God-send. The teachers there are excellent. I only recommend that the public is more exposed to the services they provide.

Numerous parents/caregivers suggested the need for services to be provided sooner than they are and requested less "dictatorial power" in the hands of program directors. A mother claimed her child was signed up for special programs and had to wait until the next year to receive services. She was told the system did not have the manpower at the time. Apparently this was not the first time the child had been "put off." The mother stated, "Every year the director gives us some unexcusable reason why she thinks our daughter should not attend the local program."

Many parents are experiencing "administrative roadblocks" and long delays before receiving service; some claim to be unable to get any service at all. Many beg to have "less having to fight for everything the child gets," less having to "cut the ice between county when it comes to a child's needs." One parent shared the same feelings of many when she requested more involvement of administration. She noted that there were not adequate programs in her area because there was no one responsible there to initiate them. Another parent/caregiver protested:

> Services are not provided as the state and federal laws mandate. They think they can do as they please and deny services to our

> children without repercussions because they are not as closely monitored like other "regular schools and classes." Laws are continually being ignored therefore hurting the education of our children. You should contact parents individually. We could really tell you some horror stories.

Several parents/caregivers included the schoolboard among those who were neglecting the hearing-impaired children, contending that board members, along with administrators, need to make available more services in all counties. A parent replied:

> It is hard enough on parents having a hearing-impaired child much less having to bus him around to get adequate services for him. Our next step is Greensboro or Morganton, both one and one-half hours away.

This plea ran concurrent with pleas of many who requested better transportation and/or closer schools for their hearing-impaired children and that their children all be allowed to go to the same school since they, the parents of a hearing-impaired children, already have extra responsibilities due to the nature of their child's handicap.

Parents were also concerned that those who work with their hearing-impaired children be interested in the children, not just in how much money the child will cost the county. They requested more recognition by school officials of the need for extra help and supplies for all handicapped children.

There were many recommendations that criteria for entering the hearing-impaired programs be improved. Some children are having to wait too long before being allowed to have the services due hearing-impaired children. Another cause for distress was that some areas did not have trained consultants working with hearing-impaired children and did not have anyone who knew how to repair the equipment which the children need, including hearing aids and phonic ears, which seem to require much time and expense.

Another often made request was for cooperation of pediatricians and other health care consultants who recognize children with hearing problems.

Some parents also felt the need for more cooperation between the different hearing-impaired programs in the area. For example, one parent claimed, "When we left the Deaf School we felt very alone and had no practical support in the mainstream program." Another parent made this point concerning her helpless feeling as she moved her child from one program to another:

> They start out great for preschool, but after she started to public school she has not received the tutoring or aide she should have. Preschool for Deaf recommended full time aid. But public school said they would determine if she should have aid or not. In the meantime the student gradually gets farther behind. Also, I have not received any follow up on how she is doing from deaf school. The transaction from deaf to public school should be coordinated. Now one drops them and it seems the other does not want to fit them into their budget.

Work with Parents

Numerous parents with hearing-impaired children requested assistance to understand how to help their children. They asked for help for both parents and teachers in public schools to understand what hearing impairment is about and how to deal with it and not to be afraid to ask questions dealing with it. Parents would like teachers, counselors, and any support personnel to review periodically the appropriateness of the methodology being used with their children and to include both parents in the selection of an appropriate program. One parent requested, "Help parents to understand how they can help their child with reading and math and dealing with problems that arise with school related work and with peer stress." Parents/Caregivers also want assistance in learning sign language or other means of communication with their hearing-impaired children and other deaf people. They requested satellite sign language courses where necessary and avoidance of cancellation of signing classes due to too few enrollees. They would appreciate promotion of sign language classes in industries, especially hospitals.

Parents in support groups praised them and contended:

> More parents need to be encouraged in some way to get more involved with their hearing-impaired children. . . . A parent support group, dealing with our problems and responsibilities could really improve the chances of many hearing-impaired children in our programs.

Parents/caregivers also need support from counselors at school, other parents, teachers, and hearing children. These support groups could do much to boost the self-esteem of those who have hearing-impaired children.

Work on Self-Esteem of Children

Parents pleaded for counselors and others to work with hearing-impaired children, even if it is just to talk with them periodically so that they have someone other than their own parents to discuss thoughts with and in order to build up the self-esteem of the children. Parents shared the same feeling in saying, "Don't just feel sorry for the children." However, one parent wrote:

> My child. . . is embarrassed at school in front of her peers by her teachers. . . . She wants to be taken out of the program because the counselor fusses at her because the instructor feels she is capable of doing better work. She doesn't understand that they are trying to help her. She cannot accept her hearing impairment. She says they "baby her and embarrass her in front of her classmates." She went completely deaf a few years ago after surgery on her ear and blames the doctor for her hearing loss.

This parent and others requested assistance in raising the self-esteem of the children.

Provide More Funds

Funds were provided through private, secular, and religious institutions to accommodate needs such as interpreters, transliterators, speech therapists, auditory trainers, etc. However, according to parents/caregivers, monies are still inadequate. Several requested that communities get more involved in raising funds for equipment for hearing-impaired children. They insist that "There are people who want to help but the money gets lost in the system. The money doesn't get where it needs to be." They need a director of funds who answers to an interested supervisor

One argued adamantly the need for more funding:

> Budget for Hearing Impaired should be seriously looked at and increased. Recently the satellite program my child attends has had to stop speech therapy due to lack of money (Over the budget for the year). The state should make sure that these and any other services should not have to worry about money for these children. . . . These children of all ages have the ability to learn and they need the proper education to make it in this world.

Parents contend that all hearing-impaired children should have the same services no matter what type of educational approaches are used, including transportation to satellite schools where needed. They feel that funding for this transportation "should be under Educational system, not the Department of Transportation." (The three state residential schools for the deaf are administered by the Department of Human Resources.) Also, they feel that more schools in the counties should handle hearing-impaired so that children do not have to travel so long to get to school.

There are many needs for additional funds. Equipment is one major area. Funds are needed to provide hearing aids and phonic ears for children whose parents cannot afford them and insurance will not pay. One parent expresses well what many suggest:

> Non-payment of hearing aids by health insurance companies is wrong. . . . There is a vast difference between an elderly person who loses their hearing at a certain point in life and that of a young child who is dependent upon hearing aids as a tool for obtaining an adequate education. This education allows the child to develop both scholastically, physically, emotionally, and mentally to their highest potential. The hearing aids help to make them healthy and responsible adults added to society.

Also parents say there is a need for insurance to pay for testing hearing aids and for access to word processors at school to help in writing.

According to parents, money is needed to keep the equipment in good repair. Auditory trainers are an educational tool which many find invaluable and feel should be made accessible to all who can benefit from their use. However, one parent reported that the auditory trainers at her child's school malfunction at least twice a year and are sent off to be repaired. She says they are often gone for a month or more, which can add up to 2 or 3 months without them, and suggests that this school needs new, up-to-date equipment if it is to achieve maximum training. Another parent said an auditory trainer was not provided until her child was in grade nine. She felt that this was too late for her child who up until grade nine had received help from no source except the Department of Exceptional Children.

Other expressed needs which would require added funds, according to questionnaire responses, were for better inservice training along with monetary compensation for mainstream teachers, for funding for interpreters certified by state, and for funding for other services and resources which would bring hearing-impaired children to have the same opportunities as their peers.

Give Attention to Staff and Resources

Although many parents praised teachers and resource personnel in the residential and public schools, several recommendations and suggestions were made. A few parents requested that more attention be paid to the individual needs of the children and to making sure that the hearing-impaired child does not feel different from the other children. One parent expressed this concern:

> Don't make the hearing-impaired child feel different; give him as much opportunity as any normal hearing child. Because [my son] didn't hear, two teachers let him get behind without telling me, and another Special Education teacher made him read the same book for three years straight and he stopped reading. . . . The Special Education Program needs to be looked into. Make the child know that he is loved and special the way he is.

Other parents requested that teachers and administrators who work with the hearing-impaired students care about the students, not just about their own salaries. Several parents felt some who work with their children are only interested in their salary, not in the education of the children. One parent said she received no service for her son until she called an administrator in Raleigh who saw that the child got the first resources he had had; even then, the person who was assigned to the child did not bother inform the child's other teachers that he had a hearing impairment. She just worked with him twice a week for 30 minutes. His teachers thought he was faking, and he continued to fail until he was moved to a residential School for the Deaf where he was successful and graduated.

Parents requested that teachers be better educated on the methodology being used with their children. They also made numerous other suggestions concerning continuing education for teachers, administrators, and resource personnel:

1. More emphasis on educational interpreter training and more and better interpreters.
2. Summer school so that hearing-impaired students do not lose the continuity in their education.
3. More one-on-one attention.
4. More physical therapy where necessary.
5. More teachers, speech therapists, etc. at middle school level to keep services equivalent to elementary schools.
6. More teachers so that there can be more one-on-one instruction in groups where children are on the same grade level.
7. A teacher who works only with hearing-impaired children, not just the speech teacher.
8. More teachers who are hearing-impaired.
9. More auditory trainers and other equipment that is not obsolete.
10. Much more speech time, maybe worked in more of a mainstreamed environment at the preschool level, perhaps in conjunction with a normal-hearing preschool.
11. Follow-up after graduation: job placement, counseling, education.
12. More resource services for multi-handicapped hearing-impaired children.

13. Release children (mileage funded) to go to residential schools daily is most appropriate for student.
14. More schools and other services for hearing-impaired children closer to child's home.

Give Attention to Academic Programs

Many parents requested more emphasis on screening for hearing-impairments at earlier ages to evaluate and determine early the services needed. Several parents reported unfortunate incidents which could have been avoided with early intervention or more attention to special services. One mother, for example, wrote:

> [Our child] travelled 80-90 miles a day and stayed in Durham until 5:00 in day care and ended up at home at 6:00 in the evening. This situation required such a hardship on [the child] through the years that I think if we had seen the total picture and had known the educational route. . . we may have chosen to move to a more appropriate community.

Other parents wrote that they love the hearing-impaired program in the county they are now in so much that they moved to a rental house there. They felt the move was necessary because the county where they had previously lived placed all hearing-impaired children, regardless of severity of hearing loss, in one K-5 class with one teacher. One father travels 410 miles per week at his own expense to put his child in a better school.

Another request for closer attention to evaluation was made by a mother who worried that her child had been misplaced in the mainstream program. She wrote, " When mainstreamed, [my child] can't keep up with class: vocabulary, etc." She and other parent/caretakers request that classroom teachers of mainstreamed hearing-impaired children be made aware of the condition of impairments of the child and of his needs.

Some asked that students be tested more often and not just evaluated on the level of hearing students. One parent stated, "My child is on higher level book than the workbook he is in shows. He reads and understands books on fourth or fifth grade level, but is held in second grade." This child is 11 years old.

Another parent with a child in the mainstream expressed concern:

> We have a school which only goes to sixth grade that has the most trained people that can be there any time. I think it should be an eight grade school. Before, they put all the children at one school. My son's school looked over him, put him at the back of the room after I had requested he be put at the front. I'm afraid when he goes back to seventh grade at that school that he will be treated this way again.

Those who praised mainstreaming would like to see the program expanded. One proponent stated, "Early mainstreaming (K-1) with proper support services (H.I. Resource teacher, speech and language, etc.) is the last chance these children have for successful mainstreaming." Most parents, with a few exceptions, would like to see more language development at younger ages and more speech therapy. One parent suggested, "Work on speech therapy; certified speech pathologist giving 15 minutes to each hearing-impaired child daily- one-on-one basis to enhance speech and language."

Several other suggestions concerning academics were listed:

1. Work on sign language: More classes or workshops for students and parents to learn sigh language.

2. Have an itinerant language program in the school in addition to speech/language services. Do not put them in a regular resource room.
3. Work on cued speech.
4. Concentrate more on upgraded vocational training and help students get after school work.
5. Put children in classrooms with proper age children instead of K-5 together.
6. Provide bigger classrooms, not closets for classrooms.
7. Help students to better their written communication.
8. Separate children so that those who are less seriously hearing impaired do not misbehave enough to keep teachers from giving needed attention to those who need it.
9. Provide more time in school: 2 hours a day is not enough! Students need lengthier programs, including some in summer. "Summer teachers literally give up on you in the summer."
10. Books should be written in ways that hearing-impaired children can understand. Children with different levels of hearing impairment should not be expected to learn exactly the same materials or by the same strategies.
11. Hold higher expectations for hearing-impaired students.
12. Provide equal opportunities for hearing-impaired children.

While most recommendations were made thoughtfully and optimistically, a few comments registered ultimate distress. To present a balanced picture of the responses, here are some of the extremely negative comments:

1. You need a book just on the political aspects of the answer. (Concerning recommendations for improvements)
2. Educate public, teachers, and hearing students concerning hearing impaired. One person heard, "I didn't know he was deaf and dumb. He acts so normal."
3. Incorporate deaf community into schools.
4. Incorporate more deaf community into programs (for access to ASL as opposed to TC).
5. Remove politics from schools!

Outstanding Features

Mainstreaming

More than 67% of those who responded reported that their children are or have been in some degree of the mainstream. Many of these parents praised the mainstream programs. One mother made this statement:

> The most outstanding feature of the educational services or programs for hearing-impaired children in N. C. is that an education is offered in the public school! That's our entire reason for selling our home in South Carolina and moving to North Carolina.

Many parents/caregivers contended that the special quality of the mainstream programs is that the programs are located in most counties so that hearing-impaired children do not have to travel so far for an education. Parents maintained that this allows children to stay at home and have a normal lifestyle. One parent confessed, "Parents are put into hardships to get their children what every other child gets with ease. Too much time has to be spent so that the child can have some home life." One parent expressed, "This teaches them that they can maintain a normal life-style just like everyone else can." Another stated:

> Having the school close to home and the fact it's a public school is convenient. [My child] is mixed with normal hearing children and hearing-impaired children giving him exposure to the hearing world.

One parent's comments illustrate either responses heard or services requested from various parts of the state:

> We are very pleased with the mainstream program and even though it has taken 3 years we now have a resource teacher. Sign language has been taught to all of our daughter's classes and the children encourage her speech also. As her kindergarten teacher said, "The children have adjusted beautifully-really no adjustment needed at all. They think, "I have brown hair, you have blue eyes and she is deaf." Simplistic- yes- but typical of the acceptance of our daughter at this school.

Several parents in one area praise the Department of Exceptional Children (part of the Public School System) which they claim has gone to great lengths to provide services in the Public School for all hearing-impaired students and to make the mainstreaming of students a reality, with students treated as their hearing students are.

Schools for the Deaf

As much as mainstreaming is emphasized, it definitely is not for everyone. More than 25% (See p. 49) of the responders indicate their hearing-impaired children are in a residential school or some program which is a part of the residential school. Parents/Caregivers with children in these schools are adamant about the necessity of the schools. One parent insists:

> The question of mainstreaming is out. No public school in the state of North Carolina in my opinion could ever do for my child what the school for the Deaf has. It's cruel to try to make him try to be something he is not. He tries to talk. Why can't other people meet him half-way and try to sign.

Another parent adds, "I enjoy this new world I have been shown. With God, prayer, me and [my child] will make it." Another proponent of the School for the Deaf praised:

> The school has given my child a life to do things I thought would never be possible. She has had excellent opportunities in sports activities and academic training, and has been accepted at Gallaudet University. She plans to become a teacher and return to the North Carolina School for the Deaf. I would fight to keep the school open.

Other strong proponents for the Schools for the Deaf make comments such as these:

1. The school is clean, well-run, and has a pleasant environment and competent teachers-staff. Moral and social education are great!
2. The schools for the Deaf are wonderful, especially their willingness to involve parents in and inform parents of their child's daily activities that parents miss out on while the children are away from home.
3. The school is the closest to total communications setting possible in North Carolina. They instigate social interaction with deaf peers and adults; they have excellent language teachers; they offer hearing-impaired children the chance to remain at home and receive normal parenting as well as good educational opportunities; and they offer excellent awareness and services for deaf individuals.
4. The deaf schools are staffed with people who can direct the parents without employing their own needs (the deaf school).
5. The North Carolina Council for the Hearing-Impaired Department of Human Resources has finally set up their offices and staff in the Eastern parts of North Carolina.

Early Intervention

Early intervention programs are highly praised. Some programs begin before the child is one year old. One mother expressed joy shared by others:

> My daughter started [school] when she was 16 months old under a parent-infant program. It taught me how to teach [my daughter] and what to teach her. . . . She was placed in a regular kindergarten with an auditory trainer. . . , but she knew a lot more than most of the other children. First grade has been wonderful. It is a great challenge. . ., but she has proven she can do it. She does not have any background noise on her phonic ear. She is totally keyed in to the teacher. What she doesn't understand, she reads lips or asks. . . . All teachers have been involved and dedicated. She has a speech teacher who is also dedicated to helping. [Our school] should be highly commended because they care.

Another parent offered these praises: "My daughter started school before she was 3. She already had an expressive vocabulary of 100+ words." Another happy parent announced:

> Since my son was diagnosed as hearing impaired the service I've received from the DEC, [Satellite Preschool Program] and

> [Elementary school] has been excellent. The most outstanding feature. . . is their willingness to help any way they can either on an individual basis or through groups. These people have my deepest respect and admiration. My son has benefitted very much from these programs. The changes in him and the things he has been taught and has learned are incredible.

Preschool Programs

Preschool programs, including satellite programs of Deaf schools, were often heralded. Many outstanding features of the programs were noted:

1. The pre-school satellite programs through the Schools for the Deaf are the most beneficial in getting these children ready for school.
2. The home visits to parents along with sigh language instructions there were wonderful. Also support personnel began visiting and helping immediately after the child was diagnosed as hearing impaired.
3. When my son started the Preschool satellite program for hearing impaired he couldn't hear. During the first few months he received his hearing aids. With them they taught him how to use them and how to listen for sounds. Also he was taught to lip read and to use a little sign and was able to get along with his hearing peers. . . . So to my husband and myself the school has helped in more ways than we can express, besides they are still willing to help with any problem or concern if we need them. We will always give praise to the Lord for leading us to them and to doctors who have been so helpful.
4. Thank God for preschool satellite program. They helped [my child] and me emotionally and physically. It was very hard to accept his problem at first but it all got a little easier with the help of the teachers. The hearing-impaired class at [our school] is great. Everyone that has worked with him has been terrific. I praise all of them.
5. We have found the pre-school program to be a great asset. Our child has benefitted a great deal from attending the school and from the speech therapy he has received. It has been extremely helpful to have all the professionals from the pre-school providing input into our child's education.
6. The state program my child is in (preschool satellite) has been great so far. The teachers . . . really are interested and very professional in relation to our child's development. The visits to the school for the Deaf for preschool children's parents is a great help in our making decisions for our children's futures.

The overall impression of parents/caregivers of hearing-impaired children is that the preschool satellite programs are staffed by professionals who provide helpful information. They laud the screening of the children to see what services they need. Those who have children in preschool satellite programs feel that the programs are outstanding in promoting total communication.

Teachers

Parents/caregivers constantly listed teachers of the hearing-impaired children as the outstanding features of North Carolina's educational system. They claim that the teachers are overworked but are determined to educate to reduce or avoid failure rather than to offer education and resources only after failure is obvious. They call the teachers professional special educators who also help parents adjust to having hearing-impaired children. Many praises to teachers were presented:

1. The teacher is the most outstanding feature. She is vibrant, energetic, caring, versatile, patience, etc. She meets with our daughter twice a week; once in our home for an hour, and once at Project Enlightenment.
2. The teacher [my child] has for hearing-impaired children has been a God-send.
3. (Hearing-impaired parent) It's too bad things weren't like this when I was going to school, for being hard of hearing hindered my reading speech so it was real hard to keep up.
4. The teachers are dedicated; they care about the students.
5. The teacher at [my child's] school don't just teach. She truly cares about her students and she shows it, and I think it makes a big difference in their performance and learning.
6. My child's teacher makes learning fun. She cares!
7. These children [preschool for the hearing-impaired program] are treated as normal children and made to feel comfortable in all that they are exposed to and taught in the school. As a result, their personalities and self esteem are tremendously

outstanding and high. Another outstanding feature is that the children are truly loved.

8. Caring teachers work with the children and help them understand and take time with them to explain and go step by step- It's great!
9. The people we work with have a genuine concern and love for the children they administer to.
10. The programs in our county are super. We could not ask for better hearing impaired teachers, speech teachers- or cooperation with all the teachers involved!
11. My son is starting to catch up thanks to a hearing-impaired teacher that cares.
12. They take the time needed for each child to learn. In our case my child rode a bus for 45 minutes to 1 hour. The teachers would send me notes, as needed, when something came up at school.
13. The hearing-impaired teachers (not Administration or School Board) in our county school system are outstanding. Without the understanding of these two teachers, dealing with my child would be impossible in her studies.
14. Outstanding features are how much the professionals within the system care about the children they serve, and how far out of the way they are willing to go to help us.
15. I just think the teachers and staff at NCSD are doing a great job in educating our hearing-impaired children. We are well pleased. I'm amazed at the discipline the children get at the school. I think it is fantastic.
16. I like how [my daughter] has learned to communicate and take care of herself. I like how she has accepted her handicap and make it work for her. I love the work the school has done, but you need more teachers to take a personal interest like [a former teacher] did. We miss that personal touch.
17. In spite of administrative road blocks, the teachers do an admirable job with our Hearing-impaired kids.
18. The itinerant teachers are able to travel directly to my child's Child Development Center. Also, I receive information about my child and for me; I receive individual help and attention.
19. I feel we have the best hearing-impaired teachers anyone could ask for and we are lucky to have them in this area.

Samples of other noted special features concerning teachers:

1. They are knowledgeable.
2. Teacher and aide have the freedom to take children on field trips to visually understand the things they study.
3. Directors listen to parent concerns and student needs.
4. Concern of personnel at local school level is great: Exceptional children's coordinator, principal of local school, teacher, and assistant.

5. Self-contained class for hearing impaired has teacher who cares. My child is very disruptive in total mainstream, calm and obedient in self-contained situation.
6. Small student/teacher ratio is great.

Innovations

Innovative features of several areas were held up by many as the most outstanding features.

1. Creation of lead teacher position whose only responsibility is the Hearing-Impaired Program is a wonderful improvement.
2. Encouragement of total communication skills is praised. One parent expressed, "I love the total-language."
3. If something needs to be changed or corrected it is taken care of immediately.
4. Excellent academic programs are wonderful. "You don't have to put your children in residential schools"
5. Individualized Education Plans are great.
6. Continuous program K-12 really helps students involved.
7. Several children in the same program allows children to relate to someone.
8. Excellent staff in speech and language programs.
9. Cued, total communication, and oral methods of communication for parents to choose from.
10. Varied electives are available: Options available for education include all methodologies. Also, electives such as Driver's Training, Computers, and sports are possibilities.
11. Our programs are excellent. Professionals keep a close eye on special students and make sure they have audiograms and proper running telexes.
12. Project Enlightenment is fantastic for infants 0-3. I feel so fortunate to have this service in this area. It is wonderful that the county school system provides this to the families at this very important time - such a developmental time.

Support Services

The availability of support services was praised by many as outstanding. One parent, for example, exclaims:

> The best thing I've found in [my county] is the Resource Teachers. They are the best. This county also has Parents Hearing Impaired Association that has been great. It keeps us informed at county and state levels and offers many, many support resources.

Parents also commended other support services:

1. Help from audiologists and hearing clinic keeps everyone informed of the child's hearing rank and changes.
2. Services are available from Crippled Children's Fund and Medicaid for multi-handicapped.
3. Medical services are available in Charlotte.
4. Interpreters, speech therapists, and special education teachers assist mainstreamed students.
5. Useful equipment is available: auditory trainer.
6. Guidance: Older students are helped to find jobs. That is very important.
7. The extra services available, such as counseling, vocational opportunities, and affiliation with [community college] are outstanding.
8. Vocational area is one of the outstanding features.

Negative Comments Made About Outstanding Features

Not all responses were as positive as the above. Some were extremely distressed about their experiences in hearing-impaired programs:

1. Resources are very poor. Thinking of relocating.
2. I don't know any outstanding features. I just know my child does not get the education she deserves. One or two hours a week is not enough.
3. NO OUTSTANDING FEATURES!
4. I am presently considering suing the public school system of North Carolina, [my county], for denying my child a proper education. Education in [my county] stinks!
5. Social service type programs have trouble accepting and relating to educated parents. We have not utilized most services because they have not offered anything my husband and I don't already know. I resent being treated in a condescending or abrupt manner.

CHAPTER V

DISCUSSION

The response to the questionnaire appears to be diversified adequately to be representative of parents and caregivers of hearing-impaired children throughout North Carolina. Responses were received from 80 of the 93 counties identified in Certified Headcount for Special Education, 1988, in Raleigh, North Carolina, as having hearing-impaired students in schools. Nine of the 557 did not designate county of residence. Forty percent of the counties were Coastal, with 180 (33%) of the students; forty percent, were Piedmont, with 259 (46%) of the students; and twenty percent were from the Mountains, with 109 (20%) of the students (See Table 1). Some response came from counties which did not have hearing-impaired students according to statistics received from Raleigh. This may be due in part to the parents moving so that the needs of their hearing-impaired children could be better met. Demographics indicate that the majority of the hearing-impaired students are located in the Piedmont where the majority of the population reside.

Seventy-one (13%) of the parents/caregivers reported that they are living where they are because of educational opportunities; some moved so their hearing-impaired children could attend public schools and others, residential schools.

The formal education, race, and income of those who completed and returned questionnaires were also diverse. Four percent completed elementary school; six percent, junior high; fifty-four percent, high

Table 1.

Response of Counties by Geographical Location

COASTAL		PIEDMONT		MOUNTAIN	
Beaufort	9	Alamance	8	Avery	1
Bertie	2	Alexander	2	Buncombe	38
Bladen	1	Anson	2	Burke	13
Brunswick	6	Cabarrus	4	Caldwell	15
Carteret	4	Caswell	1	Haywood	1
Columbus	4	Catawba	2	Henderson	9
Craven	10	Chatham	4	Madison	2
Cumberland	31	Cleveland	9	McDowell	3
Currituck	2	Davidson	15	Polk	2
Dare	2	Durham	4	Rutherford	3
Duplin	9	Forsyth	15	Surry	6
Edgecombe	2	Gaston	15	Swain	3
Halifax	6	Granville	3	Transylvannia	2
Harnett	6	Guilford	22	Watauga	1
Hertford	1	Iredell	11	Wilkes	9
Hoke	2	Lee	13	Yancy	1
Hyde	1	Lincoln	6		
Johnston	4	Mecklenburg	15		
Lenoir	2	Moore	8		
Martin	2	Orange	1		
Nash	4	Person	3		
New Hanover	17	Randolf	17		
Northampton	6	Richmond	8		
Onslow	3	Rockingham	4		
Pasquotank	1	Rowan	8		
Pitt	6	Stanley	4		
Robeson	6	Stokes	2		
Sampson	9	Union	2		
Scotland	3	Vance	3		
Washington	1	Wake	44		
Wayne	9	Warren	1		
Wilson	9	Yadkin	3		
Total	180 (33%)		259 (47%)		109 (20%)

Total who did not indicate county of residence 9 school; and thirty-six percent, at least some college. The Bureau of Census (1987) reported a total of 65,133,000 families in the United States. Of these families, (6%) finished elementary school; 5%), junior high; (44%) high school; and (38%), at least some college. (See Table 2.) This national data compared to the current data indicate that the parents/caregivers who participated in the current North Carolina study had educations characteristic of other families in the United States except in the high school area. About (12%) more North Carolina parents/caregivers of hearing-impaired students than general United States families had attended at least some high school. (See Table 2.) The percentages in the report by The Bureau of Census did not equal 100%. Twenty-four percent (24%) of the 548 respondents of the present North Carolina survey were Black; seventy-one percent (71%) were White. The percent of Black to White is about 34% Black to 66% White. The Bureau of Census (1987), however, reported 11 percent (11%) of the families in the United States and 19 percent (19%) of North Carolina families were Black (See Table 2). The findings indicate that there are about 13% more Black hearing-impaired students in North Carolina than in the rest of the United States and about five percent (5%) more Black hearing-impaired students than in the North Carolina statistics reported by The Bureau of Census. This may indicate a need to investigate the possible increase in hearing impairments in Black students in North Carolina schools.

Table 2.

Comparison of Education and Income of Those Who Completed Questionnaires to Education and Income of North Carolina and United States Families- By Race When Available (1987-88)

		Median Income
Total-United States families	65,133,000	$30,853
Total-White	56,044,000 (86%)	$32,274
Education		
Elementary	3,259,000 (6%)	$15,264
Jr. High	2,798,000 (5%)	$18,718
High (1-4 yrs.)	26,056,000 (46%)	$26,806
College (1-3 yrs.)	9,184,000 (16%)	$37,324
College (4 yrs.or more)	12,398,000 (22%)	$50,908
Total-Black	7,177,000 (11%)	$18,098
Education		
Elementary	821,000 (11%)	$12,149
Jr. High	382,000 (5%)	$13,210
High (1-4 yrs.)	3,773,000 (53%)	$16,215
College (1-3 yrs.)	1,006,000 (1%)	$25,115
College (4 yrs. or more)	692,000 (1%)	$36,568
Total-North Carolina	4,034,000	$18,637
Total-White	3,195,000 (79%)	
Elementary	N/A	N/A
Jr. High	N/A	N/A
High School	2,300,400 (72%)	N/A
College (1-4 yrs.)	610,245 (19.1%)	N/A
Total-Black	761,000 (19%)	N/A
Elementary	N/A	N/A
Jr. High	N/A	N/A
High School	401,047 (52.7%)	N/A
College (1-4 yrs.)	66,207 (8.7%)	N/A
Total-Parents/Caregivers	557	$25,362
Total-White	398 (71%)	
Total-Black	134 (24%)	
Education- All races		
Elementary	21 (4%)	N/A
Jr. High	35 (6%)	N/A
High School	305 (56%)	N/A
College (1-4 yrs.)	198 (36%)	N/A

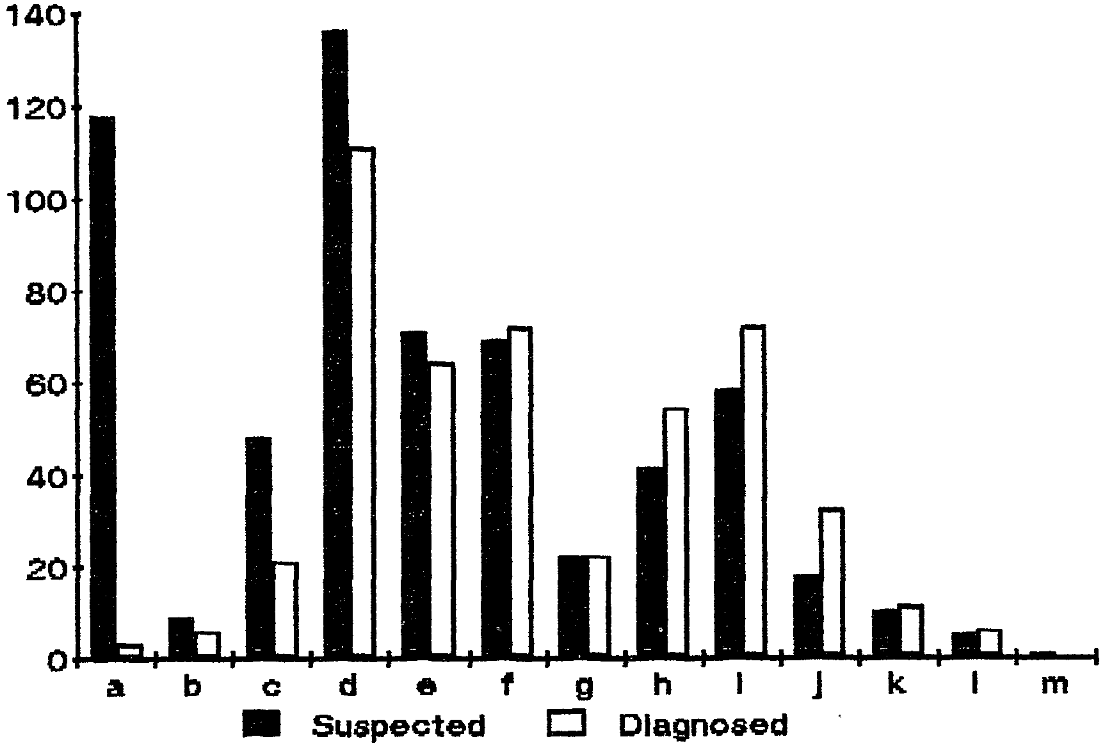
Information for N.C. and U.S. families is for 1988 and comes from Statistical Abstract of the United States-1990.

According to figures received from Student Information Management in Raleigh, there were 6 Asian, 10 Hispanic, and 23 American Indian hearing-impaired children in North Carolina schools. Response was received from 2 Asians (33%), 6 American Indians (26%) and no Hispanics.

The discrepancies in the age that family or friend suspected a child's hearing loss and the time a professional diagnosed the loss suggests to the researcher that some parents/caregivers misinterpreted the question. The question was designed to ask when someone notice something about the child that caused him to suspect a hearing loss. Many must have answered on the basis that the child was probably born hearing impaired after he or she was identified as hearing impaired by a professional. This question should be rephrased and clarified in a later survey (See Figure 1).

Incomes of parents or caregivers involved in the study ranged from less than $8,000 (9) to more than $44,000 (91), with the largest number (15) reporting incomes of between $8,000 and $15,000. Of those responding to the income question, 255 made less than $24,000 and 269 made $23,000 or more. (See p. 44.) While the average income of those who responded to questionnaireswas well above the average for North Carolina, twenty-seven percent (27%) made almost $4,000 less than average and about fifty percent (50%) less that the average for the United States. Fifty-eight percent (58%) made less than the United States average. This may explain the needs many expressed for financial assistance to pay for hearing-aids, phonic ears, transportation to

<u>Figure 1</u>. Discrepancies in Suspected and Diagnosed Age of Child's Hearing Loss.



		Number of Persons Who Suspected Hearing Loss	Number of Professionals Who Suspected Hearing Loss
a.	Birth	118	3
b.	1st Month	9	6
c.	2 - 6 Months	48	21
d.	7 - 12 Months	136	111
e.	13 - 18 Months	71	64
f.	19 - 24 Months	69	72
g.	25 - 30 Months	22	22
h.	31 Months - 3 Years	41	54
i.	4 - 5 Years	58	72
j.	6 - 7 Years	18	32
k.	8 - 10 Years	10	11
l.	11 - 15 Years	5	6
m.	16 - 20 Years	1	0

schools, and other expenses incurred in the interest of education for their hearing-impaired children.

Occupations reported were varied: 171 (33%) professionals; 58 (11%) service work; 85 (16%) manufacturing; and 159 (30%) homemakers. Others did not specify occupations. Not enough information is available to draw specific inferences from occupations; however, 130 (21%) indicated that they lived where they do because of jobs. The majority 301 (48%) of those responding live where they do because it is where they grew up. (See p. 46.)

Only 55 (10%) of the respondents indicated having some degree of hearing loss, which is in line with national data which indicate 10% of hearing-impaired children have hearing-impaired parents. No trends were noted in the age the parents/caregivers lost their hearing. Twelve reported that they were born deaf; five were hearing impaired by the time they were about five years old; four indicated they had lost their hearing by age eleven; four more, by age twenty-eight; three by age forty-seven; and one at age fifty-six. The relationships with hearing-impaired persons other than their own children were limited: 271 communicated with family or friends who had hearing losses of some degree; 69, with co-workers or neighbors; several had communicated only with their children's hearing-impaired friends. The limited associations with hearing-impaired persons other than their own children may explain why some parents felt distressed as to how to help their children and expressed anger toward teachers and support personnel. These are normal feelings for parents with hearing-impaired students when the parents have had limited association with hearing-impaired persons (Mendel & Vernon, 1971; Moses, 1985; Mindel & Feldman, 1987; Kampfe,1989).

Parents' education does appear to have some bearing on educational expectations they have for their hearing-impaired children. Parental expectations for their hearing-impaired children are high, and there is no significant variation in Black and White expectations except in vocational training. Seventy-one percent (71%) of White and sixty-six percent (66%) of Black parents or caregivers expect their hearing-impaired children to go to college. Twelve percent (12%) White and thirteen (13%) Black, expect technical training; however, thirteen percent (13%) White and six percent (6%) Black expect vocational training. (Parents or caregivers were directed to give more than one answer if applicable.) The <u>Statistical Abstract of the United States</u>, 1990 reports that about fifty-nine (59%) of White high school graduates attend at least one year of college and about forty-seven (47%) of Black graduates attend the same. College expectations of those who participated in this study are somewhat higher than the United States norm for hearing students (See Table 3). While high expectations are good, there is a possible need for counseling to set realistic, satisfactory goals for the hearing-impaired students.

<u>Statistical Abstract of the United States</u> (1990) shows that of high school graduates who do not go to college, about seventy-seven percent (77%) are employed: forty-one percent (41)% male; thirty-six percent (36%) female. Twenty-three percent (33%) are Black. Two hundred fifty-six (46%) of the children reported are females and two hundred sixty-eight (48%) are males. The sexes of the other children were not

Table 3.

Parents' Educational Expectations for Children

		No. Parents Expecting Child to Attend:		
Parents' Education		College	Technical School	Vocational School
Elementary	21	9 (4%)	4 (4%)	2 (4%)
Junior High	35	22 (6%)	4 (6%)	2 (6%)
High School	305	194 (55%)	36 (55%)	29 (55%)
College	198	157 (36%)	20 (36%)	27 (36%)

identified. About fifteen percent (15%) of the graduates are unemployed. About seventy percent (70%) of parents expect their children to be self-sufficient. Those parents who requested more vocational training and assistance in getting jobs for their hearing-impaired students appear to have legitimate claims.

About fifty percent (50%) of parents of hearing-impaired children said they expect their children to marry. Schein (1978) reported that at least ninety percent (90%) of hearing-impaired adults marry others who are members of the Deaf culture. This may not be valid currently since more hearing-impaired students come in contact with hearing persons since many are in the mainstream in some program now. Four hundred sixty-four (83%) of the students in this researcher's study were identified as being in some degree of the mainstream program. Only five percent (5%) said they expect their children to stay single, and seven percent (7%) expect their children to live at home.

Seventeen percent (17%) of those who responded said their children are multi-handicapped. This is about six percent (6%) higher than was reported by the U. S. Department of Education (1983). Their report stated that between ten percent (10%) and eleven percent (11%) of all school children in the United states have educationally significant handicaps. However, Schildroth and Karchmer (1986) reported that "among hearing- impaired children the prevalence of handicaps in addition to hearing impairment is approximately three times as large or 30.2 percent" (p. 55). They also reported that "it is reasonable to suppose that they [multihandicapped hearing-impaired students] account for well over a third of the resources devoted to deaf education " (p. 55). This might be something that those who plan the North Carolina budgets for the hearing-impaired programs might keep in mind.More than 209 (38%) of the hearing-impaired children were in residential schools or some program which is a part of the residential school. Parents and caregivers with children in these schools were adamant about the necessity of the residential schools. One hundred ninety-five (35%) were in self-contained mainstream classes. Eighty-one (15%) were partially mainstreamed, one hundred ten (20%) were totally mainstreamed, and seventy-eight (14%) were in pre-school satellite programs. Those involved in the satellite programs were delighted with the services received in the programs and with the teachers involved. Ninety-one (16%) were receiving some resource services.

About 64% of the parents/caregivers who responded indicated that they had been informed of all educational approaches to teaching their hearing-impaired children. More than half (61%) preferred total communication. (See p. 11.) Several of those who claimed they had not been made aware of the various educational programs had discovered total communication by taking the initiative to find the best possible means of educating their children. Every parent reported some degree of speech being taught to their children. Most requested more assistance in speech. Attention should be given to their request in view of the fact that surveys (Paul & Quigley, 1990) reported that the educational and vocational attributes of oral hearing-impaired adults were higher than those with typical general population and higher than those with hearing-impaired students educated in other education programs.

Almost fifty percent (50%) of the parents/caregivers indicated that they communicated with their hearing-impaired child by total communication. Many indicated that their child's hearing was good enough that the child could understand if persons talked loudly and the child could see the mouth while the person was talking; however, the data collected in this survey suggests that a great majority of the students could not communicate adequately without special assistance. The degree of hearing loss of students were as follows:

Mild (35-54 dB) 27 students (about 5%). These do not routinely require special class/school placement or speech or hearing assistance.

Moderate (55-69 dB) 137 students (about 25%). These occasionally require special class/school placement and routinely require special speech, hearing, and language assistance.

Severe (70-89 dB) 138 students (about 25%).

Profound (90 dB and beyond) 215 students (40%). The students who are severely or profoundly hearing-impaired routinely require special class/school placement and speech, hearing, language, and educational assistance. (Five percent did not indicate degree of hearing loss.

Most of the parents stated that they would like to learn to communicate better with their children. This is likely because most have had little experience with hearing-impaired persons and know little about how to communicate. Four hundred eighty-six (87%) of the respondents indicated that they had normal hearing. Only five (less than 1%) indicated profound hearing loss. Only about twenty-five percent (25%) stated that they had experience with other hearing-impaired family members, and about twenty-five percent (25%), with hearing-impaired friend. Others had had little contact with hearing-impaired persons.

Profile of Hearing-Impaired Students in Public and Residential Schools in North Carolina

Parental Information: Description of the parents or caregivers

Main caregivers: mother 443 (80%); father 285 (51%)

Number of caregivers who had at least a high school education: 503 (90%)

Typical occupations: professional 171 (31%); homemaker 159 (29%)

Average family income: $25,396

Income less than $15,000: 151 (29%)

Income more than $44,000: 91 (17%)

Population by major races: White 398 (73%); Black 151 (26%)

Regions with largest populations: Piedmont 259 (47%); Coastal 180 (33%)

Main reasons for living in a particular county: hometown 301 (55%); job opportunities 130 (24%)

Number of children in most families: 2

Typical hearing status: normal 486 (89%)

No experience with hearing impaired persons besides own child: 100 (18%)

Main type of educational program of hearing-impaired parents: public school

Main age hearing was lost: birth (41%)

Child Information

Identified as main causes of hearing loss: unknown 201 (35%); meningitis: 73 (13%); heredity 64 (11%)

Main recommendations of persons who diagnosed the hearing loss: pre-satellite program 188 (25%); get second opinion 136 (18%); regular classroom with support services 92 (12%); residential school for the deaf 71 (9%)

Main persons sought for second opinion: audiologist 237 (31%); ear, nose, and throat doctor 218 (29%)

Main type of program child is in: mainstreamed: self-contained 195 (25%) or totally 110 (14%); residential school 148 (19%).

Other programs child has been in: pre-school satellite of a residential program 108 (17%)

Approach caregiver used most for communication with his or her hearing-impaired child: total communication 266 (41%)

Approach to education most often used: total communication 265 (43%)

Parental Expectations

Main educational expectation for hearing-impaired child after school: college 381 (68%)

Main other expectations for hearing-impaired child: self-sufficient lifestyle 390 (70%); marriage 277 (50%)

Educational/Clinical Services

Typical length of time between identification of child's hearing loss and initiation of some type of action toward managing the hearing loss: birth to 6 months 448 (80%)

Typical length of time between asking for special service and receiving assistance: 0 to 3 months 376 (68%)

Person who most often delayed time between suspicion of hearing impairment and diagnosis due to misdiagnosis: pediatrician 109 (20%)

Person who first assisted in finding a program of study for hearing-impaired child: audiologist 245 (44%)

Persons who most assisted in finding a program of study for hearing-impaired child: audiologist 215 (39%); teacher 183 (33%)

Number who were informed of all educational approaches: 357 (64%)

Level of achievement of most children: grade level 197 (35%); below grade level 179 (32%)

Rate of support services received: excellent 252 (45%); average 212 (38%)

Parental Recommendations

1. Provide a centralized source of unbiased information for parents or caregivers.

2. Boost self-esteem of children.

3. Provide more funds.

4. Give attention to staff and resources.

5. Give attention to academic programs.

Outstanding Features

1. Mainstream program.

2. Residential schools.

3. Early intervention.

4. Preschool programs.

5. Teachers

6. Innovations

7. Support services

CHAPTER VI

RECOMMENDATIONS

Conclusion

The review of the literature shows that age at onset and degree of hearing loss have definite bearings on a hearing-impaired child's ability to learn (See p. 19). This point was confirmed again and again as parents praised the early intervention programs and preschool satellite programs. It is the opinion of this researcher that the parents whose children began in the early months of life to learn to relate to other persons are the parents who are pleased with the educational system. Those who are most unhappy with the educational system are the parents whose children have not had the services required by PL 94-142 (1975). This law requires that handicapped children have whatever is necessary to educate them in the least restrictive environment, and parents are supposed to be able to have some input into what is the least restrictive environment. Many parents feel that they are not being given this opportunity or are not being heard. They realize that in order to be able to help their children, they must have some training themselves. One parent made many points which should be recognized concerning students, teachers, parents, and education:

> I believe Deaf children should be given every opportunity possible to understand what is happening in our world. Parent education is where it has to come from. Teachers can only do so much. A parent needs to know they have the same obligations to a deaf child as a hearing child from bed-time stories to explaining dreams and if they can't communicate with their child, they are closing the door on their child and depending on other people. I know thru experience that teachers can involve parents or push 'em away. For the deaf child to be a better all-around person, he needs his

> parents educated also. . . . More emphasis should be put on parent education, keeping the child at home as long as possible, and encouraging families to be involved with educating deaf children.

Parents are asking for assistance so that they might help their own children. They realize that they must accept the child's handicap in order to help the child deal with it. Clearly, emotional and psychological attitudes of parents/caregivers toward their hearing-impaired children have an impact on his or her educational achievement. Paul & Quigley (1990) noted that familial interaction is without a doubt influential in educational success, and this is a message that resounded throughout the recommendations made by parents.

Most parents of hearing-impaired children involved in this survey expressed the same expectations as parents of normal hearing children. Percentage wise, they may have higher expectations. These parents are not willing to let their children fall through the cracks in the educational system; many are extremely frustrated. Some school systems are working on innovative programs that parents are praising; unfortunately, many systems appear to be negligent in the area of handicapped children.

Recommendations

Based on the study, the data indicates that many parents feel the need for a central office of information for parents of hearing-impaired children with branches in each county. This is supposedly happening with district and local personnel, but many parents contend that the system has obviously broken down and needs to be seriously evaluated and revised. This researcher offers the following recommendations:

1. Parents with hearing-impaired children should have local numbers to call for assistance and toll free numbers to a central state system for use when they do not feel their children are receiving assistance guaranteed them and feel that they cannot get satisfactory answers locally.

2. Those counties that are having so much success should be looked at as models. They are doing something right, as parents in these counties raved about the exceptional education their children are receiving.

3. A central official should be responsible for circulating throughout the state to observe the programs and equipment for hearing-impaired students to assure that the needs of hearing-impaired children throughout the state are met.

4. Regular classroom teachers who are likely to be teaching hearing-impaired students should be required to take at least one in-service course on teaching hearing-impaired students and, where possible, should be given the opportunity to observe classrooms where hearing-impaired students are being successfully taught.

5. More effort should be made to listen to parents of hearing-impaired students, to educate them as to the best ways to communicate with their children, and to establish local support groups so parents can help each other adjust to having hearing-impaired children.

6. More effort needs to be made to integrate the Deaf community into other communities and to help normal hearing students understand the Deaf and relate to them.

7. More emphasis should be placed on helping hearing-impaired students to be trained to work in public places and to find employment, beginning with after school employment when the child desires to work.

8. The Department of Education in the state of North Carolina should sponsor more research in the area of hearing-impaired students. Research in the school system can be thorough only when controlled by persons who can legally communicate person-to-person with parents/caregivers of the hearing-impaired in North Carolina public and residential schools.

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APPENDIX A

Questionnaire

QUESTIONNAIRE

PLEASE CIRCLE OR CHECK THE APPROPRIATE CHOICES
OR WRITE IN YOUR OWN RESPONSES.

SECTION I. PARENTAL INFORMATION.

A. Who is completing this questionnaire?
   a. father
   b. mother
   c. step-father
   d. step-mother
   e. foster parent
   f. grandparent
   g. other ____________________

B. Who is (are) the other caretaker(s) in the family?
   a. father
   b. mother
   c. step-father
   d. step-mother
   e. foster parent
   f. grandparent
   g. other____________________

C. What is the highest grade completed by the person(s) completing this questionnaire?

	YOU	OTHER COMPLETING THIS QUESTIONNAIRE
elementary	____	____
junior high	____	____
high school	____	____
college	____	____

D. What are your occupations?

	YOU	OTHER COMPLETING THIS QUESTIONNAIRE
professional	____	____
service	____	____
manufacturing	____	____
homemaker	____	____
other	____	____

E. What was the approximate family income in 1989?
   a. $8,000-$15,000
   b. $15,000-$23,000
   c. $23,000-$30,000
   e. $30,000-$37,000
   f. $37,000-$44,000
   g. $44,000+

F. Please check which most accurately identifies you.

	YOU	OTHER COMPLETING THIS QUESTIONNAIRE
White	_____	______
Black	_____	______
American Indian	_____	______
Hispanic surname	_____	______
Asian	_____	______
Other	_____	______

G. In what county of North Carolina do you live? ___________

H. Why do you live in this area?
a. hometown b. job opportunities
c. educational opportunities d. other________________

I. How many children do you have?
a. 1 b. 2 c. 3 d. 4 e. other____

J. What is the hearing status of those completing this questionnaire? *** (See definition below.)

	YOU	OTHER COMPLETING THIS QUESTIONNAIRE
normal hearing	____	_____
slight hearing loss	____	_____
moderate hearing loss	____	_____
severe hearing loss	____	_____
profound hearing loss	____	_____

*****Degrees of hearing loss as defined by the Conference of Educational Administrators Serving the Deaf (CEASD).**

a. Mild- (Level I)- 35-54 dB- Do not routinely require special class/school placement; do not routinely require speech of hearing assistance.

b. Moderate- (Level II)- 55-69 dB- Occasionally requires special class/school placement; routinely requires special speech, hearing, and language assistance.

c. Severe- (Level III)- 70-89 dB- Routinely requires special class/school placement and special speech, hearing, language, and educational assistance.

d. Profound- (Level IV)- 90 dB and beyond- Routinely requires special class/school placement and speech, hearing, language, and educational assistance.

K. Other than your hearing-impaired child, what has been your experience with hearing-impaired persons?

	YOU	OTHER COMPLETING THIS QUESTIONNAIRE
family member	____	_____
friend	____	_____
co-worker	____	_____
neighbor	____	_____
other	____	_____

(IF YOU HAVE NO HEARING LOSS, PROCEED TO SECTION II. IF YOU HAVE A HEARING LOSS, PLEASE ANSWER THE FOLLOWING QUESTIONS.)

L. What type of educational program did you attend?

	YOU	OTHER COMPLETING THIS QUESTIONNAIRE
public school	____	_____
private school	____	_____
residential school	____	_____
mainstream	____	_____
other	____	_____

M. At what age did you lose your hearing?
YOU _____ OTHER COMPLETING THIS QUESTIONNAIRE _____

SECTION II. CHILD INFORMATION.

If you have more than one hearing-impaired child in an educational program, Check or write in all answers which apply.

A. What was the cause of your child's hearing loss?

a. heredity
b. reubella
c. prematurity
d. meningitis
e. RH factor
f. unknown
g. other____________

B. Please complete the following columns for each child.

		Example	Child 1	Child 2	Child3
a.	Current age	5			
b.	Sex (m/f)	f			
c.	Grade in School	K			
d.	Hearing impaired (y/n)	Y			
e.	Degree of hearing loss (see CEASD definitions p. 2)	Moderate			
f.	Age hearing loss first suspected	10 mo.			
g.	First suspected by whom	mother			
h.	Age diagnosed by professional	12 mo.			
i.	Professional who diagnosed problem	Pediatrician			
j.	Diagnosed as multiple-handicapped (y/n)	N			

C. What recommendation did the person who diagnosed the hearing loss make?
   a. get second opinion
   b. private program
   c. residential school for the deaf
   d. pre-school satellite program
   e. regular classroom with support services
   f. regular classroom in public school but in self-contained class
   g. itinerant programs
   h. parent counseling and guidance in individual or group therapy
   i. other_______________________________________

D. If you got a second opinion, from whom?
   a. family doctor
   b. audiologist
   c. speech therapist
   d. ear, nose, throat doctor
   e. psychologist
   f. other____________________

E. If you did not follow the suggestion made, what action did you take?
   a. private program
   b. residential school for the deaf
   c. pre-school satellite program
   d. regular classroom with support services
   e. regular classroom in public school but in self-contained class
   f. itinerant programs
   g. parent counseling and guidance in individual or group therapy
   h. other____

F. What type of program is your hearing-impaired child in presently? (Check all that apply.)
   a. residential (day only_____) or residential______
   b. mainstream: self-contained ______
   c. mainstream: partially ______
   d. mainstream: totally ______
   e. pre-school satellite of residential program______
   f. resource services ______
   g. other_______________________ ______

G. If your child has been in different programs, please indicate how long for all that apply.
   a. residential day ____; residential _____
   b. mainstream: self-contained _____
   c. mainstream: partially _____
   d. mainstream: totally _____
   e. pre-school satellite of a residential program_____
   f. resource services _____
   g. other_______________________ _____

H. What approach do you use for cummunication with your hearing-impaired child?
a. Auditory/Verbal
b. Cued Speech
c. Oral
d. Total communication
e. Some combination of the above
(Circle all that apply)
f. Other______________________

I. What communication approach is used in educating your hearing-impaired child?
a. Auditory/Verbal
b. Cued Speech
c. Oral
d. Total communication
e. Some combination of the above
f. Other______________________

SECTION III. PARENTAL EXPECTATIONS

A. What educational expectations do you have for your child after high school?
a. college
b. technical training
c. vocational training
d. go to work
e. sheltered workshop
f. other_________________
____

B. What other expectations do you have for your hearing-impaired child? (Circle any that apply.)
a. marriage
b. stay single
c. live at home
d. self-sufficient lifestyle
e. other____________________
____

SECTION IV. EDUCATIONAL/CLINICAL SERVICES

A. How soon after your child was identified as having a hearing loss did you initiate some type of action toward managing the situation?
a. 1-6 months
b. 7-12 months
c. 13-18 months
d. other_____ months

B. How long after you asked for special services did you receive assistance?
a. 1-3 months
b. 4-6 months
c. 7-9 months
d. 10-12 months
e. other _____ months

C. If there was a delay from suspicion to diagnosis, did any of these professionals contribute to that delay through

(Check any that apply)

	MISINFORMATION	MISDIAGNOSIS?
a. pediatrician	______	______
b. family practice doctor	______	______
c. ear, nose, throat doctor	______	______
d. audiologist	______	______
e. social worker	______	______
f. psychologist	______	______
g. other _____________	______	______

D. Who first assisted you in finding a program of study for your child?

a. doctor
b. advocacy group
c. social services
d. teacher
e. audiologist
f. psychologist
g. other_______

E. Who assisted you most in finding a program of study for your child?

a. doctor
b. advocacy group
c. social services
d. teacher
e. audiologist
f. psychologist
g. other_______

F. Were you informed of all the educational approaches: Auditory/Verbal, Cued Speech, Oral, Total Communication?

____

____

____

G. On what level is your child achieving?

a. grade level
b. above grade level
c. slightly below grade level
d. extremely below grade level

H. How would you rate the support services you have received?

a. excellent b. average c. poor d. other___

I. What recommendations can you make for improvements in educational services or programs for hearing-impaired children?
(Continue on back if you need more space.)

J. In your opinion what is the most outstanding feature of the educational services or programs for hearing-impaired children in your area of North Carolina?
(Continue on back if you need more space.)

APPENDIX B

Letters to Precede or Accompany Questionnaire

The attached letter was sent to the following:

Elmer Dillingham, Superintendent
Eastern North Carolina School for the Deaf
P. O. Box 2768
Wilson, North Carolina 27893

Rance Henderson, Superintendent
North Carlina School for the Deaf
Hwy. 64 and Fleming Drive
Morganton, North Carolina 28655

Ronald F. Wilson, Superintendent
Central North Carolina School for the Deaf
P. O. Box 14670
Greensboro, North Carolina 27415-4670

110 Olde Farm Road
Hudson, North Carolina 28638
February 22, 1990

Dear

This is in regard to our conversation last summer concerning a questionnaire for the dissertation which I am currently working on a the University of North Carolina at Greensboro. In addition to your generous suggestions, I also received information from several others who are including Ronald Wilson and Rance Henderson at other schools for the Deaf, Art Mime of Beginnings, several Directors for Exceptional Children, and of course, my advisor, Dr. Ed Shroyer. I have requested from each suggestions which could be useful to hearing-impaired students in any educational setting.

This information is finally organized into a Questionnaire which hopefully will create a profile of parents and caretakers of hearing-impaired children and will identify services and educational programs available to these parents and their children. I hope also to garner suggestions, recommendations, and expectations which the parents might have which might enrich the educational opportunities for hearing-impaired children.

I am enclosing a copy of the Questionnaire which I plan to send out to all parents of hearing-impaired children in public and private schools in North Carolina. I need to know how many copies of the Questionnaires you will need to get them to parents of your students. I appreciate very much your cooperation. As soon as I know the number, I will deliver the Questionnaires to you along with self-addressed envelopes so that parents may return the Questionnaires directly to me. I will contact you within a few days to see if you have questions and to find out how many Questionnaires you will need. Please feel free to call me if you have any questions concerning this project. I can be reached at South Caldwell High School from 8:00-3:30 (704-396-2188) or at home (704-728-3756).

Thank you so much for your gracious help. I look forward to visiting you again.

Sincerely yours,

Betty C. Whitener

The attached letter was sent to the following:

Northwest Regional Education Center
Glenda Adams
Coordinator of Exceptional Children
303 E Street
North Wilkesboro, Nc 28659

Central Regional Education Center
Libby Broome
Coordinator of Exceptional Children
1401 N. Arendell Avenue
Zebulon, NC 27597

South Central Regional Education Center
Catherine Cooke
Coordinator of Exceptional Children
P. O. Box 786
Carthage, NC 28327-0786

Southwest Regional Education Center
Christine B. Hoyle
Coordinator of Exceptional Children
2400 Hildebrand Street
Charlotte, NC 28216

Western Regional Education Center
Anne Hyde
Coordinator of Exceptional Children
514 E. Marshall Street
Marshall, NC 28786

Southwest Regional Education Center
Linda Lowe
Coordinator of Exceptional Children
612 College Street
Jacksonville, NC 28540

Northeast Regional Education Center
Jeanette Shaw
Coordinator of Exceptional Children
P. O. Box 1028, Old Hayes Bldg.
705 Washington Street
Williamston, NC 27892

North Central Regional Education Center
Alice Stone
Coordinator of Exceptional Children
1215 Westover Terrace
Greensboro, NC 27408

110 Olde Farm Road
Hudson, NC 28638
April 30, 1990

Dear

I am currently working on my Ed.D. Dissertation at UNCG. My objective is to create a profile of hearing-impaired children in North Carolina. I have involved several individuals who work closely with programs for the hearing-impaired in the preparation of a questionnaire which I hope will obtain information which will be beneficial to both public and private schools where these children are taught. Some of those who have had input are Ronald Wilson, Rance Henderson, and Elmer Dillingham, superintendents at North Carolina schools for the Deaf; Art Mime of Beginnings for Parents of Hearing Impaired Children; several Directors of Exceptional Children; and my Dissertation advisor, Dr. Ed Shroyer. I requested from each suggestions which could be useful to hearing-impaired students in any educational setting.

This Questionnaire will hopefully create a profile of parents and caretakers of hearing-impaired children and identify services and educational programs available to these parents and their children. I hope also to garner parental suggestions, recommendations, and expectations which might enrich educational opportunities for hearing-impaired children.

I would very much appreciate your cooperation in getting the Questionnaires to the parents of hearing-impaired children in your schools. If you will send me the number of Questionnaires you need for your county and city schools which have hearing-impaired children, I will send you Questionnaires and letters to parents in self-addressed, stamped envelopes so that you might send them to the appropriate schools for hearing-impaired children to take home for parents to complete and mail to me. If this is too much trouble for you, please send me a list of names and addresses of schools which will be involved, the number of hearing-impaired children in each school, and the name of the person in each school who can get Questionnaires to the appropriate students. If I have this information, I can send the materials directly to the schools.

The information will be compiled with that received from all over North Carolina, so it will be completely anonymous.

I will be grateful for any assistance you might give me. Please feel free to call me for any information which might be unclear. My phone at school is 704-396-2188 and my home phone is 704-728-3756.

Sincerely yours,

Betty C. Whitener

110 Olde Farm Road
Hudson, NC 28638
April 30, 1990

Penni Thompson, Audiologist
Asheville/Buncombe School System
Asheville, North Carolina 28802

Dear Ms. Thompson:

Thank you so much for your offer to help collect information for my dissertation. I am sending 50 copies as you requested, along with letters to parents or caretakers who will be completing the Questionnaires. I have asked that the completed Questionnaires be placed in the envelopes with my name on them and returned to your office. My son-in-law, Mark Crowell, psychologist in your school system, volunteered to deliver the envelops to you and collect them.

Thank you again for your generous assistance. Please call me if you need any more information.

Sincerely yours,

Betty C. Whitener

110 Olde Farm Road
Hudson, NC 28638
April 30, 1990

Dear Director:

I am currently working on my Ed.D Dissertation at UNCG. My objective is to create a profile of hearing-impaired children in North Carolina. I have involved several individuals who work closely with programs for the hearing-impaired in the preparation of a Questionnaire which I hope will obtain information which wil be beneficial to both public and private schools where these children are taught. Some of those who have had input are Ronald Wilson, Rance Henderson, and Elmer Dilllingham, superintendents at North Carolina schools for the Deaf; Art Mime of Beginnings for Parents of Hearing Impaired Children; several Directors of Exceptional Children; and my Dissertation advisor, Dr. Ed Shroyer. I requested from each suggestions which could be useful to hearing-impaired students in any educational setting.

This questionnaire will hopefully create a profile of parents and caretakers of hearing-impaired children and identify services and educational programs available to these parents and their children. I hope also to garner parental suggestions, recommendations, and expectations which might enrich educational opportunities for hearing-impaired children.

I would very much appreciate your cooperation in getting the Questionnaires to the parents of the hearing-impaired children in your schools. I am sending you Questionnaires according to the number I was given in Raleigh of hearing-impaired students in your schools. Along with the Questionnaires, I am enclosing letters to parents. The information is in self-addressed, stamped envelopes so that parents might mail the completed Questionnaires directly to me. If you need additional Questionnaires, I would appreciate your notifying me so that I might send any extras which you need.

The information will be compiled with that received from all over North Carolina, so it will be completely anonymous.

I will be grateful for any assistance you might give me. Please feel free to call me for any information which might be unclear. My phone at school is 704-396-2188 and my home phone is 704-728-3756.

Sincerely yours,

Betty C. Whitener

110 Olde Farm Road
Hudson, NC 28638
April 30, 1990

Dear Parent:

I am currently working on my Ed.D Dissertation at the University of North Carolina at Greensboro. My objective is to create a profile of hearing-impaired children in North Carolina public and private schools. I have involved several individuals who work closely with programs for hearing-impaired children in preparation of a Questionnaire which I hope will be beneficial to all school in North Carolina where these special children are taught.

I will be grateful to you if you will take a few minutes to complete the Questionnaire. I have attempted to design it so that you will not have to spend a lot of time completing it. Your Questionnaire will be put together with those gathered from public and private schools all across North Carolina, so the information will be confidential and anonymous. Please be frank in answering the questions and feel free to write-in information if I have not designed an answer that fits your situation. My hope is that this survey will identify services and educational programs available to parents and their hearing-impaired children and will reveal suggestions, recommendations, and expectations which you have for your children. My goal is to enrich the educational opportunities of your children.

Please seal your completed Questionnaire in the stamped envelope with my name on it and mail it, at your earliest convenience. I really do appreciate your time. If you do not wish to complete the Questionnaire, please place it in the envelope and return it anyway so that I might count you as a parent who responded. Thank you so much for your cooperation.

Sincerely yours,

Betty C. Whitener

APPENDIX C

Letter from Administration of Hearing Impaired Program in Wake County

WAKE COUNTY PUBLIC SCHOOL SYSTEM
DIVISION OF STUDENT SERVICES
SPECIAL PROGRAMS

May 15, 1990

Ms. Betty Whitener
110 Olde Farm Road
Hudson, North Carolina 28638

Dear Ms. Whitener,

I have received a copy of your data request from Mr. James Fatata, Director of Special Programs. I have sent the questionnaires to my teachers of hearing impaired and asked that they be sent home to the parents with their children. We have a rather large program for the hearing impaired in Wake County and I'm sure you'll receive an excellent, overall response.

After review of your questionnaire, it appears it will provide excellent information that could be of value to Wake County Schools. Therefore, I would like to formally request a copy of your findings when you have completed your dissertation. Thank you and good luck in your course of study.

Sincerely,

Steph Schulte

Stephen T. Schulte, Ed.D.
Administrator
Hearing Impaired Program

STS:kh

cc: Mr. James Fatata, Director
Dr. Robert Wentz, Superintendent

3600 WAKE FOREST ROAD • P.O. BOX 28041 • RALEIGH NORTH CAROLINA 27611 • TELEPHONE (919) 790-2465
790-2463