Mainstreaming the hearing impaired: the development and field testing of a training module for secondary level educators.

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MAINSTREAMING THE HEARING IMPAIRED;
THE DEVELOPMENT AND FIELD TESTING OF
A TRAINING MODULE FOR
SECONDARY LEVEL EDUCATORS

A Dissertation Presented
By
Frederick David Manning

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 1983

Education
MAINTREAMING THE HEARING IMPAIRED;  
THE DEVELOPMENT AND FIELD TESTING OF  
A TRAINING MODULE FOR  
SECONDARY LEVEL EDUCATORS

A Dissertation Presented  
By  
Frederick David Manning

Approved as to style and content by:

Dr. G. Ernest Anderson, Chairperson

Dr. Raymond Wyman, Member

Dr. Henry Peirce, Member

Mario Fantini, Dean  
School of Education
Dedicated to:

My son, Jay, who has helped me learn one of the most important lessons in mainstreaming: that the normal interests and desires of a boy come before the special considerations about deafness.

My three daughters, Shannon, Melissa, and Rachel, who have helped me understand what it means to be the parent of normal hearing children.

My wife, Barbara, friend and colleague, who has tried her best to educate me as a parent.
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The author wishes to extend his appreciation to everyone in the participating schools who assisted in the completion of this study. The sincere interest of these people in learning about deafness and in trying to accommodate the special needs of a deaf student in their regular classrooms represented the highest professionalism. Appreciation is also extended to:

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Special appreciation is extended to the author's two colleagues in the Clarke School Mainstream Service: Mrs. Carol F. Gabranski and Miss Claire Troiano. Everyday, these two professionals help teachers in regular schools prove that mainstreaming of the hearing-impaired can be successful.

Finally, appreciation is extended to a good friend, Dr. Cleo Abraham, whose encouragement led the author to pursue this doctorate.
ABSTRACT

MAINSTREAMING THE HEARING IMPAIRED:
THE DEVELOPMENT AND FIELD TESTING OF
A TRAINING MODULE FOR
SECONDARY LEVEL EDUCATORS
(August 1983)

F. David Manning, B.A., Ohio State University
Directed by: Professor G. Ernest Anderson

Recent laws governing the education of children with special needs require local schools to educate them alongside children without handicaps. This has made inservice training for teachers an urgent necessity.

The author conducted a study to determine the feasibility of using a printed training module to orient personnel in ordinary high schools to the handicap of deafness. Subjects were located in public schools in central and western Massachusetts.

Subjects were divided into Control and Experimental groups. On two separate occasions, each subject completed a single questionnaire. Between administrations of the questionnaire, the Experimental Group was asked to study a printed training module written by the author.
T Tests done on the data showed that the two groups of subjects were similar in their knowledge of deafness before the experimental treatment began; they were no longer similar in knowledge following the experimental treatment; and the mean difference scores of the two groups from pre test to post test were significant. Post test scores for the Experimental Group were higher than those on the pretest. Pearson Correlation Coefficients also indicated that these post test scores of the Experimental Group were less predictable because the lower scores had been raised, a condition not true for the Control Group. The null hypothesis that there would be no significant post test difference in information scores between the two groups of subjects was rejected at the .05 level.

Greatest information score gains were made on questions relating to the severe linguistic handicap experienced by deaf students, and on ways in which these students differ from their hearing peers. Anecdotal reactions of subjects to the training module suggested ways to improve it in subsequent revisions. Subjects requested periodic reminders in the form of additional information and helpful hints about deafness during the entire school year.

As part of an ongoing effort to develop an effec-
tive system for placing hearing-impaired students in the mainstream of education, the author established a monthly newsletter in both printed and electronic forms. Possibilities for further development and dissemination of the printed training module are presented.
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CHAPTER I
INTRODUCTION

For generations, severely disabled people were considered too different to be allowed to participate in the regular flow of life. Educationally, very little was known about specific handicaps and the effects they might have on learning potential. In the eyes of most educators, the handicapped were simply thought of as being uneducable (Van Osdol, 1974, p.3).

During the second half of the 19th Century, these ideas of inferiority and worthlessness began to change and private philanthropic societies in this country established centers for the training and employment of the disabled, to make them contributing members of society. As far as the education of handicapped children was concerned, however, the idea persisted that very special training and assistance were needed. Special residential schools and teacher training programs were established for each of the major disabilities.

Following the end of World War II, progress toward the inclusion of minorities in the life of this country was steady. The most notable steps came as the result of
the civil rights movement in the 1960's. Through a combination of judicial decrees, legislative mandates, and parent advocacy movements, most minority groups have reached the stage where there is formal inclusion, if not yet complete acceptance. With respect to the severely disabled, we have seen efforts made in almost every community across the nation to make buildings and programs more accessible to them, to enable them to enjoy the same rights and privileges as the non-handicapped.

School systems have also been deeply involved in this new treatment of the disabled. Beginning with the passage in Massachusetts of the Comprehensive Special Education Law (Chapter 766) in 1972, followed quickly on the national level by the Education for All Handicapped Children Act (Public Law 94-142) in 1974, local education authorities throughout the United States have been assigned responsibility for the education of all children, exceptional or not, within their jurisdictions. No longer can children be ignored or refused entry to their local schools simply because of a handicap.

The rationale for this educational inclusion reflects the belief, not yet backed up by scientific evidence, that handicapped children will progress better academically and socially if they are in regular classrooms. It is argued that the regular school can do better than a
segregated school in helping these children learn to adjust to, and cope with, the give and take of daily life as they grow up. From the standpoint of nonhandicapped children, it is claimed that exposure to handicapped children will aid in the development of a better understanding of the individual differences in people, and will help to diminish the stereotyping of the handicapped (Brenton, 1974, p.20). Some schools even advocate having the nonhandicapped children assist the teachers in their efforts to help the disabled students.

The new regulations governing these mainstreaming efforts call for schools to provide programs to enable handicapped children to be educated with normal children as early as possible. Children with severe handicaps may be sent away to segregated facilities only when they are unable to benefit from the various programs provided on the local level. In the case of older students who are already in more restrictive settings, such as residential schools or special classrooms in regular schools, the regulations require that they be moved to more normal placements in an orderly manner as soon as possible.

In the time since this legislation took effect, millions of special needs students throughout the nation have been placed in regular classrooms in their local public schools. Their teachers, trained at a time when
handicapped children were educated in segregated settings, have been faced with a new way of doing things. They have been confronted with the immediate need for background information about a wide range of handicapping conditions, and they have found themselves urgently in need of the important teaching skills that will enable them to teach these students. Inservice education has become a big business.

The Problem

Public law 94-142 has made it necessary for teachers in regular classrooms throughout the country to accommodate children with a variety of disabilities. Most of these teachers were trained when special needs students were educated in separate facilities, and many of them have never had the training to do this kind of work. The low-incidence nature of some of the handicapping conditions has also meant that many teachers have not yet been exposed to many children with special needs. Thus, there is and will continue to be a need for inservice training for these people.

Payne and Murray (1974) found that teachers lack information about the various handicaps. In their investigation, school principals said the most needed competency regular teachers need is knowledge of excep-
tionalities. Reynolds and Birch (1977) stated, "When new roles emerge, practicing professionals will need to be retrained to fill them, and if new functions are added to old roles, personnel now in the schools will require inservice training to carry them out."

Some schools have been trying to reorient teachers by having general workshops on disabilities, but these do not provide detailed information for specific handicaps. When a disabled child enters one of these schools, the school staff will be faced with the need to develop an educational plan when it won't even have an understanding of the ways in which the handicap affects the child's ability to learn. This will put the child in the awkward position of having to try to bridge this information gap for the teachers so that he can be successful in the new school.

A brief investigation of approximately one hundred Massachusetts secondary teachers who had recently taught a deaf graduate of The Clarke School for the Deaf was made during the summer of 1979 (Allen, 1979). The general picture presented by the results indicated that not enough was being done in the schools to prepare personnel to work with a hearing-impaired student. More than 30 percent of the respondents said they did not know why a deaf student was attending their school instead of going to a high
school for the deaf. Sixty percent of them reported that they had not volunteered to teach the student, but had simply been assigned. Comments made by the teachers indicated that they would have preferred to have had the opportunity to volunteer since it was the first time they had worked with a deaf person and because the amount of extra work involved in mainstreaming was unusually heavy. Most said they had lacked confidence in their own ability to do this kind of teaching. Sixty-nine percent of the respondents reported that they had not even known they would be having a deaf student in their class until the first day of school. Only a few schools had scheduled inservice orientation meetings.

Thus, the teachers who will have these students are faced with the need to acquire in a short period of time the training to work effectively with such a student. The kind of orientation that is needed should include information about the nature of the handicapping condition; the effects the handicap has on a student's learning style; ways to modify activities in the regular classroom so that the special needs student's learning style is accommodated; typical problems to watch for; specific information about the particular student's previous education, including material covered and skills learned; and, underlying all of this, a coherent philosophy toward the
inclusion of such a student in a regular school.

Once this has been done, the staff will be in need of continuing professional support during the time they will be working with the disabled student. The National Education Association has specified among its preconditions for mainstreaming, "Regular and special teachers and administrators must share equally in the planning and implementation of these programs; appropriate instructional materials, support services, and pupil personnel services must be provided for the teacher and the handicapped student; modifications must be made in class size, scheduling, and curriculum design to accommodate the shifting demands that mainstreaming creates; and there must be a systematic evaluation and reporting of program developments" (National Education Association, 1976, p.19).

In summary, it has been well documented that there is a need for inservice preparation of regular school personnel, along with a system of follow up and support.

**Purpose of the Present Study**

It was the purpose of the present study to develop and field test a training module specifically designed for personnel in ordinary secondary schools chosen to work with hearing-impaired students making the transition
from a special school, the Clarke School for the Deaf in Northampton, Massachusetts. This training module addressed issues connected to the integration of such a student into the regular high school.

Focus of Inquiry

The Clarke School for the Deaf is a private boarding and day school for hearing-impaired children. Since its first graduating class in 1875, it has been preparing students to integrate into regular classrooms with hearing students, usually around the ninth or tenth grade level. In its 116 year history, thousands of its alumni have entered such schools, completing their education with nonhandicapped students.

As part of Clarke School's preparation for mainstreaming, inservice training of professionals in the receiving schools is considered an important component. The fact that Clarke School's students come from all parts of the United States and several foreign countries presents the school with a major challenge in terms of this inservice training.

The present study investigated the use of a particular method for providing inservice training: a printed training module specifically designed for ordinary secondary school personnel who were asked to work with a
hearing-impaired alumnus of Clarke School. This training program addressed many of the basic issues directly connected to this integration.

**Rationale for the Inquiry**

Training programs are needed for regular classroom teachers who are expected to work with special needs students. Many high schools have not sufficiently responded to this need, but have instead set up resource rooms where students with special needs may go for whatever instructional help they may need. This has amounted to removing the problem from the regular classroom, rather than including, or mainstreaming, the student.

The author, as the Coordinator of Mainstreaming Services at Clarke School, is primarily concerned with assisting regular schools, regardless of size and location, in learning how to mainstream hearing-impaired students. An inservice training program of this type should be of interest to all people who hold mainstreaming as a realistic goal for disabled students. It should suggest an overall system of instructional support and supervision for the instructional team. It should assist each team member in defining his or her specific role in the instructional process and should call attention to those areas where hearing-impaired students commonly need
special assistance and teaching, thus providing a measure of security to staff members inexperienced in working with the hearing-impaired. It should also be of assistance to those who have the important responsibility of formulating the student's Individual Educational Program. And, finally, it should be a welcome addition to the limited body of information concerning mainstreaming on the secondary level.

Limitations of the Study

The fact that this study was based specifically on the experience of Clarke School alumni and their regular high schools means that some of the information in the study has limited application in schools across the country. On the other hand, many of the techniques suggested for preparing students for regular high schools, for including them in classroom activities, and for overseeing their educational programs, should have wide applicability in high schools throughout the nation.

Although the training module developed for this study contained information to aid educators in working only with hearing-impaired students, it should be of general use to all instructors who teach special needs students with learning problems because it addresses many of the educational problems common to all learning
disabled students.

The method of student communication discussed in the module is the Oral Method (speaking and lipreading), rather than the Combined Method (speech, lipreading, fingerspelling and signing), but many of the suggestions given for one method may be readily adapted for use with the other.

It was recognized at the outset of this study that audio-visual media have much to contribute to the development of an understanding of hearing impairments, but the actual preparation of such materials, although contemplated for the future, were beyond the scope of the present study.
CHAPTER II
BACKGROUND OF THE STUDY

The Comprehensive Special Education Law, Chapter 766 of the Massachusetts Acts, was passed by the Massachusetts Legislature in 1972. This law for the first time guaranteed to all handicapped children in the Commonwealth a free and appropriate public education, regardless of the handicapping condition they might have (Weatherly, 1979, p.1). This action marked a major turning point in public education because it repudiated the negative, rejection-oriented regulations of the past which had allowed many special needs children to be placed automatically in segregated facilities.

In 1975, the United States Congress passed Public Law 94-142, the Education for All Handicapped Children Act, modeled directly after the Massachusetts law. Educators (Reynolds and Birch, 1977, p. 4) expressed the belief that under these new laws handicapped children would become a part of the "educational mainstream to the maximum extent feasible." Furthermore, they argued that exposure to handicapped children would help normal children better understand individual differences (Brenton 1974, p. 21).
The history of the education of handicapped people is really the story of society's attempts to include them. A reading of this history reveals that there have been gross fluctuations in the treatment of these people according to whatever religious, secular, and utilitarian influences were dominant at the time (Melcher, 1976). It has only been during the past three centuries that society has come to understand the potential of these people and has begun to try to habilitate them through the development of educational programs.

**History Prior to 18th Century**

No one knows when men first became interested in helping those with handicaps. Our earliest records indicate that there has always been an awareness - but certainly the pre-Christian era has to stand as the grimmest period in the history of our treatment of disabled people. Healthy children who were potential hunters and fighters were cherished, while those with handicaps perished of natural causes, or were abandoned or destroyed as poor and worthless examples of the human race (Turnbull and Schulz, 1979; Van Riper, p. 5; Baker, p. 69; Wallace p. 390; Baker, p. 268).

There were also times during this era when handicapped people were looked upon as supernatural (Best,
People apparently thought that some "sinister, demonological force permeated the air, striking a mind here, a spirit there, twisting a body or destroying a sense (Bowe, p. 5).

The most devastating condition facing the handicapped, however, was man's inability to imagine that these people could learn, could be trained. For example, the Greeks believed that language and speech were instinctive rather than acquired so they considered it foolish to try to teach language where it did not exist naturally. Both Aristotle (384-332 B.C.) and Plato (427-347 B.C.) made mention of the deaf, considering them largely incapable of education because of the absence of the sense of hearing. Aristotle said that "Men that are deaf are in all cases also dumb; that is, they can make vocal sounds, but they cannot speak." Over the centuries, this quote took on many meanings and became distorted to the point that the following sentence appeared in place of the original: "Those who are born deaf all become senseless and incapable of reason." (Hodgson, p. 61-62)

During the Middle Ages (500 A.D. - 1500 A.D.), many people came under the influence of the teachings of Christ, Confucious, Zoroaster, and Mohammed. These men all urged physical tolerance and care of the disabled, and as a result, churches and monasteries took in handicapped
people (Wallin, p. 4). Priests, monks, and leaders of various religions took responsibility for the disabled, giving them a right to life and, occasionally, some measure of care through charity. Their chief concern for these people was to save their souls (Frampton, 1938, p. 14).

During the Seventh Century, the first attempt to teach a handicapped person was recorded. Bishop John of York (St. John of Beverley) reportedly called to him a man who had never been able to speak one word. The Bishop told the "poor man to put his tongue out of his mouth and show it to him; then laying hold of his chin, he made the sign of the cross on his tongue, directing him to draw it back into his mouth and to speak. The youth's tongue was immediately loosed, and he said what he was ordered." (Encyclopedia Britannica, p. 101).

In the 12th Century, the Duke of Bavaria established a home for the blind and attempted to instruct them (Frampton 1938, p. 5).

With the advent of the Renaissance (14th Century), there was an explosive rebirth of interest in learning. This was a time of exploration and discovery, and there was wide dissemination of knowledge resulting from the invention of the printing press. It was also a time of importance for the handicapped in terms of trying to make
them more a part of the world. In 1561, Cirolino Cardano, a physician and scientist of Padua, Italy, outlined in two books the principles for the education of deaf people. He argued that the deaf could be taught to comprehend written symbols or language, could learn to speak and use a manual alphabet (Best, p. 374). In essence, he believed they could be taught to read and write, and thus be responsible and contributing citizens (DiCarlo, 1964, p. 14). It would not be too extravagant to consider Cardano's writings as the educational Magna Carta for the deaf (Davis and Silverman, 1978, p. 423).

Cardano looked from the deaf to the blind and suggested that they, too, could be taught (Best, p. 301). At about the same time, a blind man, Peter Pontanus, a Fleming, published a book regarding the blind and their possible instruction (Best, p. 301).

The 18th Century is considered by most professionals to be the dawning of organized attempts to teach both the deaf and the blind (Hodgson, 1954, p. 106). Partly resulting from modern political and social democracy, this social consciousness opened the way for training and special education as a public responsibility (Simon, 19 , p. 393). Jean Jacques Rousseau (1712-1778) asked, "What can we do to alleviate the lot of this class of (blind) sufferers, and how shall we apply to their edu-
cation the results of metaphysics?" (Anagnos, p. 14). The first real school for the blind, L'Institution Nationale des Jeunes Aveugles, was established in Paris around 1790 (Farrell, p. 230; Wallin, p. 10; Simon, p. 392). Establishment of schools for the deaf soon followed.

The earliest advances in the education of the handicapped during the 19th Century were on behalf of the mentally retarded. Jean-Marc-Gaspard Itard (1774-1838) set up a school to train a boy who was later to be called the "Wild Boy of Aveyron." This was the first recorded attempt at educational training of a retarded child (Wallin, 1942, p. 15; Frampton, 1938, p. 173). Itard's work was later carried on by Edward Seguin (1812-1880). These two men are considered to be the founders of the study and training of mentally retarded children (Reynolds, 1977, p. 14).

In the United States during the 19th Century, increasing numbers of people were needed for labor as our country's industry and commerce grew. With the great influx of immigrants from other countries, the population expanded and so did the need for social welfare and reform. Innumerable societies were organized for the purpose of doing private philanthropic work (Butts, 1955, p. 434). These groups championed such causes as: preventing poverty, abolishing slavery, improving prison conditions,
helping the insane, the blind, the deaf, and the otherwise handicapped. But as the century progressed, so did the belief that government should become more active in this work. This was because only the government had the resources to deal with problems of this magnitude. There were calls for a great deal of social legislation, and concomitantly, for public education (Butts, 1955, p. 439).

The first schools for the handicapped in this country were residential centers, many of them started by societies of private individuals, and later supported by state governments. These centers were separate from the regular school system as a result of several factors outlined by Van Osdol (1974, p. 3):

1. The severely handicapped were considered by most people to be too peculiar to participate in or benefit from regular schools. Most people in a community didn't know very much about blindness, deafness, or mental retardation. They did not understand the potential of the children involved, or their learning needs. Community and school leaders simply thought of these children as beyond being educable so they never seriously considered including them in the regular system.

2. The incidence of severe handicaps was so low that there were too few children in a single town to make a special educational program economical, thus the need to centralize.
3. The United States was still a rural country and transportation systems had not been sufficiently developed.

4. There was not a corps of trained teachers to supply a system of decentralized and dispersed classes. The first formal school for handicapped children in the United States was the American Asylum for the Deaf founded by Thomas Hopkins Gallaudet (1787-1851) in Hartford, Connecticut in 1817. Prior to that time, the few deaf children in this country who were educated had to be sent to England.

The establishment of this and other schools for the deaf throughout the country once again led to similar advances for the blind. During the years 1819 to 1825, the New England states authorized a census of the blind and there were calls for the establishment of a school to educate them.

The successes of these early schools for the deaf and the blind were considered to be wonders of education. Great things were believed to be in store for the human race as a result of the achievements of education (Best, p. 402).

The Perkins School for the Blind was established in 1832 in Watertown, Massachusetts, by Dr. Samuel Gridley Howe. Following this, he started a class for the training of mentally retarded children in 1837. The first residential school for the mentally retarded was a private school started by Harvey B. Wilbur at Barre, Massachusetts, in 1848 (Wallin, p. 25).
As the schools for the deaf spread across the country, some people began to question whether deaf people could truly become integrated into society if they could not communicate with hearing people. Two of these people were Horace Mann (1796-1859) and Dr. Samuel Howe. In 1843, these two men toured schools for the deaf in Europe and returned to this country with praise for the oral classes they had seen in Germany (Bender, 1970, pp. 148-149). A few years later, Gardiner Greene Hubbard of Cambridge, Massachusetts, started a school for deaf children in Chelmsford, Massachusetts. In 1867, this school was moved to Northampton and became known as the Clarke School for the Deaf. It was the country's first private oral school for deaf children.

In 1852, Massachusetts passed this country's first compulsory education law, bringing large numbers of children—both normal and handicapped—to the attention of the regular school system (Heck, 1953, p. 334). Immediately, Dr. Samuel Howe said that he believed blind children should be educated in the regular schools because of the social advantages (Hewett, 1974, p. 49). It was still the practice of schools, however, to exclude handicapped children from regular classes. Most parents did not want their children to be separated from them while being educated (Van Osdol, 1974, p. 4). They believed that local schooling could have the following advantages:
1. The children could have a more normal life by not being institutionalized.

2. The home is the basic unit of society, the center of affection and interests of the child.

3. The character and influence of the family can be maintained.

4. The children can learn to deal with other people and events in the community in an ordinary manner.

5. The children have a better chance to develop a sense of responsibility.

6. The public can have a better chance to understand handicaps by having contact with them.

7. The best hope for the future of the handicapped is to bring them into contact with normal children so that this familiarity can prevent rejection when they are adults.

8. There is less expense involved (Best, p. 448-450).

During the latter half of the 19th Century, day schools for handicapped children opened throughout the country.

Events during the first half of the 20th Century provided important evidence for increased normalization of educational programs for the handicapped. During the First World War, mental ability tests used on soldiers revealed that many who had been thought to be normal were really below normal, but had been leading more or less normal lives. These results pointed to the inappropriate-
ness of the concept of segregation and provided a boost to the integration of the handicapped with normal children. (Frampton, 1938, p. 183).

In 1926, Bell Telephone Laboratories developed the audiometer for testing hearing. As a result of this, it was learned that very few deaf children are totally deaf. The development of the electronic hearing aid followed quickly and this made it possible for many students who had previously been placed in classes for the deaf to be integrated into regular classrooms (Goldstein, 1933, p. 10).

In 1931, the United States Office of Education established the Section on Exceptional Children and Youth. This was the forerunner of the Bureau of the Education of the Handicapped (Gearheart, 1974, p. 59).

Recent Events

With the termination of World War II and the redirecting of the country's attention to domestic matters, the country was finally ready to make a major effort in serving the handicapped (Hewett, 1974, p. 49). Melcher (1976, p. 34) lists the factors involved in the beginning of this thrust:
1. Professional knowledge regarding the handicapped was expanding rapidly.

2. The country felt an acute need to repair its war wounded and also those children who had physical and mental disorders.

3. Prominent people in many fields began to give visibility and significance to the push for better education of handicapped children. Names such as Pearl Buck, Mrs. Spencer Tracy, and the Kennedy family gave stature to the movement for improvement of the education of the handicapped.

4. Parents of less national prominence, but with considerable regional, state, and local prestige, added their voices to the call for carrying out our Constitutional mandates.

5. Professionals serving the handicapped began to amalgamate their efforts and activities into both scholarly and political forces, and reinforced the parental demands for services to the handicapped.

6. Legislators, both national and state, decided that this social need was due for their political consideration. It became politically popular for legislators to fight for these people who had been avoided so long.

7. President John Kennedy's interest and action in behalf of mental retardation.

8. The Federal government began to move slowly into a supportive role in both finance and research. Especially encouraging was the development of a revitalized Bureau of Education for the Handicapped.

Several important court cases were the immediate precursor to the passage of Chapter 766. In 1954, the desegregation case, Brown v. Board of Education, established that "separate" was inherently unequal.
"In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made to all on equal terms."

In 1972, Pennsylvania Association for Retarded Children (PARC) v. the Commonwealth of Pennsylvania dealt with the state's failure to provide a free public education for all of its mentally retarded children. The court ordered this condition reversed.

Another case that same year, Mills v. Board of Education, was a class action suit claiming that the Washington, D.C. Board of Education had failed to provide all handicapped children with a publicly supported education. This case established the right of all handicapped children to a free and appropriate education, and the right of parents and children to be informed, to be heard, and to appear, via due process.

In 1970 and 1973, Diana v. State Board of Education, the cases dealt with the inappropriate placement of some Mexican children in schools because of discriminatory testing. Another case, Larry P. v. Riles in 1972, dealt with the same issue. These two cases resulted in provisions for non-discriminatory testing in schools.

These cases, the thinking of the day, and the
theories popular with educators at the time culminated in the passage of The Comprehensive Special Education Law, Chapter 766, in Massachusetts in 1972. This law guaranteed children with special needs an adequate, publicly-supported education, and was the forerunner of Public Law 94-142 (Regulations 766, Massachusetts Department of Education 1978, p. iii).

The Comprehensive Special Education Law

Chapter 766 was signed by the governor in 1972, and became fully effective in 1974. This law covers children who are mentally retarded, visually handicapped, speech handicapped, hard-of-hearing, deaf, seriously emotionally disturbed, orthopedically impaired, deaf-blind, multihandicapped, and those with particular learning disabilities. At the time of the bill's passage, the United States Congress had found that more than half of the eight million handicapped school age children in this country were not receiving appropriate educational services, and one million were excluded from the public school system entirely (20 United States Code, p. 1401).

The purpose of the Massachusetts law was to provide a flexible, uniform system of educational opportunities for all children requiring special education. It required towns to locate and then provide for students
from age 3 to 21 a free and appropriate public education (Weatherly, p. 1).

The key provisions of Chapter 766 can be outlined. Those found in the subsequent Public Law 94-142 are similar.

Local school districts are responsible for identifying all young people needing special education within their jurisdiction.

Each student believed to be in need of special education must be evaluated by a multidisciplinary team using several methods of evaluation.

An individualized educational program (IEP) must be developed taking into account the student's weaknesses and strengths. This plan must be formulated in writing by the school's staff, the parents, and relevant specialists, and must specify both general and specific instructional objectives, along with a declaration regarding the dates for initiation and termination of such instruction. This plan should remove the child from the mainstream of regular education as little as possible.

Parents have the right and the responsibility to be involved in this process at all points. When a plan of services has been developed, the parents must consent to them. Students above the age of 14 also have the right to participate in this process.

Each student's progress must be reviewed regularly, with the results incorporated into the student's subsequent educational plan.

The local school district is responsible for providing appropriate special education services and for transporting students to those services.

The professional personnel charged with responsibility for carrying out the educational plan must be qualified. The school district is
expected to provide continued inservice training to all of its staff members concerning special education (McGarry, 1982); (DuBow, pp. 28-41; Gallaudet Alumni Newsletter, pp. 4-5, c. 1978).

The provisions of both of these laws represented the deepest incursion yet of the central government into the affairs left to the states by the Constitution.

But the laws were a fact, and as a result of them millions of special needs children with handicaps ranging from simple speech problems to serious sight, hearing, mobility, and emotional problems became the direct responsibility of their local public school systems. Individual evaluations and individual educational programs had to be developed. Although not all of the children were mainstreamed into regular classes, the majority of them were. This produced some dramatic changes in the way schools went about the business of educating children. The United States Office of Education described it as a "fundamental break with traditional practices," (USOE Report, p. 33).

**Impact on the Classroom**

An examination of these laws from the perspective of the classroom teacher shows that teachers are expected to modify in some way the instructional approach they use so that a special needs child will be able to achieve suc-
cess in the classroom. Emphasis is on inclusion rather than exclusion. Elementary schools probably have the basic organizational flexibility to incorporate into their programs this new approach to educating exceptional children. As a rule, elementary schools are relatively small and the teachers consider themselves to be generalists. They work with a group of children for the entire school day, subject by subject, so they have the opportunity to develop a broad understanding of each child's academic strengths and weaknesses. Moreover, they concern themselves with each child's social as well as academic development. They usually have a variety of methods for helping individual children acquire the basic skills they need for learning, living, and working together. The IEP process appears highly compatible with this basic form of school organization.

Secondary schools, on the other hand, offer quite a different picture, and mainstreaming on this level takes a different form. Many secondary schools are quite large, due in part to school districts regionalizing on this level. Large class size introduces a quality of anonymity among the students, making it more difficult for teachers to get to know students on an individual basis. The schools have rotating classes, teachers customarily deal with six or seven large groups of students during the
course of a day, each group for a limited period of time. This results in the teachers having a fragmented view of their students. Further, the teachers consider their job to be beyond the teaching of basic skills, and many of them have only a narrow range of methods to employ in teaching their particular subject matter specialty. The emphasis on this level is on group rather than individual instruction, and there is greater competition among the students. These conditions make it harder for special needs students to succeed.

One of the basic necessities in a large high school is for students to be able to take care of themselves as much as possible. From the school's point of view, there are such large numbers of students involved that a primary consideration is simply to see that every student is assigned to a classroom for every period of every day. Educational concerns seem to come further down on the list of priorities, and these are left up to the teachers to handle with the students. As far as the classroom teachers are concerned, however, instructional concerns are at the top of their list, and it has never been easy for them to get the kind of instructional help they have wanted and needed. Many understood right away that mainstreaming would require that teachers have strong administrative support.
Secondary teachers see themselves more or less as specialists in their particular area of academic interest. They try to keep up with the latest trends and developments in these areas and incorporate this new information into their teaching. They are accustomed to having many demands placed on their time and energy in school, and to working more or less independently. There are large numbers of students to teach and the classes are often large. The teachers expect that by the time the students reach secondary level they should have mastered the basic skills needed to learn and, therefore, the emphasis should be on acquiring information and concepts. This view suggests a picture of students as autodidacts; in effect, learning on their own. Teachers with this orientation find it difficult to deal with students who have difficulty learning. The tendency has been to want to remove these people from regular classes and send them to remedial classes or to resource rooms where they can get the more careful teaching needed.

Beery (1974, p. 2) suggests that education involves meaningful exchanges between people. The basic organization of secondary schools seems to work against the student and the teacher getting to know each other as individuals. In fact, many secondary schools try to avoid affective issues. Teachers, because they see students
only a short period of time each day, and have numerous other collateral duties, do not have time to learn about students' backgrounds, goals, or very much about the ways in which the students learn best. There is not enough time for the students and the teacher to adjust to each other as human beings, a requirement that is almost essential when it comes to teaching special needs students.

The stresses and strains produced by attempts to mainstream students with severe disabilities sometimes uncovered weaknesses already present in a school system. For example, many schools do not have a way for teachers to pass on information about a particular student's learning style to those who will work with the child later. This means that every new set of teachers has to rediscover the wheel--a waste of time and effort. Administrators and staff have to develop and maintain highly effective systems of communication within schools to enable information of this sort to be moved on to those who will work with these students in the future.

The passage of Chapter 766 and Public Law 94-142 created concern and confusion in the minds of these teachers. To many of them, it was unclear just what mainstreaming meant and how it would affect them. Some believed that mainstreaming meant simply placing the student in the regular classroom, while others believed there
was an obligation to make the student a part of the class. When the tasks associated with teaching a severely handicapped student were enumerated, many teachers responded by saying that there were too many other students needing to be served to permit giving so much extra time and attention. Some also had negative attitudes about special needs students being in the regular schools. They judged and evaluated the students harshly, or applied the age-old myths to them. Some resented the fact that these students had not mastered the basic skills of learning, and were frustrated because they were not sure how to help the students acquire this mastery. They objected to participating in the required lengthy planning meetings on behalf of the students because they felt the students did not really belong there. They also felt the pressure of their other school duties, which had not been lessened simply because they were working with a more complicated student. Thus, teachers' reactions to mainstreaming ranged from strong support to qualified acceptance, and in some cases outright rejection (Chaffin, 1974, p. 8).

The most commonly used approach to special needs students on this level provides them with the special help they need outside the regular classroom, in the resource room or in tutorials. Since the high schools basically employ group teaching, the tutorial system has been seen
as a convenient way to prepare the disabled student for class or to bring the student back up to class level as problems have developed.

The laws did not specify a particular approach to mainstreaming on either the elementary or secondary level other than to say that the student should be in as near normal an atmosphere as possible, but the implication appeared to be that secondary schools ought to change to a mastery learning system or a diagnostic-prescriptive teaching model similar to what is used on the elementary level. There has been considerable enthusiasm for diagnostic-prescriptive teaching in university teacher-training centers (Reynolds and Birch, 1977). There has not appeared to be so much interest in this in the high schools, leading one to conclude that a change in the approach used by secondary schools will take a long time.

**Need for Training**

Reynolds and Birch (1977) stated, "When new roles emerge, practicing professionals will need to be retrained to fill them, and if new functions are added to old roles, personnel now in the schools will require inservice training to carry them out." There was an immediate and huge demand for information about handicaps. Teachers and other school personnel needed training for evaluating,
programming, and teaching students with such diverse learning needs (Payne and Murray, 1974). School principals said the most needed competency regular teachers required was knowledge of exceptionalities.

Workshops on handicaps became regular elements in the inservice training programs in school systems, but these were often conducted on a general level stressing the elements that all handicaps have in common. Though helpful, they did not prepare staff to work with a specific handicap. This meant that when a new child entered school, the staff could be faced with the need to develop an immediate educational plan to address the student's specific needs, when the staff didn't even have an understanding of the ways in which the particular handicap affected the child's ability to learn. It presented the teachers with the immediate threat of failure and also put the child in the position of having to try to bridge this information gap.

The Handicap of Deafness

Deafness has probably been with man since the beginning of time, yet most men know very little about it. In our century, significant advances have been made in diagnosing and treating disabled people, but there is still a lack of understanding of deafness by the general
public (Best, 1948, Chap. 8). Stated simply, deafness interferes with a child's reception of the sounds in its environment, most importantly the sounds of the English language, and prevents the child from learning to communicate in the normal manner. The child will not learn to speak naturally, nor will it learn to understand and use the English language naturally. And because our language is the medium through which we are exposed to concepts and information about the world, the young child will be intellectually isolated. Thus, a hearing loss interferes with the complete and normal development of the individual.

Population

It is estimated that one child in a thousand in the United States is deaf (Carhart, 1969), and that about 8 percent more males are affected than females (Myklebust, 1964, p. 10). This figure has been about the same for a number of years. According to the American Annals of the Deaf Annual Directory (1979, p. 184), there were 44,528 hearing-impaired children in the United States enrolled in special programs as of October 1978. This figure does not include those children who were placed in regular schools without special services or those who are, for one reason or another, simply not in school. Massachusetts was shown
to have 1,139 students enrolled in eighteen programs for the hearing-impaired (American Annals of the Deaf, 1979, p. 143).

Thompson reported (1973) that there were about 1,300 deaf children in Massachusetts at that time. He found that 44 percent of the state's 351 cities and towns had fewer than five deaf children. Fifteen cities had fifteen or more deaf children, and only three had more than thirty. Thus it can be seen from these figures that in terms of the general population, deafness is a low incidence handicap.

Causes of Deafness

Ries (1973, p. 3) reported that the most common causes of deafness known in 1971 were heredity, maternal rubella, meningitis, prematurity, and mother-child blood incompatibility. Moores (1978, p. 92) has indicated that deafness resulting from congenital-hereditary factors has been stable for many years. Hearing losses from all other causes, however, have changed over the years, probably the result of improved methods of disease control by the medical profession.

Any corrective measures which might be available for the amelioration of hearing loss depend upon the nature of the pathology which caused the loss, the age at
which it occurred, and the location and severity of the condition. For the children being considered in this dissertation, the profoundly deaf, the hearing loss is irreversible. Some other means must be employed to help them overcome the effects of the hearing loss.

Terminology

Many people use the word deaf to describe anyone who does not hear normally. Others use the same word to refer to those who are totally without hearing. Still others use the words hard of hearing or partially hearing. The following definitions are currently used by the Conference of Executives of American Schools for the Deaf (Frisina, 1974, p.3).

Hearing-impaired - covers the entire range of auditory impairments.

Hard of hearing - refers to those for whom the auditory channel is affected, but still functional. (These people are also referred to as partially hearing.) A hard of hearing person can have a mild, moderate, or severe impairment, depending upon the magnitude of the loss. Frisina (1974) says that a partial hearing loss of the mild, moderate, or severe variety makes "difficult, but does not preclude, the understanding of speech through the ear alone, without or with a hearing aid."

In other words, a hard of hearing person is one who, despite a loss of hearing acuity, still has a significant amount of hearing left, and can function success-
fully in most daily situations with (and sometimes without) the help of a hearing aid.

Deaf - one whose hearing is disabled to an extent (usually 70 decibels or greater) that precludes the understanding of speech through the ear alone, without or with the use of a hearing aid.

The important part of this definition is that the deaf person, even with the help of a hearing aid, is still unable to understand speech without visual assistance. It should be noted here that almost all deaf people have a small amount of residual hearing.

In terms of the training and rehabilitation, the hard of hearing person is one who needs help in learning to make sense of the sound received through a hearing aid while at the same time learning to make use of lipreading or other visual information for support. The deaf person, on the other hand, functions in an opposite manner, using whatever small amount of residual hearing exists as a support for receiving information visually.

Another important set of terms needed to describe deafness refers to the age at which the hearing loss occurred relative to learning the native language.

Prelingual deafness. The hearing loss was present at birth or occurred at an age prior to the development of speech and language.
Postlingual deafness. The hearing loss occurred at an age following the spontaneous acquisition of speech and language (Moores, 1978, p. 7).

These distinctions are important because a child who learns to speak the language of its parents normally before losing its hearing is in a more advantageous position educationally than one who was born deaf. The child who is born deaf will not develop speech and language independently in the normal fashion, but will require special instruction to learn the language of its culture.

Characteristics of the Deaf

Intelligence

From early times until the early part of the Twentieth Century, people believed that deaf people were of low intelligence. Cattell and others started a movement around the end of the last century for the development of tests of mental ability in children (Hewett, 1974, p. 43). Results of early tests on the deaf were reviewed by Pintner in 1941. He came to the conclusion that deaf children were, as had been thought for thousands of years, inferior in intelligence (Moores, 1978, p. 130). In the 1940's, Myklebust and Burchard (1945) tested a large number of deaf students and found that the range of intelligence levels does not differ from that of the hearing. They found brilliant, average, dull, and men-
tally retarded deaf children just as they did in the hearing population.

Residual Hearing

Since the 1600's, various individuals have been aware of and have tried to develop the residual hearing in deaf people, first with the cupped hand and a loud voice, then with the acoustic tube, and now with electronic hearing aids. Despite all of the effort and all of the methods which have been devised for training, there are many children in schools today who do not make very good use of their residual hearing.

Boothroyd (1971, p. 37) indicates that the effect of deafness on the child's education is the product of many factors in addition to the hearing loss. These include such things as intelligence, emotional stability, social maturity, perceptual and motor development, motivation, and age at onset of the hearing loss. "If all other factors could be controlled, the severity of the educational handicap would be directly related to the severity of the hearing loss."

A profound loss is one that prevents the development of speech and language in young children in the normal manner. Amplified sound can play an important role in the education of a child with a loss of this magnitude,
but it will not enable the child to understand speech. That can only be done through the use of lipreading or some other visual system.

Speech

The most striking effect of deafness in a small child is the impact it has on speech. Cazden (1972, p. 3) defines speech as "the realization in behavior of the knowledge that we have in our heads. It consists of actual utterances spoken to particular people in particular situations. It exists only in moments of actual speaking or listening, including the silent activation of language in thought." Speech is learned largely by ear in the normal child, the sense of hearing making possible the monitoring and controlling of both voice and articulation. Deaf babies vocalize and babble the same as hearing children, but this usually disappears by the end of the sixth month (Mavilya, 1969). From that point on, until the child has entered a special program of speech teaching, he is essentially a silent being, spending more than 50 percent of his time quietly. Hirsh (1974, p. 1) states that a child with this handicap must be found early and taught to vocalize and speak so that its understanding and use of language can develop.

Ling (1976, p. 11) surveyed the results of a
variety of speech intelligibility studies on deaf children covering the past forty years and found that the students' scores have ranged anywhere from 0 to 75 percent, with most achieving levels below 50 percent. There appeared to be no differences in intelligibility related to particular methods of teaching. He then described the typical speech problems of deaf people:

- a general lack of coordination between the articulators and the breath-voice system,
- the expulsion of more than normal amounts of air during speech production,
- a restricted range of voice pitch,
- phonations that are three times greater than those of hearing children,
- faulty speech rhythm,
- vowel distortions and substitutions,
- consonant errors, omissions, distortions, and substitutions.

Ling concluded that the overall levels of speech intelligibility are inadequate for oral communication, although he did acknowledge that there are examples of some students achieving high levels. He advocated a revised form of the analytic teaching approach, and is reportedly achieving some success with it.

The point to be made here is that there is no physiological evidence available at this time to indicate
that intelligible speech is an unrealistic goal for deaf people. On the contrary, there is much recent evidence available (Ling, 1964; Boothroyd, 1978; Pollack, 1964; Simmons-Martin, 1967, b) that children with profound hearing losses can, with the help of hearing aids and perhaps other sensory aids, perceive voicing, manner of articulation, intonation, and rhythm. What is so promising about this information is that it is stimulating a rethinking of teaching techniques, and is leading teachers to put greater emphasis on the exploitation of the child's residual hearing. Methods in the past attached greater importance to the child's use of vision.

**Language Development**

Cazden (1972, p. 3) defines language as "the knowledge we have in our heads. It consists of all the words in a person's mental dictionary, and all the rules at his (usually conscious) command for combining those words into an infinite number of novel sentences and for interpreting the equally novel sentences that he hears. It exists even in the moments of silence and sleep."

Myklebust (1964, p. 228) has described language as an arbitrary symbol system used to represent objects, ideas, and feelings.

The great challenge in educating deaf children,
regardless of the particular method used, is to make known to them the language of their culture. Once this has been done, the child has access to man's accumulated knowledge.

One of the most extensive studies of the language of deaf children was done by the Heiders (1940) at The Clarke School for the Deaf. They concluded that deaf children use relatively simple language units; their sentences are shorter, have fewer verbs in clauses (subordinate or coordinate) and more verbs in simple sentences than hearing children; they use causal clauses and object clauses beginning with "that" more than the hearing; they do this because they have less comprehension of the paragraph as a unit; they use fewer shades of meaning and fewer contexts where precision of meaning is important; they use more fixed forms, avoid elliptical forms of language, and prefer simpler fixed expressions; they explain "why" more often than the hearing; and finally, they rarely speak of possibilities, preferring to describe concrete actualities.

Silverman and Lane (1970) discussed the problems deaf children have with vocabulary, multiple meanings, verbalization of abstractions, and complexity of structure.
Vocabulary. Hearing children know approximately 2,000 words by the time they are six years of age. The deaf child is fortunate if this number reaches two dozen words by that time.

Multiple Meanings. Individual words in the English language may have many meanings which are made clear to hearing children through hearing them repeated in particular contexts. Deaf children commonly have a single meaning attached to a single word, due primarily to their lack of hearing the words used in other ways, and partly to weaknesses in their educational programs.

Verbalization of Abstractions. Concepts such as love, faith, justice are ones which hearing children learn incrementally through frequent repetitions. Concepts of this nature are certainly within the ability of a deaf child to learn, but they must be developed deliberately and thoughtfully.

Complexity of Structure. The language of young hearing children is complex, involving vocabulary, parts of speech, tense, person, word order, clauses, and phrases. The language of a deaf child at the same age presents a barren landscape in comparison. This great discrepancy between the language of hearing children and the language of deaf children continues to grow and develop as the children mature.

The following samples of uncorrected written language are included to illustrate the various types of grammatical mistakes deaf people make in their writing, and the wide variability in the levels of linguistic proficiency they achieve.

The Paddy

I like a Paddy was play ball. This Paddy ball. of that boy and girl play Paddy ball he like Paddy. yes" I like to. Paddy play ball ready go to with Paddy outside play with ball
Jane play with Paddy. Dorothy play with Paddy come back eat supper time ready go eat Paddy. I have a surprise for you. Mammy say. this for Paddy to. I like this for Paddy eat I don no where Paddy surprise. I love Paddy kiss. Thank you.

Age: 10 years.

Dear Sam,

How are you? I am fine. You didn't tell me. You were going to Columbus. You didn't tell Susie.

I see your father at work. I go to the George Washington Jr. High School. Bob and Tom moved to Cleveland, Ohio. They go to the Cleveland Deaf School.

You remember George is 10th grade now. I have homework everyday. You write me at the deaf school or home.

Do you see Dr. Morrison. Last Tuesday's night Jan 23 I went to festival at the deaf school. I saw in the newspaper about classes for the deaf and hard of hearing at the deaf school.

My puppy died today. A man killed the puppy. He hit her with a car.

Our friend
Johnny Lee Smith

P.S. I don't like homework.

Friend
J.L.S.

Age: 14 years.

Excerpts from an autobiography.

I was born in Osterville Hospital in Osterville, on March 15, 1965 at 4:37 am. My parents' names are William J. Allen and Barbara H. Allen. I don't have any brothers or sisters but I have a cat named Tammy. I have a very close cousins that I always can talk to her, and have lots of fun together. My favorite cousins
is deaf like me. Their names are Jenny and Bobby Reynolds. They graduated from a school for the deaf in 1977 and 1978.

My deafness was caused by hereditary. My mother found out that I was deaf when I didn't responded her and she took me to the doctor and asked him if I was deaf or not. He said that I wasn't deaf because I jumped up when he dropped a metal stuff. So they had a little argument on whether I was deaf or not. My mother sent me to the Children's Hospital in Allentown to have a hearing test, I was deaf. So I got my first body aid hearing aid when I was almost one year old. That time I didn't like to wear it. Finally I got used to that, I had no problems. Now I have two behind-the-ear hearing aids. I wear them everyday and like those better than the body one.

Age: 15 years.

Attendant with problems of learning to use language expressively are difficulties in the area of reading comprehension. Reading is particularly important to deaf students because it is a main avenue for getting information about the world around them.

Moores (1978, p. 3) has concluded after considering the complexities of language learning and the difficulties deaf children have in mastering it, that language for them "is not a facilitating device for the acquisition of knowledge. Rather it is a barrier standing between them and the full realization of their academic, intellectual, and social potentials."

It is important to note here that there is no linguistic or psychological evidence currently available
to indicate that profoundly deaf children are incapable of developing intelligible speech or normal language and reading skill. Many deaf children have done it in the past and many are doing it today; but it must be acknowledged that there is great variability in the levels of proficiency the children achieve, many reaching levels inadequate for daily living. Recent studies of language acquisition in normal children, and the new interest being shown in the development of language in the deaf, offer hope for improved teaching methods in the future.

**Personality Development**

Personality is formed through the dynamic interaction between the developing organism and the physical and social environment (Frankiel, 1959). The influence that the various life experiences have on the personality formation of the maturing deaf child is unclear because there is scanty evidence from the studies that have been done. Silverman (1970, p. 400) states that the results of such studies have been meager and contradictory.

Donoghue (1968), Soloman (1943), Levine (1956), Myklebust (1964), Springer and Roslaw (1938), Altshuler (1963) and others have investigated this very complex area and have concluded that deaf people are detached; have unrealistic fears; demonstrate rigid behavior; are emo-
tionally immature, submissive and dependent; are egocentric, irritable, impulsive, and suggestible; and demonstrate personality constriction and deficient emotional adaptability. Myklebust (1964, p. 121) suggests that the greater the extent of the impairment and the earlier the onset, the more a characteristic personality pattern seems to emerge.

Moores (1978, p. 144), on the other hand, has taken issue with most of these studies, arguing that the materials used for the testing were developed for and standardized on hearing individuals. The elements considered by a particular test to be important in a hearing person's adjustment to life may not be the same as those of importance to deaf people. A further problem has been the language used in the test material, and between the tester and the subject. It has usually been too difficult and the test administrator has not been experienced with the manner in which deaf people express themselves. He believes that this has caused a lack of accurate communication, thus distorting the results of the tests. And finally, the norms that have been developed for the various tests were based on hearing people. Moores concludes that it is probably inappropriate to apply these tests to deaf people. "The efforts at the assessment of personality variables are at about the same level as intelligence testing was 30 years ago (p. 146)."
Self-Concept

The perception a deaf person has of himself or herself is formulated in the same way as a hearing person's. It is composed of impressions or ideas about one's own body, mind, abilities, likes, personality characteristics, overt and covert feelings, and other qualities. This process begins when the child is quite young and continues throughout life, with the continuous addition of fresh information from the child itself and from those around it. This means that the self-concept continually goes through changes and revisions. What is different about the developing self-concept in the deaf individual is the quality of experiences.

Interpersonal Relationships

This is one of the most difficult areas for a deaf person because there is a significant discrepancy between the kind of relationship hoped for and the one that is often achieved. The deaf person knows that the hearing loss will affect each relationship, either drawing people in or away. It will become a part of the relationship itself. This can be threatening, and many deaf adolescents worry about meeting hearing people for fear of being hurt in the encounter. They know that their speech is hard to understand, and they know that some hearing
people are difficult to lipread. The fear they experience sometimes leads them to try to appear indifferent to people, which has an undesired effect upon the hearing person and can make the next encounter even more threatening. Counseling and role-playing in cases of this kind might help these people formulate strategies for controlling social situations and help them develop insights into the hearing person's perception of deaf people.

**Disability Related Frustrations**

Buscaglia (1975, p. 185), citing the work of Fitzgerald (1950), Shere (1954), Barker and Wright (1955), points out that even though the disabled are more likely to encounter frustrations resulting from their handicap, there seems to be no relationship between the type of handicap and the degree of frustration. The degree of frustration seems more closely related to the individual's personal adjustment. It is evident that no life is free of frustration; a certain amount of it challenges and motivates the individual requiring creativity in reaching one's goals.
Rejection and Acceptance

Some interesting studies have been done in this area. Blood (1979) investigated the reactions of normal people to those with voice disorders and found that a listener perceives a speaker with a voice disorder in a more negative manner in terms of personality and appearance.

Kleck (1968) studied the reactions of normal people to those with obvious physical disabilities and found that the behavior of normal people changes significantly when they are in the presence of a disabled person. He recorded changes in gaze patterns, obvious nervousness, more restricted body movements, faster termination of the interaction, and less variability in verbal behavior, in spite of the fact that the normal person said later that the encounter was enjoyable. The most important element operating in such encounters appears to be the uncertainty of both participants (Richardson, Hastorf, Goodman, and Dornbusch, 1961). Kleck (personal communication, 1978) has found that if the disabled person makes some kind of simple statement about the disability--acknowledges it--the normal person will be able to relax somewhat. Often, however, the disabled person will wait for the normal person to clear up the roadblocks to communication. No studies of this kind have been done using deaf subjects.
One of Kleck's more important findings (1968) was that normal people will express attitudes in the presence of a disabled person that are not truly representative of their actual beliefs in an attempt to "please" the disabled person. Nondisabled teenage boys, for example, told a disabled boy in a wheelchair that they thought school was much more interesting than sports. The implication of this is quite clear: when normal people shield the disabled person for fear of hurting the person's feelings, the disabled can develop a false picture of the real world.

Anecdotal information gathered by this writer indicates that experiences such as these are not uncommon. Deaf people find them frustrating and devaluing because they strive to function as a part of the world. But Buscaglia (1975, p. 188) says that much of the way in which the world treats disabled people depends on them. "When the disabled person is able to reveal himself primarily as a well-integrated, growing person in social situations, he will be accepted as such. The alternative to this is to stay with people who have the same disability, which can be comforting and relaxing. But sooner or later the disabled person will have to deal with normal people."
Limitations of Experience

Deaf people are not physically restricted, but they are linguistically constrained and informationally impoverished. The worst kind of isolation and loneliness can occur while doing the same thing everyone around you does, but not being able to communicate fluently with any of them. Heider (1948) explained this by saying: "Plans are made and people move about the deaf person. He is expected to fall in and do what the group does. He is blamed and considered 'stupid' if he does the wrong thing, yet a nuisance if he wants the activity in hand to be interrupted so that he can get a full explanation."

Montague (1934) pointed out, "It would be helpful if one's friends would realize that it is deaf ears, not feeble minds, that make us slow on the uptake." This lack of intimate contact and its resulting deficiency in the amount of information acquired means the deaf person has an insufficient background against which to react, to judge, and evaluate, making adjustment to new situations more difficult.

Inferiority and Lower Status

"One learns that he is inferior, he is not born with feelings of lower status (Buscaglia, 1975, p. 191)."

The child is taught this through daily interactions with
people, even well-meaning people. Once the child is convinced that it is true, it will be possible for him to find confirming evidence of it all around, real or imagined. This is where the supporting family and close friends can make an important difference. In the final analysis, the disabled person has to come to see himself as he is, not just in terms of the impairment; to see his abilities and strengths as well as to accept his limits. This is a sober challenge to any disabled person, although it is a task that all people must go through. There will be the temptation from time to time to give in to the disability, and this is normal. Strong support from the important people in the disabled person's life will demonstrate that he is valued for himself.

**Special Educators' Attempts to Educate**

Three predominant methods are used to teach deaf students in this country: Oralism, the Rochester Method, and the Simultaneous Method (sometimes known as Total Communication).

**Oralism.** In this method, the deaf person receives input through speechreading and amplification of sound, and expresses himself through speech. Gestures and signs are not employed.
Speechreading is a process of comprehending the words of the speaker by associating meaning with the movements of the lips (Myklebust, 1964, p. 246; Newby, 1958, p. 224). Most people who use speechreading or who have studied it agree that it is not a precise system, and is not a complete substitute for the sense of hearing. About one-third of the sounds of the English language are clearly visible, meaning that a portion of what has been said is not seen. The redundancies in our language (John, 1972), however, aid the speechreader in decoding the speech signal so that speechreading is an effective system for day to day communication. Studies of speechreading ability have revealed that it is related to memory for a sequence of symbols, understanding of social situations, and reading achievement. Females appear to be somewhat more proficient in the use of it than males (Blair, 1957; Myklebust, 1964). Boothroyd (1979) has shown that the use of residual hearing can enhance comprehension through lipreading.

Those who employ the oral method in their schools maintain that with proper teaching methods the deaf can be taught to talk and understand speech so that it is possible for them to communicate with normal hearing people in the usual fashion (Newby, 1958, p. 268).

Critics of this method maintain that even though
it is desirable for deaf people to be able to communicate
by speech, the results of this approach as reflected in
low intelligibility scores do not justify the tremendous
amount of effort required to learn it.

The Rochester Method. This method involves a com-
bination of the oral method plus fingerspelling.

Fingerspelling is a system which uses conventional
finger positions to represent the letters of the alphabet.
It is an easy system to learn and it is possible to de-
velop great enough proficiency in using it that it can con-
vey approximately one hundred words per minute (Moores, p.
15). Quigley (1969, p. 94) found that when fingerspelling
is used in conjunction with good oral techniques, there is
no detrimental effect on the acquisition of oral skills.

Under the Rochester Method, the children receive
information through speechreading, amplification, and
fingerspelling, and express themselves through speech and
fingerspelling. When practiced correctly, the teacher
fingerspells every letter of every word in coordination
with her speech. The teacher talks while holding his or
her hand at mouth level to spell what is being said.

Critics of this approach maintain that few of the
teachers practicing it do it well, relying instead on
fingerspelling more than on talking. Also, the children
who have learned to use this approach find it easier to fingerspell to each other than to put forth the effort to speak intelligibly. It is believed that this will affect speech intelligibility adversely. An added criticism is that few hearing people know the finger alphabet so that a deaf person cannot expect it to be used universally.

The Simultaneous Method. This method is currently known as Total Communication. It involves a combination of the Oral Method plus signs and fingerspelling. The children receive input through speechreading, amplification, signs, and fingerspelling. They express themselves in speech, signs, and fingerspelling.

Signs are stable, conventional hand movements and postures which convey concepts. They are independent of spoken language. The gestures usually resemble in some way what they denote.

Advocates of this approach say that it makes use of all avenues of communication. They stress the importance of developing the child's intellectual ability as well as a system of communication. They point out that signs are easy to learn, even by those who find speechreading difficult. The signs can be made large enough so that they can be understood over greater physical distances than can speechreading.
Signs are bound to the concrete and are limited with respect to abstraction, humor, and subtleties such as figures of speech (Silverman, 1970, p. 390; Schlesinger and Namir, 1978, p. 6). Critics of the Simultaneous Method say that it is basically a hybrid, and since sign language is not the English language, proficiency in it does not ensure understanding of English. Studies in schools where this system is practiced show that the students prefer to use the manual components rather than speech because they are easier. Finally, it is argued that no matter what the children learn, ultimately they will have to use English to communicate with hearing people. Experience with this system will not fully prepare them to do this.

**Academic Achievement**

The Office of Demographic Studies at Gallaudet College (1972) administered the Stanford Achievement Test to deaf children nationwide in 1971. Results on the Advanced Battery of the test, designed for normal hearing students grades 7 to 9.9, showed that the deaf students were about three years behind their age-appropriate peers at the time they should have entered the tenth grade regardless of the method of instruction. By the time they reached eighteen years of age, the time when most hearing
students graduate from high school, the deaf students were achieving at about the eighth grade level, four years behind their peers. The subtest that caused the most difficulty for the deaf students was the one testing reading comprehension. The subtests causing the least trouble were those not related to language: arithmetic and spelling.

The deficiencies of the deaf in comprehending what they read have also been documented in other studies (Karlin, 1964; Wilson, 1967; Cooper and Rosenstein, 1966). Myklebust (1964) studied the reading vocabularies of deaf children in the United States between the ages of nine and fifteen years. He reported that they were severely retarded in this aspect of reading, and that the retardation increased with age. Students eighteen and nineteen years of age had vocabulary scores below the third grade level. Cooper and Rosenstein (1966), after reviewing fifty years of research on the language of deaf people, stated that the average vocabulary level of eighteen-year-olds is about the fourth grade. Wrightstone, Aranow, and Moskowitz (1963) found that of the 5,000 deaf students in the United States and Canada they tested, less than 10 percent of those over ten years of age could read at the fourth grade level.

Numerous specialists in the education of the deaf
(Justman, 1956; Van Wyck, 1960; Myklebust, 1964; Bender, 1970; Giangreco, 1970; Beery, 1972; Moores, 1973; Leckie, 1973; Nober, 1973; Bitter, 1974; Brill, 1974; Birch, 1975; Nix, 1976; Orlansky, 1977; Yater, 1977; Manning, 1979; and Burbach, 1980) have discussed the factors that seem to determine a hearing-impaired student's chances for successful mainstreaming. Although there is considerable agreement among these people concerning these critical factors, Bruce (1975) has pointed out that there is a paucity of objective research documenting these characteristics.

One of the most basic factors important to success in the mainstream is physical health and stamina. A hearing-impaired student is continually faced with the challenge of trying to get information when placed in situations where it is difficult to know what is being said. Dealing with ambiguity and fragmentary information is commonplace. Add to this the pressures of time and grades, and such a student will need the physical endurance to support whatever efforts will be made to succeed.

There is common agreement that average or better intelligence is necessary to achieve success in the mainstream. Most attempts to determine intelligence among deaf students are made with nonverbal intelligence tests.
Some educators believe it is possible for those with slightly less than average intelligence to be able to function successfully in regular schools provided those schools have suitable programs, usually of the vocational variety.

The personality of the student is another factor in identifying candidates for mainstreaming. Deafness has a significant impact on the development of a student's personality. Those being considered for mainstreaming should have achieved a degree of maturity that will enable them to shoulder their responsibilities, live with others, and accept their handicap.

Related to this is motivation, a factor that all educators agree is essential to mainstream success. The student should have demonstrated prior to mainstreaming an interest in education and a willingness to work at it. Going to a regular school will involve more work for the student than remaining in a special school or class, and students who lack the necessary motivation should not be considered.

Basic proficiency in the use of the English language in all of its forms is another underlying variable that seems to be critical to the success of mainstreaming. This competence is important to the student's understanding of what he or she hears, lipreads,
reads, and writes. It is believed that the student should be placed on a level where his or her linguistic skill is within one or two years of the standard for the class.

Certainly the amount of residual hearing the student has is another important variable. The more hearing the student has the greater the chances for success. Wireless hearing aid devices are now available that make it possible for a student with significant residual hearing to receive the teacher's voice clearly regardless of the distance between them.

The student's ability to lipread is a major consideration. Although lipreading is not a perfect substitute for hearing, it can be used beneficially in combination with the student's residual hearing to enable the student to comprehend much of what is said in the regular classroom. Effective lipreading depends upon the critical seating of the student and a somewhat restricted area of movement for the teacher.

Many educators point to the importance of placing otherwise qualified hearing-impaired students on levels at or near the ages of the hearing students. The more conservative advocates claim that the student should be mainstreamed only if he or she can be placed on a level with other students the same age, while others believe that it is possible to tolerate age differences of plus or
minus two years.

The academic part of mainstreaming is important but it is not the sole determiner of mainstreaming success. The student's ability to function socially among hearing students is also a critical factor. The mainstreaming effort should be one to help the student develop into a well rounded individual, not one that merely places an isolated student in a classroom with hearing peers. The student's feelings of social adequacy can make or break otherwise successful efforts to mainstream. The literature seems to indicate (Bitter, 1974, 1976; Burbach, 1980; Conway, 1979; Farrugia and Austin, 1980; Garreston, 1977; Justman, 1956; Kates and Kates, 1965; and Van Wyck, 1959, 1960) that the provision for social growth has been one of the weakest aspects in most attempts to mainstream handicapped students.

This discussion of young deaf people has meant to show the effects a hearing loss has on the lives of these youngsters. All who are familiar with deafness agree that the impact is significant, and that there is no simple way to solve it. Each child must struggle against great odds to overcome the disability and achieve basic proficiency in communication. It should not be made to appear, however, that these people lead morose and very different
lives. As Moores (1978, p. 102) has pointed out, "the majority of deaf people make an adequate adjustment to the world. They marry, raise children, pay taxes, contribute to the good of the community, fight, watch television, and entertain themselves in much the same way as everyone else." Most of their problems are caused by society's indifference and lack of understanding, something they must learn to live with daily.

**Inservice Education**

The passage of Chapter 766 and Public Law 94-142 have resulted in a wider range of programs and services being available to almost every student with special education needs than ever before. On the secondary level, these laws have required teachers and administrators to change the ways they have thought and worked. McGarry (1982) points out, however, that "despite extensive progress and increased opportunities, secondary education is the area of special education in which much more remains to be done" (1982, p. 48). The recommendation was made that those in charge emphasize the need to train regular education staff to deal with disabilities which they find hard to integrate and that this training deal with attitudinal and programatic difficulties, as well as time management skills.
A particular challenge is to provide for the transition of a student from the school for the hearing-impaired to a regular high school that is located a great distance away.
CHAPTER III

METHODOLOGY

Background

Public Law 94-142 and Massachusetts Chapter 766 direct that appropriate educational services for disabled children be provided to the extent possible in the ordinary public schools. Since the enactment of these two laws in 1972 and 1975, millions of special needs students throughout Massachusetts and other states have entered regular school programs with nonhandicapped students at all levels.

Teachers in regular classrooms face a significant challenge when a student with a profound learning disability enters. Without a proper orientation to the particular handicap, the teachers are immediately faced with questions. What is this student's educational training and background? What is the student's ability to comprehend what is happening in this class? Can the student participate in the regular activities of the class? What standards should be used to evaluate this student's performance? Feelings of uncertainty about the answers to these questions have caused concern to the extent that...
teacher associations throughout the country have already begun to press school systems through the collective bargaining process to revise their special education support systems.

Many special schools preparing disabled students for placement in regular classes believe that they have a responsibility to provide some kind of orientation for the receiving teachers, many of whom have never worked with students with profound handicaps. The most obvious way to handle this question is for the special school to conduct workshops at the schools involved. This is a satisfactory approach when the students are entering the same one or two regular schools nearby, but the question the author of this study is faced with is how this orientation can be done effectively when the receiving schools are dispersed over a wide geographic area? Conducting orientation workshops for the teachers in these widely dispersed schools would be financially prohibitive.

The present study is concerned with situations where students with serious hearing impairments are making the transition from a particular school for the deaf in Massachusetts to regular high schools widely dispersed throughout the eastern part of the United States. The focus of the study is on providing the receiving teachers with a basic orientation to the education of the hearing-
impaired. Specifically, the study attempts to determine the impact of a printed training module concerning the mainstreaming of hearing-impaired youth on the understanding of the regular educators who will be receiving them in their schools.

The Study

The purpose of this study was to determine the impact of a printed training module on the subjects' understanding of mainstreaming as it relates to hearing-impaired youth. This module was developed and then field tested by the author. The study involved three high schools and 22 educators who would teach an alumnus of the Clarke School for the Deaf in Northampton, Massachusetts. It was believed that this training module, if successful in helping regular educators understand hearing loss and its effects in the regular classroom, could lead to a smoother transition for hearing-impaired students between the special school and the normal classroom.

Design

The following hypothesis was formulated to test the impact of the printed training module on the understanding of the subjects (i.e., regular educators) concerning the mainstreaming of hearing-impaired youth:
Hypothesis: There is no significant difference in information posttest scores between subjects who were exposed to the printed training module on hearing impairments and subjects who were not.

This hypothesis pointed the researcher to a research design that permitted observation of both control and experimental groups in the face of a specified treatment. Thus, a pretest-posttest control group design was chosen for this investigation.

Pretest-Posttest Control Group Design

<table>
<thead>
<tr>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>0</td>
</tr>
<tr>
<td>Control Group</td>
<td>0</td>
</tr>
</tbody>
</table>

Questions of Internal Validity

Campbell and Stanley (1963) have presented eight different classes of extraneous variables which might jeopardize internal validity. These are discussed in relation to the present study.

1. History. The period of time between the pretest and posttest was about eight to ten weeks, i.e., the summer vacation. This period of time gave the participants the maximum opportunity to study the training module. It is recognized that it might have been possible for one or more of the participants to visit a library, meet a hearing-impaired person or to see something on television connected with this subject during
the interval between tests, but no attempt was made to control for this since it was virtually impossible to predict. Should such an event have happened in a few isolated cases, it was considered unlikely that it would have a significant effect on the overall study. Subjects were asked to concentrate their attention on the materials the researcher gave them.

A few of the guidance counselors were not included in the testing portion of the study because they had already been exposed to some information concerning Clarke School's approach to mainstreaming. This meant that teachers made up the major portion of the testing group.

2. Maturation. It was not believed that there would be sufficient emotional or physiological changes in the participants during this period of time to jeopardize the results of this study.

3. Testing. It was believed that this threat to internal validity was controlled for since both the experimental and the control groups received the same test.

4. Instrumentation. The most important part of both tests, the core of questions concerning the participants' understanding of the education of hearing-impaired young people, did not change from one test to the other. In addition, the instruments were administered in the same manner to both groups.

5. Statistical Regression. The researcher did not select groups on the basis of extreme scores.

6. Differential Selection of Subjects. This potential threat to the present study was believed to be under control because within the overall population of volunteers, there were two randomized groups of subjects.
7. Experimental Mortality. The number of subjects available to be included in this study was limited because the number of deaf students who were entering regular schools was so small. Everyone who was available was included.

8. Selection-Maturation Interaction. It was believed that any such maturation effects would have occurred in both the experimental and control groups since the subjects were randomized.

Questions of External Validity

Campbell and Stanley (1963) also present four threats to external validity. Three of these are applicable to the present study.

1. Interaction of Testing and X. There was concern that the pretesting in this study might have increased the experimental group's sensitivity to the experimental treatment, i.e., the training module. Campbell and Stanley point out, "While such a sensitizing effect is frequently mentioned in anecdotal presentations of the effect, the few published research results show either no effect...or an interaction effect of a dampening order." (p. 18). Thus, if an effect was to be expected in this study, it should have been in the direction of a false negative rather than a false positive.

2. Interaction of Selection and X. The subjects in this study were personnel who had already volunteered to teach or work with a hearing-impaired student. They were not people who were merely volunteering to participate in this study. Thus, they should have been representative of any group of volunteers interested in working with hearing-impaired high school students. In reality, this was the same selection process the schools would
have used had they not been involved in this project.

3. Reactive Arrangements. Since the testing and other contacts were made with the subjects in their own schools, there was nothing artificial about the setting. The subjects were asked to participate in a program to develop information and materials to aid regular high school educators rather than being told that they were subjects in an experimental study. The only outside element was the researcher, but he was the special educator the schools understood would be following up on the student.

Development Of The Training Module

The Clarke School for the Deaf has been sending its students to regular schools with hearing students for 115 years. Four years ago, it began a formal Mainstream Service to oversee and coordinate the transition between these two types of programs. During these first four years, a great amount of anecdotal information was gathered concerning the experiences of Clarke School's former students as they completed their education in regular high schools throughout the eastern part of the United States.

Each year, the Mainstream Coordinator has participated in the planning of students' Individual Educational Programs, and has then followed up on these students as the new school year progressed. During this follow up, visits have been made to all of the schools,
and orientation meetings have been held with many of the teachers involved. The anecdotal information garnered from these contacts with regular school personnel served as the basis for the development of the training module used in this study.

Personnel in regular schools, regardless of private or public status, have the same early concerns and questions about working with a student with a hearing loss. The questions and comments heard in a single school are repeated in all of the others, making it possible to identify the areas to be included in a training module.

Basic information concerning each of the following areas was included in the training module:

an explanation of the nature of hearing loss and its effects on a student's understanding of the English language;

a description of the student's previous educational experience;

a presentation of the various steps that might be taken prior to the student's entry into the regular school;

a list of practical teaching suggestions for including the hearing-impaired student in classroom activities; and

a discussion of a practical system of supervision and support.

The final version of the module consisted of eight chapters, and 127 pages. It is included in Appendix D. It
covered each of the areas listed above, giving simple, straightforward explanations of the important basic concepts. The module was not intended to provide complete information on any of the topics included, but was meant to assist a professional with no background in this area of exceptionality in getting started.

Development of the Questionnaire

A single testing instrument was devised to be used as both a pretest and a posttest for the participants. Individual items were written based on the material contained in the printed training module. The first and subsequent versions of the questionnaire were submitted to the doctoral committee for review and suggestions. The final version of the questionnaire was then tested for form and content.

To establish content validity, a group of three trained and experienced professionals in the education of deaf children was asked to review the general content of the questionnaire, indicating which items might be included and which should be omitted. The individual items were rated on a scale from 1 to 3, 3 meaning "Strongly Agree" and 1 meaning "Strongly Disagree." Those questions receiving a rating of 1 by two or more of the reviewers were excluded from the questionnaire.
To evaluate the form of the questionnaire, the same three experts checked the clarity of each question and the ease of completion of the entire questionnaire. Confusing and ambiguous items were reworded.

**Description of the Questionnaire**

The questionnaire first asked for identification of the subject's sex and professional role. Each questionnaire was given a unique identification code so that pretest and posttest results could be compared. A statement appeared at the beginning of the questionnaire reminding the subjects that honest opinions, not expert knowledge of hearing impairments, was the information we hoped to get from them. Assurance was given that all responses would be kept confidential.

The main body of the questionnaire was six pages long and contained 30 items, most of them multiple choice. The questions concerned each of the major areas to be covered in the training module:

- Knowledge about hearing impairments;
- Information each participant wanted about working with hearing-impaired students;
- Attitudes regarding the need for close supervision of the student's program; and
Opinions regarding the degree of professional support each participant wanted.

Sample

It was intended that six high schools would be involved in this study, each of them to be attended by an alumnus of The Clarke School for the Deaf beginning in September 1981. The subjects would be educators who would work directly with the hearing-impaired student on a daily basis. It was first determined that approximately 50 subjects would qualify for inclusion in this investigation, but the passage of Proposition 2 1/2 by Massachusetts voters had a severe impact on the number who were finally included.

Voted into law in late 1980, Proposition 2 1/2 mandated a serious reduction in local property taxes, ultimately meaning that many public school teachers received lay-off notices in the spring of 1981. Some of the educators who participated in the early part of this study were no longer working when the posttest was administered. In other communities, there was such turmoil occurring within the high school as a result of Proposition 2 1/2 that it was decided that these schools would not be included. The final sample of subjects, therefore, numbered three schools and 22 educators.
Those schools which did participate in this study did so at the expense of valuable time for their staff members at a particularly busy time of the year. Their cooperation is appreciated.

Each subject included in the study (Control and Experimental Groups) was randomly selected from the pool of people who were chosen to begin working with the Clarke School alumnus in September 1981. None of the schools involved had ever had a hearing-impaired student before, and none of the educators had had prior experience with hearing-impaired students from Clarke School. This was not a difficult condition to meet because the incidence of hearing impairment is so low that most schools have not had such a student in their enrollments. Half of the selected staff (Experimental Group) in each school was exposed to the training module, while the other half (Control Group) was not.

**Timing of the Study**

The timing of this study was critical because the experimental treatment (i.e., the printed training module) had to be administered between the time the educators were first selected for inclusion in the study and the first day of the new school year. The training module was of such length that a careful study of it would require
several weeks under spaced learning conditions.

The most convenient method for organizing the timetable for the study was to administer the pretest in the spring of the 1980-81 school year, and the posttest just prior to the start of the 1981-82 school year. The pretest was completed in May and June, and the posttest was accomplished during the first days of the new school year in the fall. The intervening summer allowed sufficient time for the experimental subjects to read the training material.

Procedure

The participants at each high school met as a group for the first administration of the questionnaire. The group was told that the Clarke School Mainstream Service was investigating the most cost-effective way of providing training information to regular educators who have never worked with a hearing-impaired student. Each member's cooperation was requested for completing the investigation.

Following the completion of the questionnaire (pretest), each subject was randomly assigned a case number. Those with even case numbers were given a copy of the experimental training module to be studied during the summer. Those with odd case numbers were told that they
would receive both a copy of the module and a direct and personal orientation before the start of school in the fall. Each participant was requested not to read any other information about hearing impairments during the coming months.

At the close of the summer, a few days before the start of the new school year, the author revisited the cooperating schools and each of the subjects was asked to complete the questionnaire once again (posttest). Each questionnaire was coded in such a way that the responses given by an individual subject in the fall could be compared with those given in the spring.

Following completion of the posttest, those subjects who had not received the training module in the spring were given a copy. In addition, the author gave an orientation workshop for them using the particular hearing-impaired student who was preparing to enter their respective school. It was believed that involving the hearing-impaired student in this workshop would give it greater impact and would make it possible for each of the participants to see firsthand how to communicate with the student. Each participant was also given the opportunity to engage in conversation with the student.

Throughout the following school year, the author made several visits to the participating schools to learn
about the progress of the deaf students and to solicit teachers' reactions to the material in the training module. The findings are presented in Chapters IV and V of this document.
CHAPTER IV
STATISTICAL ANALYSIS OF
MODULE EFFECTIVENESS

TABLE 1 shows that a total of 22 subjects in three public high schools in Massachusetts participated in this study. Thirteen subjects were men and nine were women. One school was located in central Massachusetts, while the other two were in the western part of the state. Two of the schools were regional, serving more than one town, and one school was located in a city of 50,000. Nineteen of the participants were classroom teachers, one was a guidance counselor, one was an adjustment counselor, and one did not specify role. Thus, the view presented by the results of this study is predominantly one of classroom teachers in public high schools in Massachusetts with enrollments in excess of 1500 students. The conditions for a school to be included in this study were: 1) that it would soon be attended by a Clarke School graduate; and 2) that it had not been recently attended by an alumnus of Clarke School. To be a subject, the person could not have worked with a hearing-impaired student before. The conditions for both the schools and the participants were met.
<table>
<thead>
<tr>
<th>School</th>
<th>School Type</th>
<th>Enrollment</th>
<th>Number of Hearing Impaired Students</th>
<th>Study Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>City</td>
<td>Regional</td>
<td></td>
<td>Sex</td>
</tr>
<tr>
<td>1</td>
<td>X</td>
<td></td>
<td>Below 2000</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>X</td>
<td></td>
<td>Below 2000</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>X</td>
<td></td>
<td>Above 2000</td>
<td>2</td>
</tr>
</tbody>
</table>

* One subject did not identify job role.
Pretest

The first administration of the questionnaire was carried out in June 1981. Immediately following completion, the participants were divided randomly into Experimental and Control Groups. Each of the subjects in the Experimental Group was given a copy of the printed training module to read during the summer, while those in the Control Group were told that they would be given the same information in the fall along with some additional personal attention to make up for any lost time. Members of the Control Group were asked not to read any of the training modules given to colleagues who had been placed in the Experimental Group. They were also asked not to read any other information pertaining to hearing or hearing losses.

An analysis was then done on the pretest responses of the two groups on the 14 scaled questions and a total score for each was obtained. The purpose of this was to confirm that the two groups were evenly matched in terms of their current knowledge of hearing impairment. TABLE 2 shows that the means and the standard deviations for both groups were not significantly different.
TABLE 2
Pretest Calculated F Value on Scaled Items

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>F Value</th>
<th>T Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>48.60</td>
<td>4.648</td>
<td>1.07</td>
<td>+.78</td>
</tr>
<tr>
<td>Control Group</td>
<td>47.08</td>
<td>4.50</td>
<td>(p=.905)</td>
<td>(p=.447)</td>
</tr>
</tbody>
</table>

Post Test

In September, just prior to the opening of school, the author returned to each of the high schools and readministered the same questionnaire to both groups of subjects. Responses from each questionnaire were then encoded and entered into a computer for statistical treatment.

Statistical Analysis

Another t Test was performed, this time on the post test responses to see how the two groups differed after the experimental treatment and the intervening summer. TABLE 3 shows that the two groups were not quite significantly different in variance, but were in mean. A t Test was then performed on the differences in scores between the post test and the pretest for both the Control and the Experimental Groups. The computed t value on the
TABLE 3

Posttest Calculated F Value on Scaled Items

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>F Value</th>
<th>T Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>50.80</td>
<td>3.293</td>
<td>3.41</td>
<td>+2.93</td>
</tr>
<tr>
<td>Control Group</td>
<td>44.50</td>
<td>6.083</td>
<td>(p=.076)</td>
<td>(p=.008)</td>
</tr>
</tbody>
</table>

two groups was greater than the tabulated t value at the .05 level of acceptance. Therefore, it appeared the null hypothesis that there would be no changes in the two groups could be rejected.

TABLE 4

t Test on Difference Scores Between Pre and Post Tests

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>F Value</th>
<th>T Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>2.2</td>
<td>4.315</td>
<td>1.049</td>
<td>2.436</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Control Group</td>
<td>-2.583</td>
<td>4.42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An unusual event was noted in the results of the statistical treatment just discussed. Although the mean for the Experimental Group changed in a positive direction from one administration of the questionnaire to the other, the mean for the Control group did not. On the contrary, the mean for the Control Group actually decreased. The reason for this unexpected occurrence is unclear. It could
have resulted from normal variations that were magnified by the small n of the study, or it could have signified a forgetting phenomenon that took place among the Control group members during the intervening summer vacation. Perhaps the second administration of the questionnaire was given too early in the new school year, before the group had readjusted to being back in school. Whatever the cause, it was of interest to do two further statistical investigations with the data.

The first was to compare the relationship of the pre and post test results within each group. This was done by computing the Pearson Correlation Coefficients. It can be seen in the following two tables that a stronger relationship existed between the pre and post test scores for the Control Group than existed between the before and after scores of the Experimental Group. The lower r for the Experimental Group indicated that the post test scores were less predictable on the basis of the pretest scores than was seen for the Control Group.

To the extent the training for the Experimental Group was successful, a lower r would be expected. A scattergram comparing the scores for each of the two groups (Experimental and Control) was then constructed. (See Figures 1 and 2.) These scattergrams show that the bottom scores on the pretest for the Experimental Group
FIGURE 1. Scattergram comparing pre and post test scores of the Control Group
Figure 2. Scattergram comparing pre and post test scores of the Experimental Group
TABLE 5

Experimental Group
Pearson Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Post Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>1.0000</td>
<td>.4516</td>
</tr>
<tr>
<td>Post Test</td>
<td>.4516</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

TABLE 6

Control Group
Pearson Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Post Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>1.0000</td>
<td>.6889</td>
</tr>
<tr>
<td>Post Test</td>
<td>.6889</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

were pulled up on the post test, a result not shown in the scores of the Control Group.

The hypothesis of this study was: There is no significant difference in information post test scores between subjects who were exposed to the printed training module on hearing impairments and subjects who were not. The results of the independent t test, shown in TABLE 4, along with the correlation coefficients, indicated that a significant difference did exist between the responses of the experimental subjects and those of the control group on the fourteen scaled items on the post test question-
naire, and that this difference was not random. Thus the
null hypothesis that there is no significant difference
between the groups is rejected.

Examination of Responses By Question

It is acknowledged that the number of responses
cited in this study is very small, and any rigid statisti-
cal conclusions are unwarranted. The numbers, however, do
give some indication of the changes that apparently took
place between the two administrations of the question-
aire. They are presented as suggestions of trends.

Responses to Causes of Hearing Impairment Early in
the questionnaire, the participants were asked to identify
what they thought were causes of hearing loss by checking
the items that applied, and TABLE 7 shows a summary of
these responses. On the pretest, three of the primary
causes - disease; injury; and heredity were correctly
checked by most of the subjects. The fourth most common
cause - drugs - was identified in only a few cases. The
training module stated clearly the various causes of
hearing loss without going into a lot of detail.

On the post test, most of the Experimental (X) and
the Control Group (C) responses identified the four common
causes. Since the scores of both groups were so similar,
despite the fact that the one group had not been exposed
to the experimental treatment, it is assumed that this question was not useful in differentiating groups. Its importance for training purposes, however, is still acknowledged.

**TABLE 7**

<table>
<thead>
<tr>
<th>Causes of Hearing Loss as Identified by Subjects (Q 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre.X</td>
</tr>
<tr>
<td>N=10</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Heredity</td>
</tr>
<tr>
<td>Disease</td>
</tr>
<tr>
<td>Diet</td>
</tr>
<tr>
<td>Drugs</td>
</tr>
<tr>
<td>Injury</td>
</tr>
</tbody>
</table>

Responses to Questions on Feelings

The questionnaire inquired about the participants' feelings as they approached this new type of work. Specifically, it was of interest to know what their feelings were regarding the prospect of working with a hearing-impaired student (Q 1), and to find out how confident they were to do this work (Q 18). TABLES 8 and 9 present these results.

The subjects were asked to check those items in the prospect of working with a hearing-impaired student. It can be seen from their responses on both the pre and post tests that the feelings associated with the situation
TABLE 8
Feelings of Participants by Percentages (Q1)

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre. C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resentful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fearful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous</td>
<td>30% (3)</td>
<td>30% (4)</td>
<td></td>
<td>25% (3)</td>
</tr>
<tr>
<td>Concerned</td>
<td>80 (8)</td>
<td>17 (2)</td>
<td>50% (5)</td>
<td>83 (10)</td>
</tr>
<tr>
<td>Hopeful</td>
<td>20 (2)</td>
<td></td>
<td>50 (5)</td>
<td>67 (8)</td>
</tr>
<tr>
<td>Confident</td>
<td>60 (6)</td>
<td>50 (6)</td>
<td>40 (4)</td>
<td>25 (3)</td>
</tr>
<tr>
<td>Pressured</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 9
Percentage of Responses About Feelings of Confidence (Q18)

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't Know</td>
<td></td>
<td>8% (1)</td>
<td></td>
<td>17% (2)</td>
</tr>
<tr>
<td>Not very</td>
<td>10% (1)</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Neutral</td>
<td>-</td>
<td>17 (2)</td>
<td>20% (2)</td>
<td>8 (1)</td>
</tr>
<tr>
<td>Somewhat</td>
<td>60 (6)</td>
<td>58 (7)</td>
<td>50 (5)</td>
<td>50 (6)</td>
</tr>
<tr>
<td>Very</td>
<td>30 (3)</td>
<td>17 (2)</td>
<td>30 (3)</td>
<td>25 (3)</td>
</tr>
</tbody>
</table>

were positive, but tempered with what might be thought of as a healthy degree of concern. The Control Group's responses on the post test indicated some ambivalence within the group since both nervousness and confidence were checked, an understandable condition since none of the members of that group had received any training by the time the post test was taken. A comparison of scores by
sex revealed nothing remarkable.

Question 18 was closely related to Question 1 in that it inquired about the subjects' present level of confidence to do this new type of work.

Table 9 shows that the majority of the participants indicated feelings of confidence that were consistent with their expressed feelings in Question 1. Although the range of responses of the Control Group was slightly broader than that of the Experimental Group, the general picture presented was that all the subjects, regardless of their membership in one group or the other, felt positive about the coming experience, but they were also somewhat concerned about the exact nature of this new work.

Breaking down the post test responses by sex within each group in Table 10, we can see that the Experimental Groups of both women and men appeared to be more confident than the Control Groups. 100% of the Experimental Group's responses ranged from Neutral to Very Confident.

Interestingly, 42.9% of the male subjects in the Control Group seemed to indicate feelings of being Very Confident, a sentiment not shared by the Control Group women. It has been observed by the author in mainstreaming work during the last five years that men
TABLE 10
Feelings of Confidence by Group and Sex (Q18)

<table>
<thead>
<tr>
<th></th>
<th>Experimental (N=6)</th>
<th>Control (N=7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't Know</td>
<td>-</td>
<td>14% (1)</td>
</tr>
<tr>
<td>Not very</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Neutral</td>
<td>16.7% (1)</td>
<td>-</td>
</tr>
<tr>
<td>Somewhat</td>
<td>66.7% (4)</td>
<td>42.9% (3)</td>
</tr>
<tr>
<td>Very</td>
<td>16.7% (1)</td>
<td>42.9% (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Experimental (N=4)</th>
<th>Control (N=5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>-</td>
<td>20% (1)</td>
</tr>
<tr>
<td>Not very</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Neutral</td>
<td>25% (1)</td>
<td>20% (1)</td>
</tr>
<tr>
<td>Somewhat</td>
<td>25% (1)</td>
<td>60% (3)</td>
</tr>
<tr>
<td>Very</td>
<td>50% (2)</td>
<td>-</td>
</tr>
</tbody>
</table>

generally express a higher level of confidence in anticipating the upcoming mainstream experience than do women. Whether this is sociological in nature is unclear, but women generally view the anticipated mainstream experience as a more complex process than do their male counterparts.

Summary of Responses on Questions About Feelings

The subjects taking part in this study indicated on two different questions that they had positive feelings about the prospect of working with a hearing-impaired student. An analysis of both the range and intensity of the
responses indicates that there were some feelings of concern, even though most of the participants felt confident enough to do the work.

Looking at the post test scores, it appears that the Experimental Group felt somewhat more confident about this upcoming experience than did the members of the Control Group, an understandable condition since the Experimental Group had received a copy of the printed training manual. However, random behavior could also be a cause with such a small number of participants.

Responses to Questions About Communication

The most obvious area of concern expressed by people when they are about to begin working with a hearing-impaired student is communication. People usually wonder how the student will be able to understand them, and how the student will express himself? The mode of communication for the hearing-impaired students who were about to enter the schools involved in this study is talking and lipreading, not sign language. Probably the most common mode of communication used by hearing-impaired people in the northeastern part of the United States is sign language. The author's experience with many regular high schools in this area has shown that many people
expect hearing-impaired people to use sign language to communicate. Questions 2 and 3 were meant to determine the expectations of the subjects in this study regarding the primary form of communication their new student would be using.

**TABLE 11**

Mode of Receptive Communication (Q2)
Subjects' Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign Language</td>
<td>100% (10)</td>
<td>83% (10)</td>
<td>100% (10)</td>
<td>83% (10)</td>
</tr>
<tr>
<td>Lipreading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>17 (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In both the pretest and the post test, on Question 2, none of the participants expected sign language to be the primary mode of receptive communication. Instead, **TABLE 11** shows that they expected lipreading to be used. This was a somewhat surprising finding in view of the author's experience. A plausible explanation for this discrepancy is that the subjects may have been told beforehand by the special education director in their school that the student would be coming from a school where sign language is not used.
TABLE 12
Primary Mode of Expressive Communication (Q3)
Subjects' Responses by Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talking</td>
<td>50% (5)</td>
<td>8% (1)</td>
<td>50% (5)</td>
<td>25% (3)</td>
</tr>
<tr>
<td>Writing</td>
<td>8% (1)</td>
<td>8% (1)</td>
<td>50% (5)</td>
<td>25% (3)</td>
</tr>
<tr>
<td>Talking + Writing</td>
<td>50 (5)</td>
<td>83 (10)</td>
<td>50 (5)</td>
<td>75 (9)</td>
</tr>
<tr>
<td>Sign Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Similarly, the subjects responded to Question 3 that the student would use a combination of talking plus writing as the primary means of expression. This response held across both administrations of the questionnaire, as is seen in TABLE 12. The only change was seen in the Control Group's post test score, where there seemed to be less of a feeling that writing would be needed. In general, no net change appeared to take place. Thus, it appears that no change took place as a result of the Experimental treatment, meaning that this section of the training module probably needs to be strengthened.

Question 4 examined the topic of lipreading more closely by asking the subjects to identify all those factors they believed to be important classroom contributors to successful lipreading. Experience has shown that teachers in regular classrooms are either unaware of, or
forget about, the factors that are important to lipreading success. These factors include: using visual aids; preferential seating; and using probing questions to ascertain a hearing-impaired student's level of understanding. Question 4 was meant to reveal the subjects' understanding of the importance of these items.

**TABLE 13**

Factors Important For Successful Lipreading (Q 4)
Subjects' Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Aids</td>
<td>100% (10)</td>
<td>100% (12)</td>
<td>80% (8)</td>
<td>83% (10)</td>
</tr>
<tr>
<td>Talk Single Words</td>
<td></td>
<td>8 (1)</td>
<td>30 (3)</td>
<td>17 (2)</td>
</tr>
<tr>
<td>Speaker Keep Still</td>
<td>50 (5)</td>
<td>25 (3)</td>
<td>20 (2)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Pref. Seating</td>
<td>90 (9)</td>
<td>100 (12)</td>
<td>100 (10)</td>
<td>100 (12)</td>
</tr>
<tr>
<td>Understanding of Topic</td>
<td>50 (5)</td>
<td>67 (8)</td>
<td>70 (7)</td>
<td>67 (8)</td>
</tr>
</tbody>
</table>

It is evident from TABLE 13 that most of the subjects did understand the importance of visual aids and preferential seating before the experimental treatment began. In the module, the point was also made that it is very helpful if the person who is trying to lipread has a basic understanding of the topic. On the post test there was a slight increase in the number of subjects who added this item to the list, but the fact remains that both the Experimental subjects and Control subjects demonstrated a
correct understanding of the elements important to successful lipreading on both administrations of the test. This indicates that the training module had only slight impact.

Knowing whether or not the lipreader is understanding what is being discussed is another area of importance for the teacher. A simple question directed to the student asking if he or she understands is not an acceptable strategy because the student can sometimes give an honest but misleading answer. The student may believe that he or she understands when, in fact, there is confusion. The teacher must be sensitive to the clues contained in the hearing-impaired person's overt behavior in attempting to make this determination. Question 5 was intended to see if the participants in this study had this sensitivity.

| TABLE 14 |
| Behavior Indicating A Lack of Understanding (Q5) |
| Responses in Percentages |

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Spelling</td>
<td>20% (2)</td>
<td>17% (2)</td>
<td>20% (2)</td>
<td>17% (2)</td>
</tr>
<tr>
<td>Misses Announce.</td>
<td>50 (5)</td>
<td>67 (8)</td>
<td>80 (8)</td>
<td>83 (10)</td>
</tr>
<tr>
<td>Never Volunteers</td>
<td>50 (5)</td>
<td>42 (5)</td>
<td>30 (3)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Misses Appoint.</td>
<td>90 (9)</td>
<td>91 (11)</td>
<td>80 (8)</td>
<td>75 (9)</td>
</tr>
<tr>
<td>Inappropriate Beh.</td>
<td>90 (9)</td>
<td>83 (10)</td>
<td>90 (9)</td>
<td>91 (11)</td>
</tr>
</tbody>
</table>


There was a discussion in the Communication section of the module of 12 common indicators of communication breakdown, making clear the typical ways in which students demonstrate a lack of understanding. The items that received the greatest number of responses from both groups on both tests are, in fact, pretty reliable indicators of student confusion. TABLE 14 shows that there were some slight positive changes in the thinking of the Experimental Group after exposure to the printed training module, but once again, the scores of both groups were so similar that one must question how discriminating this item was.

The reason for including this question in the study and training module was that professionals in schools visited by the author so seldom seem to recognize trouble signs in the classroom. When visiting schools, it is common to hear teachers report that they lack confidence in knowing whether the hearing-impaired student is actually following and understanding what is said. Perhaps the training module would be more effective if it included case studies about students who are having difficulty, and the staff were asked to identify the trouble signs in each case.

Question 12 continued the investigation into the subjects' understanding of communication by asking the
subjects to estimate how easy or difficult it would be for the hearing-impaired student to understand what would be discussed in the normal course of class each day. The training module made the point that it is indeed a challenge for a hearing-impaired student to follow what is said in class unless it is properly structured. Lipreading is not a perfect substitute for hearing.

**TABLE 15**
Ease or Difficulty of Understanding Classwork Through Lipreading (Q 12) Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>40% (4)</td>
<td>50% (6)</td>
<td>10% (1)</td>
<td>33% (4)</td>
</tr>
<tr>
<td>Difficult</td>
<td>10 (1)</td>
<td>17 (2)</td>
<td>20 (2)</td>
<td>17 (2)</td>
</tr>
<tr>
<td>Rather difficult</td>
<td>40 (4)</td>
<td>25 (3)</td>
<td>60 (6)</td>
<td>42 (5)</td>
</tr>
<tr>
<td>Rather easy</td>
<td>10 (1)</td>
<td>8 (1)</td>
<td>10 (1)</td>
<td>8 (1)</td>
</tr>
</tbody>
</table>

It can be seen in **TABLE 15** that the greatest number of responses from both groups on the pretest indicated confusion. 45.5% of all subjects said they did not know if it would be easy or difficult to understand what is said in class, while the same number said they thought it would be difficult. Looking at the groups separately, 50% of the Experimental Group thought it would be difficult, while 50% of the Control Group said it did not
know.

A breakdown of the pretest responses by sex in TABLE 16 showed that most of the women (56%) said they could not judge how great the challenge would be, while 54% of the men estimated that the students would find following in class to be rather difficult or difficult. This is obviously part of the reason for the concern about the student's chances for success expressed by the subjects in earlier questions.

TABLE 16

Ease or Difficulty of Understanding Classwork Through Lipreading (Q 12)

Pretest Responses by Sex

<table>
<thead>
<tr>
<th></th>
<th>Men N=13</th>
<th>Women N=9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>39% (5)</td>
<td>56% (5)</td>
</tr>
<tr>
<td>Difficult</td>
<td>15% (2)</td>
<td>11% (1)</td>
</tr>
<tr>
<td>Rather difficult</td>
<td>39% (5)</td>
<td>22% (2)</td>
</tr>
<tr>
<td>Rather easy</td>
<td>8% (1)</td>
<td>11% (1)</td>
</tr>
<tr>
<td>Easy</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
</tbody>
</table>

Among theExperimental subjects there was an increase (30%) from pretest to post test in the number responding that it would be difficult for the student to follow in class. There was also a change in the number of the Control Group, but the increase was only 17%. It is
important to make clear in the training module that although it is a challenge, the proper structure can make it possible for the student to understand most of what is said in class.

Question 13 asked the subjects to estimate how easy or difficult they thought communication would be between the hearing-impaired student and his/her hearing peers. On previous questions, they indicated that they expected the student to receive information through lipreading and to use talking and writing for expression. They also thought the student would find it difficult to follow in class because of the pace of events and because there might be so many different speakers. Given this, it seems reasonable to expect them to think communication with peers would also be challenging.

Looking at the scores of both groups on the pretest in TABLE 17, there did not seem to be any clear estimate about how effective communication with peers would be. There was almost an even split among the three most commonly chosen responses, resulting in no clearly dominant impression. It would have been interesting to know the reason behind each of the subject's choices.

50% of the Experimental Group on the pretest thought it would be easy and 40% thought it would be difficult. On the post test, only 10% thought communication
between hearing students and the hearing-impaired student would be easy and 60% said it would be difficult. This represents a shift away from the previous position. The number who felt unable to decide whether it would be easy or difficult increased from 10% to 30%.

A re-examination of the material on this topic in the training module showed that the tone of it may have been too pessimistic. Any communicative situation with a hearing-impaired person carries with it a challenge, but hearing-impaired students do not report one-to-one interactions to be as difficult a challenge as following in class. This needs to be explained more clearly in the module.

The final two questions under the broad category of communication had to do with the importance of sound
for hearing-impaired people. Despite their inability to perceive it as well as normally hearing people, sound is still important to the hearing-impaired. Few people are totally deaf, and all who can perceive sound can get some kind of useful information from it. Question 6 checked to see if subjects understood this.

Responses shown in TABLE 18 indicate that 46% of all subjects on the pretest understood that sound for a deaf person is important. Examination of scores by group showed that the largest group of Control members (49%) thought sound is important. The Experimental Group was evenly divided.

**TABLE 18**

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>20% (2)</td>
<td>33% (4)</td>
<td>33% (4)</td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>10 (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>30 (3)</td>
<td>16.6 (2)</td>
<td>40% (4)</td>
<td>8 (1)</td>
</tr>
<tr>
<td>Agree</td>
<td>20 (2)</td>
<td>41 (5)</td>
<td>50 (5)</td>
<td>50 (6)</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>20 (2)</td>
<td>8 (1)</td>
<td>10 (1)</td>
<td>8 (1)</td>
</tr>
</tbody>
</table>

On the post test, 60% of the responses of the Group indicated agreement with the statement sound is of great value. This seems to represent an in the right
direction. 58% of the Control Group also agreed, although the increase over the scores was minimal.

Although there was a positive degree of change within Experimental Group, it must be acknowledged that 40% of subjects on the post test either disagreed or did not know the answer.

Question 8 was meant to see if the subjects understood if any, effect a personal hearing aid has on a loss. Many people believe that this device lost hearing. It does not. Neither does it sounds that are rendered distorted by the ear. It only makes sounds louder as they the ear. Those subjects who understood this should disagreed with the statement as it appeared in the questionnaire.

TABLE 19

Hearing Aid Correct Hearing Loss (Q 8)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>10% (1)</td>
<td>8% (1)</td>
<td>10% (1)</td>
<td>25% (3)</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>20 (2)</td>
<td>8 (1)</td>
<td>30 (3)</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>40 (4)</td>
<td>41.7 (5)</td>
<td>50 (5)</td>
<td>50 (6)</td>
</tr>
<tr>
<td>Agree</td>
<td>30 (3)</td>
<td>33 (4)</td>
<td>10 (1)</td>
<td>25 (3)</td>
</tr>
<tr>
<td>Strongly agree</td>
<td></td>
<td>8 (1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Looking at the responses of all subjects on the in
TABLE 19, it appears that most of them did have understanding of the function of a hearing aid. 55% of them disagreed with the statement in the questionnaire, by groups, 60% of the Experimental and 50% of the Control Group disagreed with the statement.

The training module pointed out clearly that a hearing aid does not correct a hearing loss the way eyeglasses correct many vision problems. In the eye, the problem is one of accommodation. In the ear, there is an actual loss of ability to hear resulting from pathology. A hearing aid makes a sound louder as it arrives at the outer ear, but it must be remembered that the inner ear is still pathological and, in part, dysfunctional.

On the post test, there was some positive growth registered among the Experimental Group members. 80% of them disagreed with the statement in the questionnaire, while the number of Control Group respondents held at 50%. It may be assumed that the printed training module was effective in making this point clear to those newly engaged in this kind of work.

Summary of Communication Responses

Judging from the responses on the questionnaire, the printed training module appeared to be of assistance in helping the subjects understand that communication bet-
ween the hearing-impaired student and hearing peers would be more difficult than previously supposed. This section of the module, upon second examination, is not as clear as it might be and is too pessimistic in tone.

The subjects also seemed to make a slight amount of improvement in recognizing certain indicators in a hearing-impaired person's behavior that show there is a lack of understanding. The change, as noted, was only slight.

The subjects made a clear gain in their understanding that sound, though not perceived normally, is still important to a hearing-impaired person. They also indicated that they realized that the hearing aid, though helpful, does not correct the hearing loss. It only makes sound louder as it enters the ear.

One of the areas in which the module appeared to be ineffective had to do with the expected mode of expressive communication. Scores of the Experimental group did not change across the two tests, and the picture presented was that only 50% of the subjects understood that the student would use talking as the primary means of expressive communication. As far as receptive communication was concerned, everyone expected the student to get information through lipreading. This is a response that is contrary to the author's experience in talking
with professionals throughout New England. Most people assume that the student uses sign language. It is possible that the special education directors in the schools involved in this study informed the subjects of this when they asked them to participate.

Everyone in both groups correctly identified the factors that are the most important for successful lipreading. Thus, this question was not sufficiently discriminating.

The evidence from the pre and post test responses to the questionnaire is fairly inconclusive concerning the effectiveness of the printed training module in helping the subjects understand communication. Some rewriting will be needed on each of the concepts before the module can be used with schools in general.

Responds to Questions Concerning Language Comprehension

Although language is part of communication, it is being discussed in this paper as a separate category because of its overriding importance in the education of the hearing-impaired. The major educational impact of hearing impairment on any developing child is the interference with the child's growth in understanding and using the language of his or her country. This slowed
linguistic development, in turn, interferes with the student's ability to read with understanding; to write with clarity; and to understand abstract concepts. In other words it will have a significant adverse effect on the student's ability to function successfully in school.

It is difficult for the person unfamiliar with the effects of hearing loss to comprehend the magnitude and the pervasiveness of this problem for the hearing-impaired. Moreover, its invisibility and the fact that most hearing-impaired students appear healthy in other ways makes it appear to the average person as only a minor handicap. If the student is seen to be wearing a hearing aid, the problem is often thought to have been eradicated.

Question 16 was deliberately structured in a way that those with a true understanding of the handicap would check activities involving the use of the English language. Those who did not understand the effects would be drawn to more superficial items.

It is clear from TABLE 20 that 14 of the 25 responses checked on the pretest by all subjects were for activities not involving the English language. The activity most subjects believed would be the most difficult for the hearing-impaired student was playing basketball. Also, 35% of the responses indicated that none of the activities listed would be affected by hearing impairment.
TABLE 20

Activities Difficult for a Hearing-Impaired Student (Q16)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy. mech. draw.</td>
<td>7.6% (1)</td>
<td>5.6% (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comp. math. equa.</td>
<td>7.6% (1)</td>
<td>11.2% (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading a novel</td>
<td>7.6% (1)</td>
<td>5.6% (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drawing a sketch</td>
<td>5.6% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing bsktbl</td>
<td>46% (6)</td>
<td>46% (6)</td>
<td>22% (4)</td>
<td>61.5% (8)</td>
</tr>
<tr>
<td>Writing compos.</td>
<td></td>
<td>11% (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solv. chem. equa.</td>
<td>7.6% (1)</td>
<td>5.6% (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comp. writ. exam</td>
<td>7.6% (1)</td>
<td>27.8% (5)</td>
<td>7.6% (1)</td>
<td></td>
</tr>
<tr>
<td>None of above</td>
<td>23% (3)</td>
<td>46% (6)</td>
<td>5.6% (1)</td>
<td>30.8% (4)</td>
</tr>
</tbody>
</table>

This is a strong confirmation of the subjects' inexperience with this handicap and of the need for this important topic to have been included in the training module.

The statement was made repeatedly throughout the training module that the understanding and use of the English language was the area most severely affected by a hearing loss. This was emphasized in the sections on communication; the adolescent in the mainstream; the teachers' section; and more briefly in the tutor's section. Literally anything the student does, so long as it involves the English language, will be affected. This means that the student will not be able to read or write
with as deep an understanding, will experience continual shortage of vocabulary; and as a result of these two conditions not have as large a storehouse of concepts about the world. Those who understood this condition should have chosen the three responses on the questionnaire that were language-related (reading a novel; writing a composition; and completing a written exam).

Looking at the post test scores, it can be seen that the number of Experimental group responses received by language-related activities increased from 2 on the pretest to 8 on the post test. This is a good gain, but still an inadequate level of understanding for professionals who will be responsible for instructing the affected student.

The Control Group's choice of language related activities increased from 0% to 8%. Playing basketball continued to be the activity they thought would be most affected.

Question 17 was related to Question 16 in that it asked the participants to identify some of the ways in which they thought the hearing-impaired student might differ from hearing students. All of the choices listed in the questionnaire were valid, although the one about peer acceptance would not distinguish a hearing-impaired student from one with normal hearing.
The choices checked by the two groups on the pre-test are shown in TABLE 21. The ones checked most often were "Difficulty in the Use of Spoken English" and "Interest in Being Accepted by Hearing Peers." It is interesting that they were drawn to the item on English in this question, when they were not drawn to any of the activities connected with English on the previous question. The reason for this appears to be that they made their selection because of the use of the word "spoken." If this is correct, it is another indication that they see the problem simply as one of poor speech production.

The fact that "concept deficiency" was not checked, and that "difficulties with the English language" was so rarely checked supports the conclusion previously drawn that the participants did not appreciate the deeper consequences of impaired hearing.

On the post test, the Experimental Group increased the number of items its members checked from 19 to 47. The items receiving most of the checks were language-related whereas only one of the items receiving the most checks on the pretest had been language-related. Another positive sign was a rather large increase (70%) for the item on Concept Deficiency. 35 of 47 responses on the post test were allocated to language-related items for the
TABLE 21

Differences Between Hearing Impaired & Hearing Peers (Q17)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short. of Vocabulary</td>
<td>30% (3)</td>
<td>8% (1)</td>
<td>100% (10)</td>
<td>25% (3)</td>
</tr>
<tr>
<td>Peer Acceptance</td>
<td>40 (4)</td>
<td>50 (6)</td>
<td>40 (4)</td>
<td>91 (11)</td>
</tr>
<tr>
<td>Reading Problems</td>
<td>20 (2)</td>
<td>50 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diff. w/ spoken Eng.</td>
<td>50 (5)</td>
<td>75 (9)</td>
<td>90 (9)</td>
<td>75 (9)</td>
</tr>
<tr>
<td>Diff. w/ written Eng.</td>
<td>20 (2)</td>
<td>40 (4)</td>
<td>8 (1)</td>
<td></td>
</tr>
<tr>
<td>Concept deficiency</td>
<td>70 (7)</td>
<td>8 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chron. older</td>
<td>30 (3)</td>
<td>33 (4)</td>
<td>80 (8)</td>
<td>42 (5)</td>
</tr>
</tbody>
</table>

Experimental Group, while only 14 of 30 responses for the Control Group responses were.

Summary of Language Responses

It appears from the responses on the two administrations of the questionnaire that the Experimental Subjects showed a good amount of growth in their understanding of the important role language plays in the hearing-impaired person's education. There was a 66% increase in the number of language-related items checked on Question 16 after the experimental treatment. This is very encouraging. It must be acknowledged, however, that 56% of the responses made by the Experimental Group were still directed at activities where there would be either
no negative consequences, or only limited ones.

On the question asking the subjects to identify those areas in which the hearing-impaired student would be different from the hearing peers, the printed training module appeared to make the Experimental subjects more aware of the ways in which the hearing-impaired student would differ. The number of items chosen by the Experimental group increased 59.6% on the post test, the greatest increase being registered on "Concept Deficiency."

The Experimental Subjects appeared to sharpen their understanding of the linguistic consequences associated with hearing losses, but it is clear that too many of the subjects still did not understand the tremendous impact this handicap has on a student's ability to function successfully in a regular high school.

Responses to Questions Concerning Adjustment

The adjustment of the hearing-impaired student to the new school is also an area of concern in mainstreaming. Questions related to this in the pre and post tests were: the student's feelings about being mainstreamed; the staff's estimate of the degree to which such a student could be integrated into the life of the
school; and the staff's perception of the willingness and ease with which the student could discuss his/her handicap. It was expected that the responses of the staff on each of these questions would be in a positive direction.

Question 9 asked the subjects to estimate the feelings the hearing-impaired student had about being mainstreamed. They were to do this by checking all of the feelings they thought applied to the student. TABLE 22 shows their responses.

**TABLE 22**

**Estimates of Students' Feelings (Q9)**
**Responses in Percentages**

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolated</td>
<td>10% (1)</td>
<td>8% (1)</td>
<td></td>
<td>8.8% (3)</td>
</tr>
<tr>
<td>Resentful</td>
<td>10 (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fearful</td>
<td>30 (3)</td>
<td>25 (3)</td>
<td>20% (2)</td>
<td>50 (6)</td>
</tr>
<tr>
<td>Nervous</td>
<td>70 (7)</td>
<td>75 (9)</td>
<td>80 (8)</td>
<td>83 (10)</td>
</tr>
<tr>
<td>Concerned</td>
<td>40 (4)</td>
<td>58 (7)</td>
<td>90 (9)</td>
<td>75 (9)</td>
</tr>
<tr>
<td>Hopeful</td>
<td>80 (8)</td>
<td>67 (8)</td>
<td>70 (7)</td>
<td>42 (5)</td>
</tr>
<tr>
<td>Confident</td>
<td>20 (2)</td>
<td>8 (1)</td>
<td></td>
<td>8 (1)</td>
</tr>
</tbody>
</table>

The responses on the pretest were wide-ranging, but basically indicated that the Experimental Group was nervous but optimistic. The greatest number of responses checked were for "Nervous" and "Hopeful." The Control Group responses were also wide-ranging and a bit more
pessimistic. The greatest number of responses were for Nervous, Hopeful, and Concerned.

On the post test, the situation seemed to reverse itself with the Experimental Group assigning 92% of its responses to Nervous, Concerned, and Hopeful. The item that showed the greatest increase was Concern. As was pointed out earlier, it is possible that in pointing out the severity of the handicap, the training module presents an impression that is too negative.

Question 10 asked the subjects if they agreed that the student would be embarrassed to talk openly with them about his or her handicap. The experience the author has had in a wide variety of regular schools has been that most people avoid talking with a student about a handicap because they do not want to embarrass or because they think the student would be reluctant.

TABLE 23 shows that on the pretest, 72.7% of the combined groups disagreed with the statement that the student would be embarrassed to discuss the loss. A breakdown of the responses by group showed that the Experimental Group members felt this way more strongly (80%) than did those in the Control Group (66.7%).

The training module invites regular school personnel to discuss with the student the hearing loss and its implications. All during the time the student was
enrolled at Clarke School, this was done. The suggestion was made that such talks be held privately in the beginning.

On the post test, 100% of the Experimental Group indicated disagreement with the statement in the questionnaire, while there was less of a change registered by the Control Group. It is questionable how effective this section was.

The women in the Experimental Group seemed certain from the outset of their disagreement with the statement (TABLE 24). Their overall disagreement did not change across the two tests. The men in the Experimental Group did not seem to feel as certain in the pretest as they did on the post test.

The women in the Control Group, on the other hand,
**TABLE 24**

H. I. Students Embarrassed to Discuss Hearing Loss (Q 10)
Responses in Percentages by Sex Within Groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Men:</td>
<td>N=6</td>
<td>N=6</td>
<td>N=7</td>
<td>N=7</td>
</tr>
<tr>
<td>Don't Know.</td>
<td>33% (2)</td>
<td>-</td>
<td>28.6% (2)</td>
<td>14% (1)</td>
</tr>
<tr>
<td>Strong. Dis.</td>
<td>16.7 (1)</td>
<td>50% (3)</td>
<td>28.6 (2)</td>
<td>14% (1)</td>
</tr>
<tr>
<td>Disagree</td>
<td>50 (3)</td>
<td>50 (3)</td>
<td>42.9 (3)</td>
<td>71 (5)</td>
</tr>
<tr>
<td>Agree</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Strong. Agr.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

| Women:                 | N=4          | N=4        | N=5     | N=5        |
| Don't know             | -            | -          | 40% (2) | 60% (3)    |
| Strong. Dis.           | -            | 25% (1)    | 20 (1)  | -          |
| Disagree               | 100% (4)     | 75 (3)     | 40 (2)  | 40 (2)     |
| Agree                  | -            | -          | -       | -          |
| Strong. Agr.           | -            | -          | -       | -          |

Seemed to have greater doubt on the post test than they did on the pretest. The number disagreeing with the statement dropped from 60% to 40%, and the number indicating that they did not know increased from 40% to 60%. The men in the Control Group seemed to be more certain of their disagreement with the statement, but the change in their responses from pretest to post test was not great.

Question 27 sought to determine the degree to which the subjects thought the hearing-impaired students would be able to integrate socially into the life of their
schools. A summary of their responses is shown in TABLE 25.

**TABLE 25**

*Estimate of Degree of Social Integration (Q 27)*  
*Responses in Percentages*

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td></td>
<td>8% (1)</td>
<td></td>
<td>8% (1)</td>
</tr>
<tr>
<td>Very little</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quite a bit</td>
<td>60% (6)</td>
<td>25 (3)</td>
<td>50% (5)</td>
<td>41.6 (5)</td>
</tr>
<tr>
<td>A great deal</td>
<td>40 (4)</td>
<td>66.6 (8)</td>
<td>50 (5)</td>
<td>50 (6)</td>
</tr>
</tbody>
</table>

It is interesting that all subjects thought there would be a high degree of social integration when they indicated in Question 13 that they expected communication between the hearing and hearing-impaired students to be difficult. Certainly easy communication is central to socialization. A remark by one of the subjects in one of the schools leads the author to hypothesize that some of the subjects may have interpreted the word "integration" to mean "acceptance" by the hearing students or "a willingness to accept." This may explain part of this score.

Question 11 checked to see if the staff thought the student would be able to adjust to the daily routine
in the school since the student would be coming from a different type of educational environment.

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>30% (3)</td>
<td></td>
<td>16.7% (2)</td>
<td>25% (3)</td>
</tr>
<tr>
<td>Difficult</td>
<td>20 (2)</td>
<td>8% (1)</td>
<td>25 (3)</td>
<td>16.7 (2)</td>
</tr>
<tr>
<td>Rather difficult</td>
<td>30 (3)</td>
<td>25 (3)</td>
<td>16.7 (2)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Rather easy</td>
<td>20 (2)</td>
<td>66 (8)</td>
<td>25 (3)</td>
<td>25 (3)</td>
</tr>
</tbody>
</table>

Responses for the whole group are shown in TABLE 26. They indicate that about 40% thought it would be difficult, and about the same number thought it would be easy. Examining the responses by group, it can be seen that 50% of the Experimental Group thought the adjustment to the new routine would be difficult, while 66% of the Control Group thought the adjustment would be easy.

On the post test, the number of Experimental responses dropped somewhat to 41.7%, and there was a slight increase in those who checked Rather Easy. The Control Group went in the opposite direction. The number who thought the adjustment would be rather easy dropped to 25%, and the number who thought it would be difficult
increased. The reason for this is not apparent.

Of the various types of integration (social, academic, athletic), academic integration is the type the school is best organized to attempt. It is expected that staff members should be able to determine the needs of a student and construct a program to deal with them. At first glance, those who have had no experience educating hearing-impaired students, with no understanding of the pervasiveness of the language handicap, might be expected to estimate that the hearing-impaired student would achieve a high degree of academic integration. The student should be able to function successfully if he or she is appropriately placed.

Question 26 asked the subjects to make an estimate about this type of integration. Subjects' responses are shown in TABLE 27. On the pretest, 57% of all subjects estimated that the student would be able to integrate A Great Deal in the academic life of the school. This was the strongest statement they could check.

We have seen in previous questions that the subjects in this study were somewhat cautious in their view of what would happen once the mainstreaming began. As far as classroom communication is concerned, they estimated that it would probably be hard for the student with the hearing loss to follow what was being said. It is to be
TABLE 27

Estimate of Academic Integration (Q 26)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>10% (1)</td>
<td>-</td>
<td>-</td>
<td>8% (1)</td>
</tr>
<tr>
<td>Very little</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Somewhat</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>50 (5)</td>
<td>41.6% (5)</td>
<td>70% (7)</td>
<td>41.7 (5)</td>
</tr>
<tr>
<td>A great deal</td>
<td>40 (4)</td>
<td>58 (7)</td>
<td>30 (3)</td>
<td>50 (6)</td>
</tr>
</tbody>
</table>

expected, based on this, that academic integration,
involving a high level of communication, would have been
seen by them as something that would be difficult to
achieve.

The training module attempted to make the point
that the education of hearing-impaired students requires
more than appropriate academic placement. There must be
concerted and coordinated efforts from the student, the
teachers, and several support specialists if this form of
mainstreaming is going to be successful. It is
challenging work that can be done, but not quickly or
easily. People with this understanding would probably
take a more moderate and realistic position.

On the post test, there was a shift in the respon-
ses of the Experimental Group from "A Great Deal" to
"Quite a Bit," a more moderate, yet still positive, view.
It can be hypothesized that the exposure to the training module influenced their thinking on this matter.

Question 28 asked for an estimate of the degree to which athletic integration might be achieved. One wondered before looking at the responses if the subjects would be less sure about this question since they indicated earlier that the greatest influence the hearing impairment would have on the student would be to interfere with his or her ability to play basketball.

**TABLE 28**

Estimate of Athletic Integration (Q 28)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>10% (1)</td>
<td>16.7% (2)</td>
<td>10% (1)</td>
<td>8% (1)</td>
</tr>
<tr>
<td>Very little</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Somewhat</td>
<td>20 (2)</td>
<td>8 (1)</td>
<td>10 (1)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>20 (2)</td>
<td>33 (4)</td>
<td>50 (5)</td>
<td>25 (3)</td>
</tr>
<tr>
<td>A great deal</td>
<td>50 (5)</td>
<td>41.7 (5)</td>
<td>30 (3)</td>
<td>33 (4)</td>
</tr>
</tbody>
</table>

Athletics has been recognized for many years as the easiest and quickest way for a hearing-impaired student to integrate with hearing students. Most hearing-impaired people are otherwise physically intact, making it possible for them to compete in sports on a more or less equal footing. Alumni of Clarke School have consistently
reported over the years that sports is a good equalizer in activities with hearing people.

On the pretest (TABLE 28), about three-fourths of all subjects indicated the student would be able to make a substantial integration athletically. Both the Experimental and Control Groups gave the greatest number of responses to "A Great Deal," the highest rating.

In the section on the Adolescent in the Mainstream, the training module clearly explained that sports and art are two areas in which hearing-impaired and hearing people can function on an equal basis, and are good starting points from which to attempt social integration. Exposure to the manual should have made the Experimental subjects sensitive to this.

On the post test, all subjects moderated their opinions. The largest number of Experimental respondents lowered their estimation from A Great Deal to Quite A Bit, while the Control Group split into a range that extended from "Somewhat" to "Quite a Bit" to "A Great Deal." The responses of the Experimental Group were disappointing because they were not higher.

Examining responses according to sex shows that the men in the Experimental Group estimated a middle degree of athletic integration on the post test.
TABLE 29

Estimate of Athletic Integration (Q 28)
Responses by Sex Within Groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Men:</td>
<td>N=6</td>
<td>N=6</td>
<td>N=7</td>
<td>N=7</td>
</tr>
<tr>
<td>Don't Know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very little</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td>33% (2)</td>
<td>16.7% (1)</td>
<td>14% (1)</td>
<td></td>
</tr>
<tr>
<td>Quite a Bit</td>
<td>33% (2)</td>
<td>66.7% (4)</td>
<td>14% (1)</td>
<td>42.9% (3)</td>
</tr>
<tr>
<td>A Great Deal</td>
<td>33% (2)</td>
<td>16.7% (1)</td>
<td>71% (5)</td>
<td>57% (4)</td>
</tr>
<tr>
<td>Women:</td>
<td>N=4</td>
<td>N=4</td>
<td>N=5</td>
<td>N=5</td>
</tr>
<tr>
<td>Don't Know</td>
<td>25% (1)</td>
<td>25% (1)</td>
<td>40% (2)</td>
<td>20% (1)</td>
</tr>
<tr>
<td>Very little</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td></td>
<td></td>
<td>80% (4)</td>
<td></td>
</tr>
<tr>
<td>Quite A Bit</td>
<td>25% (1)</td>
<td>60% (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Great Deal</td>
<td>75% (3)</td>
<td>50% (2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The larger group of women's responses was assigned to the highest degree of integration.

In summary, it can be said that the subjects in the Experimental Group seemed slightly more positive about the possibility of the student integrating athletically. Exposure to the training module did not seem to have a strong effect.

Adjustment Summary

Summarizing the participants' responses regarding the student's adjustment to the new school, it can be said
that the entire group felt that the hearing-impaired student would be nervous, but optimistic about succeeding. They thought the student would be able to integrate socially, academically, and athletically, but the women chose statements that did not express this as positively as did the men. The women's opinions seemed to be more diverse regarding the student's ability to adjust to the routine, noise and confusion of the new school.

It must be acknowledged that the training module did not appear to have any positive influence on the members of the Experimental group with respect to their thinking about these adjustment issues.

**Responses to Questions About Informing The Hearing Students**

Related to the subject of the student's adjustment were those questions asking if the normally hearing students should be given information that would help orient them to the presence of a student with a hearing loss. Questions 14 and 15 attempted to determine the participants' feelings regarding the importance of informing the hearing students that there is a hearing-impaired student in their class, and explaining to them the communication needs the student might have.

It has been the experience of the author that very
few teachers in regular high schools have routinely informed their classes of the presence of a hearing-impaired person. There seems to be a feeling that the student might be embarrassed if such a disclosure were made, and that attention should not be drawn to the handicap when the person is in the midst of trying to mainstream. This view has resulted in little being said and, therefore, to subsequent unexplained and potentially embarrassing behavior on the part of the person with the hearing loss.

**TABLE 30**

Importance of Informing Hearing Students (Q 14)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not important</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat important</td>
<td>40% (4)</td>
<td>33% (4)</td>
<td>10% (1)</td>
<td>41.7% (5)</td>
</tr>
<tr>
<td>Important</td>
<td>20 (2)</td>
<td>50 (6)</td>
<td>30 (3)</td>
<td>41.7 (5)</td>
</tr>
<tr>
<td>*Very important</td>
<td>40 (4)</td>
<td>16.6 (2)</td>
<td>60 (6)</td>
<td>16.7 (2)</td>
</tr>
</tbody>
</table>

*Emphasized in the training module*

TABLE 30 shows that on the pretest the majority of the Experimental Subjects thought it would be important to inform hearing students, but they were split into two smaller groups about it's relative importance. One gave
it a higher priority than the other.

In the teachers' section of the training module, there are specific instructions for ways to go about informing the hearing students that a hearing-impaired student is present. It was explained that making such a disclosure in an informal manner would prevent some misunderstandings and would decrease the potential for embarrassment.

After the experimental treatment was carried out, it can be seen that the opinions of the Experimental Group pulled more into line with the position taken in the module. The opinion of those in the Control Group, however, went in the opposite direction.

Breaking the scores down by sex within the groups, it can be seen in TABLE 31 that the women felt that it was more important to make this disclosure than did the men.

The men in the Experimental Group seemed to change their minds the most in this matter on the post test, while the women showed no change.

TABLE 32 shows that having discussions in class with students about hearing impairments and communication seemed to be considered an important activity by all subjects in Question 15, but the women consistently seemed to feel more strongly about this than did the men.

It can be seen on the pretest responses that most
TABLE 31
Importance of Informing Hearing Students (Q14)
Responses by Sex Within Groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Men:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td>N=6</td>
<td>N=6</td>
<td>N=7</td>
<td>N=7</td>
</tr>
<tr>
<td>Not Imp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some Imp.</td>
<td>66.7% (4)</td>
<td>16.7% (1)</td>
<td>57% (4)</td>
<td>71% (5)</td>
</tr>
<tr>
<td>Important</td>
<td></td>
<td>16.7% (1)</td>
<td>42.9% (3)</td>
<td>14% (1)</td>
</tr>
<tr>
<td>Very Imp.</td>
<td>33 (2)</td>
<td>66.7% (4)</td>
<td></td>
<td>14% (1)</td>
</tr>
<tr>
<td>Women:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td>N=4</td>
<td>N=4</td>
<td>N=5</td>
<td>N=5</td>
</tr>
<tr>
<td>Not Imp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some Imp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>50% (2)</td>
<td>50% (2)</td>
<td>60% (3)</td>
<td>80% (4)</td>
</tr>
<tr>
<td>Very Imp.</td>
<td>50 (2)</td>
<td>50 (2)</td>
<td>40 (2)</td>
<td>20 (1)</td>
</tr>
</tbody>
</table>

TABLE 32
Importance of Discussing Hearing & Communication (Q15)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X</th>
<th>Pre.C</th>
<th>Post X</th>
<th>Post C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=10</td>
<td>N=12</td>
<td>N=10</td>
<td>N=12</td>
</tr>
<tr>
<td>Don't know</td>
<td></td>
<td>8% (1)</td>
<td></td>
<td>8% (1)</td>
</tr>
<tr>
<td>Not Important</td>
<td>20% (2)</td>
<td>8% (1)</td>
<td>20% (2)</td>
<td>25% (3)</td>
</tr>
<tr>
<td>Somewhat Imp.</td>
<td>30% (3)</td>
<td>25% (3)</td>
<td>10% (1)</td>
<td>41.6 (5)</td>
</tr>
<tr>
<td>Important</td>
<td>30% (3)</td>
<td>50% (6)</td>
<td>30% (3)</td>
<td>16.6 (2)</td>
</tr>
<tr>
<td>*Very Impor.</td>
<td>20% (2)</td>
<td>8% (1)</td>
<td>40% (4)</td>
<td>8% (1)</td>
</tr>
</tbody>
</table>

*Position taken in training module
subjects thought it was an important topic, but few of them considered it to be of the highest priority. This is an interesting observation when the subjects expressed concern in previous questions about the effectiveness of communication in the classroom. Perhaps there was a reluctance to draw attention to the handicapped person and/or there were feelings of inadequacy regarding the introduction and handling of such a discussion. Whatever the cause, it is apparent from the pretest scores that the subjects were taking a somewhat benign or passive view of the subject. If anything, a few more subjects in the Control Group gave the subject a higher priority than did those in the Experimental Group.

The post test responses seemed to have reversed the situation, with the Experimental Group giving the topic higher priority. It is assumed that exposure to the training manual accounts for this.

Informing Hearing Students:
Summary of Responses

Most of the subjects involved in this study indicated that hearing students should be informed of the presence of hearing-impaired student in the class. They also seemed to think that it would be helpful to have discussions with their classes about hearing losses and
communication with a deaf person. Across both questions in this section, it was seen that the women favored a more complete disclosure and discussion of the consequences than did the men. It is clear that none of the subjects was confident about discussing this topic in the classroom.

Responses to Questions Concerning Information Needed By Educators

Of major importance to this study was the identification of the types of information the subjects felt they needed in order to help them get started working with their new student. Teachers usually want an orientation, or printed information prior to the beginning of the school year. It has been the author's experience that teachers request information regarding the student's recent educational history and a description of some of the basic teaching techniques that might be used in class.

Responses elicited in the pretest of this study are displayed in TABLE 33. They show that most of the subjects wanted information about: typical educational and social problems; communication; the student's educational history; and suggestions for the classroom. The type of information they wanted least was information about the student's hearing loss and about the family.
Numerous educators working on behalf of hearing-impaired students have often stated that the family is the most consistent and important force in the life and education of the child. It is the family that often has the best and broadest understanding of the child's handicap because it has been with the child in the widest variety of situations. This means that the family has valuable information about the child that is not only valuable, but is unavailable to educators from any other source. It is the family that determines the long range educational and vocational goals for the child. It usually chooses the school the child will attend. And, in the final analysis, it is the family that is left with responsibility for the child's emotional, physical, and educational welfare after the educators and other specialists have come and gone. It is, therefore, important that the family and educators
not stand so far apart. An important feature of a training manual for regular educators should be an explanation of the ways the family can play an important role in the child's education.

Although the training module mentions the importance of involving the parents, the strongest reference to this is in the administrator's section, and there were no administrators among the subjects. Thus, this study did not evaluate this section of the manual adequately.

It can be seen in the post test scores that the importance given to information about the family did not change. It is still considered to be of less value. To this extent, the training module needs improvement in helping the teachers understand how important a contribution the family can make to such a student's education. This portion of the module has been rewritten.

It was made clear by some of the participants during later discussions that they did have an interest in conferring with parents, and they did not feel the importance of such conferences was made sufficiently clear in the manual. This portion will need to be revised.
Questions Concerning Responsibility for Program

Several questions were included for information purposes only. Question 22 was one of these. It asked respondents to indicate from their "front lines" perspective the staff member in their school who should have primary responsibility for monitoring a hearing-impaired student's educational program. Of course, the answer to this question depends on the size of the school and the organization of its staff. In most schools the author has dealt with, however, it has been the guidance counselor who has had this responsibility on a day-to-day level.

TABLE 34

Person Responsible for Monitoring Student's Program (Q 22)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X</th>
<th>Pre.C</th>
<th>Post X</th>
<th>Post C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=10</td>
<td>N=12</td>
<td>N=10</td>
<td>N=12</td>
</tr>
<tr>
<td>Principal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asst. Prin.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sp.Ed.Dir.</td>
<td>40%</td>
<td>42%</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>Tutor</td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Guidance</td>
<td>30</td>
<td>33</td>
<td>30</td>
<td>33</td>
</tr>
<tr>
<td>Adj. Couns.</td>
<td>8</td>
<td>20</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Speech Path.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychologist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>8</td>
<td>8</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Res. Rm Tchr</td>
<td>20</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Adm. Direct.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dir. Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


TABLE 34 shows that the participants in the present study did not seem to have a strong and clear opinion regarding this question on either the pretest or posttest. The largest number indicated that it was the special education director's responsibility to monitor the student's program, although not more than half of any group said this. The second choice was for the guidance counselor. The training module had suggested the guidance counselor have this position, but this was not reflected in the responses.

**Questions Concerning Frequency of Case Review**

Question 21 asked how often the student's case should be reviewed to be sure that needed services were being provided and that the student was making academic and social progress. One would expect teachers to have clear opinions regarding this matter. The pretest questionnaire results displayed in TABLE 35 indicate that they would prefer to have progress checked anywhere from once a month to once a week.

This desire for frequent checks was somewhat surprising because it has been the author's experience that many people just learning about this handicap recommend checking on the student not more than once each
marking period. The educators in the present study showed a greater sensitivity to the chance for problems, perhaps as a result of having had other special needs students in their classes. If this is true, it is a positive sign that educators in regular schools are becoming sensitized to the potential these special needs students have for learning problems. Of course, it cannot be ruled out that their sensitivity could have resulted simply from being part of this study.

**TABLE 35**

Frequency of Routine Review of Student Progress (Q 21)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X ( N=10 )</th>
<th>Pre.C ( N=12 )</th>
<th>Post X ( N=10 )</th>
<th>Post C ( N=12 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once marking per.</td>
<td>10% (1)</td>
<td>10% (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a month</td>
<td>20 (2)</td>
<td>25% (3)</td>
<td>8% (1)</td>
<td></td>
</tr>
<tr>
<td>Twice a month</td>
<td>40 (4)</td>
<td>33 (4)</td>
<td>42 (5)</td>
<td></td>
</tr>
<tr>
<td>Once a week</td>
<td>20 (2)</td>
<td>33 (4)</td>
<td>60 (6)</td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td>10 (1)</td>
<td>8 (1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As in Question 19, the answer to this question depends upon the individual student and the program he or she is taking. It is possible to say, however, that professionals experienced in working with hearing-impaired students usually prefer to review the student's case at least every two weeks because the student's lack of
understanding can be so subtle that it can be easily overlooked if frequent checks are not made. Frequent reviews make it possible to uncover problems as they are emerging so that they can be remedied while they are still small.

On the post test, 60% of the Experimental Subjects indicated a desire to have a weekly check, while the Control Group was almost evenly divided between twice a month and once a week. Those in both the Experimental and Control Group showed a clear shift to more frequent reviews.

Questions 23 and 24 were intended to find out the degree of professional support these staff members thought would be necessary to enable them to be effective. It has been the experience of the author that a great many teachers in regular high schools feel that they receive too little professional support from within their schools. Candid remarks have indicated the desire for more frequent expressions of interest and encouragement, particularly in cases where a special needs student is involved.

TABLE 36 shows that on the pretest, most or all respondents in each group indicated that they would not need more than the usual amount of professional support during the time they would be working with this special needs student. This is surprising in view of the remarks
TABLE 36
Professional Support Needed (Q 23)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>20% (2)</td>
<td></td>
<td>10% (1)</td>
<td>83% (10)</td>
</tr>
<tr>
<td>Same</td>
<td>80 (8)</td>
<td>100% (12)</td>
<td>60 (6)</td>
<td>16.7 (2)</td>
</tr>
<tr>
<td>Somewhat more</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great deal more</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

teachers have made during visits to their schools. It also seems to reflect the idea that they expect nothing unusual to happen during the time they work with this student. This is a curious reaction when some of their answers to previous questions have been guarded.

The training module emphasizes the need for consistent and frequent communication and support among those who work directly with the student. Communication is the student's weakness, and in order for his or her program to function smoothly and successfully, the system of communication around the student must be well organized and rich. The design of the support system recommended in the training module is largely based upon this realization. Those exposed to the training module should have indicated a desire for a strong support system.

On the post test, there was a slight shift in
their thinking. Both groups indicated that they wanted more than the customary amount of support given in normal situations. This was a little more pronounced in the case of those subjects who were exposed to the training module than it was for the Control Group. All told, it was a modest move in a more realistic direction, and a breakdown by sex within the groups showed that the move was made by both men and women in the Experimental Group, whereas it was made only by the women in the Control Group (TABLE 37).

**TABLE 37**

Professional Support Needed (Q 23)
Responses by Sex Within Groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Men:</td>
<td>N=6</td>
<td>N=6</td>
<td>N=7</td>
<td>N=7</td>
</tr>
<tr>
<td>Don't know</td>
<td>16.7 (1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Same</td>
<td>83 (5)</td>
<td>67% (4)</td>
<td>100% (7)</td>
<td>100% (7)</td>
</tr>
<tr>
<td>Somewhat more</td>
<td>-</td>
<td>33 (2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Great deal more</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Women:</td>
<td>N=4</td>
<td>N=4</td>
<td>N=5</td>
<td>N=5</td>
</tr>
<tr>
<td>Don't know</td>
<td>25% (1)</td>
<td>25% (1)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Same</td>
<td>75 (3)</td>
<td>50 (2)</td>
<td>100% (5)</td>
<td>60% (3)</td>
</tr>
<tr>
<td>Somewhat more</td>
<td>-</td>
<td>25 (1)</td>
<td>-</td>
<td>40 (2)</td>
</tr>
<tr>
<td>Great deal more</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Question 24 extends this topic by asking how often...
the staff should meet to discuss the hearing-impaired student's progress.

TABLE 38

Importance of Meeting to Discuss Student Progress (Q24)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>-</td>
<td>8% (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not important</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>33 (4)</td>
<td>10% (1)</td>
<td>42% (5)</td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>80% (8)</td>
<td>33 (4)</td>
<td>30 (3)</td>
<td>42 (5)</td>
</tr>
<tr>
<td>Very important</td>
<td>20 (2)</td>
<td>25 (3)</td>
<td>60 (6)</td>
<td>17 (2)</td>
</tr>
</tbody>
</table>

The position taken throughout the training module was that it is not only desirable, but necessary, to have regular periodic meetings of staff members to discuss the work of the student. On the pretest, TABLE 38 shows that respondents in both groups thought meetings of this sort are important, but few gave it the highest priority. Among the Control Group members, the importance of this type of meeting seemed to be viewed broadly.

The post test responses showed a change of thinking. The group exposed to the Experimental treatment produced a 40% increase in the number who considered meetings of this sort of great importance, while the thinking in the Control Group was that these conferences
were not a priority item. Anyone who works with a student with impaired hearing quickly learns that in order for the work to go smoothly, there must be a great amount of staff consultation and coordination. Almost all responses on Question 24 indicated that the subjects thought it is important to meet regularly with colleagues to discuss special needs students' progress.

The final question on supervision concerned the amount of individual attention the student would require from staff members. TABLE 39 summarizes the responses for both the pretest and the post test. On the pretest, the subjects indicated that only slightly more attention would be required by the student.

### TABLE 39

**Degree of Individual Attention Required By Student (Q 20)**

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>10% (1)</td>
<td>8% (1)</td>
<td></td>
<td>17% (2)</td>
</tr>
<tr>
<td>Consid. less</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Slightly less</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Slightly more</td>
<td>60 (6)</td>
<td>91 (11)</td>
<td>40% (4)</td>
<td>67 (8)</td>
</tr>
<tr>
<td>Consid. more</td>
<td>30 (3)</td>
<td>-</td>
<td>60 (6)</td>
<td>17 (2)</td>
</tr>
</tbody>
</table>

On the post test, the major portion of the Control Group held to its previous position, although there was
some slight movement toward more attention being required.

The Experimental Group, however, produced a 30% increase in the number of subjects who thought the student would require considerably more personal attention than a hearing student. Having been exposed to the training manual, they could apparently see that the potential for academic problems is much greater with a student like this. A teacher will be required to give more than the usual amount of time and attention to the student to be sure that he or she is making satisfactory progress.

Closely related to the previous questions is Question 29. It asked the subjects to estimate what would happen to their workload. According to TABLE 40, most subjects on both tests thought their workload would increase only slightly. One wonders how this conclusion can be reached in the light of the challenge they have said both they and the student would face.

Examination of scores by sex within the groups (TABLE 41) showed that more women in the Experimental Group thought their workload would increase than did men, but it was not a dramatic shift.
### TABLE 40

Degree of Change in Workload (Q 29)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X N=10</th>
<th>Pre.C N=12</th>
<th>Post X N=10</th>
<th>Post C N=12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remain same</td>
<td>20% (2)</td>
<td>33% (4)</td>
<td>10% (1)</td>
<td>17% (2)</td>
</tr>
<tr>
<td>Increase slightly</td>
<td>80 (8)</td>
<td>67 (8)</td>
<td>70 (7)</td>
<td>75 (9)</td>
</tr>
<tr>
<td>Increase greatly</td>
<td>20 (2)</td>
<td>8 (1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 41

Degree of Change in Workload (Q 29)
Responses by Sex Within Groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Men:</td>
<td>N=6</td>
<td>N=6</td>
</tr>
<tr>
<td>Don't know</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Decrease</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Remain Same</td>
<td>17% (1)</td>
<td>-</td>
</tr>
<tr>
<td>Inc. Slight.</td>
<td>-</td>
<td>83% (5)</td>
</tr>
<tr>
<td>Inc. Greatly</td>
<td>-</td>
<td>17 (1)</td>
</tr>
</tbody>
</table>

| Women:    | N=4          | N=4     | N=5      | N=5      |
| Don't know | -            | -       | -        | -        |
| Decrease  | -            | -       | -        | -        |
| Remain Same | 25% (1)   | 25% (1) | 20% (1)  | -        |
| Inc. Slight. | 75 (3)  | 50 (2)  | 80 (4)  | 80% (4)  |
| Inc. Greatly | -           | 25 (1)  | -        | 20 (1)  |
Establishing Working Relationship

The final question to be considered in this section was one which asked the participants to choose the most effective way to establish a good working relationship with the student. Here again, there is no "right way" to do this. The training module pointed out that even though attempts to establish a working relationship depend on the personalities of the people involved, meeting privately to get acquainted and to learn to communicate with each other is probably the most commonly used technique. The overwhelming majority of all respondents in this study said they believed that meeting privately with the student was the best way (TABLE 42).

TABLE 42

Most Effective Way to Establish Relationship (Q 25)
Responses in Percentages

<table>
<thead>
<tr>
<th></th>
<th>Pre.X</th>
<th>Pre.C</th>
<th>Post X</th>
<th>Post C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=10</td>
<td>N=12</td>
<td>N=10</td>
<td>N=12</td>
</tr>
<tr>
<td>Be pleasant</td>
<td>10% (1)</td>
<td>25% (3)</td>
<td>20% (2)</td>
<td>42% (5)</td>
</tr>
<tr>
<td>*Meet privately</td>
<td>90 (9)</td>
<td>75 (9)</td>
<td>80 (8)</td>
<td>58 (7)</td>
</tr>
<tr>
<td>Give student handout</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask other st. to orient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone student's parents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Emphasized in training module

One of the suggestions made in the training manual
for teachers is to meet privately with the student during the early days of school, but experience has shown that it is rarely ever done unless pressure is applied. It is likely that this reluctance comes from the teachers' concern about not being able to understand the student, about not being understood by the student, or simply because of the pressure of other responsibilities. This could be a cause for special frustration for the conscientious, yet hesitant, teacher.

**Summary of Questions Concerning Professional Support**

The subjects involved in this study expressed a desire to have certain kinds of information regarding the work they would be doing with a hearing-impaired student. The information they wanted most had to do with typical educational and social problems, communication, and the student's academic history. The information they least wanted was information about hearing losses and the student's family background.

When asked who should have daily responsibility for the hearing-impaired student's program, the largest number of responses was given to the special education director. This was an interesting fact since few schools function in this way. The special education director in
most school systems is responsible for so many students that it is almost impossible for him or her to have direct dealings with the student on a daily basis. This seems to point to a difference in the perspective of the classroom teachers involved in this study.

The subjects also indicated that they would like a little more than the usual amount of professional support during the time they work with this hearing-impaired student. They were particularly interested in having more meetings to evaluate the student's progress. They realized that this student would require more personal attention than a hearing student would, but when asked if they thought their own workload would change, the greatest number said that it would change only slightly. Apparently they felt the extra attention would be coming from the tutor.

**Summary of Responses to Questionnaire**

Twenty-two of the twenty-nine questions on the questionnaire were tied to specific information in the printed training module. A comparison of post test and pretest scores shows that the Experimental Group made gains consistent with the information in the training module on 18 of the twenty-two questions. On the remaining four questions, the Experimental Subjects showed
no change on three, and lost ground on one.

The greatest gains were made on questions related
to discussing the handicap with the deaf student (Q 10),
the degree of challenge presented by attempting to follow
what is happening in the classroom (Q 12), identification
of the academic activities that would be difficult for the
student to handle because of the language handicap (Q 16),
and the recommended frequency for reviewing the student's
progress (Q 21).

The smallest gains were made on questions about
communication between deaf and hearing students (Q 13),
the amount of professional support the teachers thought
they should receive (Q 23), and the importance of having
regular professional meetings regarding the student
(Q 24).

That no change was registered on questions 4 and 7,
those related to factors important to lipreading suc-
cess and causes of hearing impairment, does not rule out
the fact that the subjects had the highest possible score
on these questions both times the questionnaire was admi-
nistered.

Although it appears that exposure to the printed
training module contributed to the gains made by the
Experimental Subjects on the post test, the overall level
of knowledge attained by the Experimental Subjects was
less than the author had hoped would result. It appears that sections of the module should be rewritten to emphasize more strongly some of these basic principles in the education of the hearing-impaired. This is especially true when it comes to understanding the severe linguistic effects of the handicap.
CHAPTER V
ANECDOTAL ANALYSIS OF
MODULE EFFECTIVENESS

During the course of the 1981 fall semester, after the second administration of the questionnaire, periodic site visits and telephone calls were made to each of the schools that participated in this study. The purpose of these contacts was to gather information about the progress of the hearing-impaired students, to see how the program of supervision and support was progressing within each school, and to give assistance to those teachers requesting it. In addition to this, opinions were gathered from the subjects in the study regarding the value of their orientation; the usefulness of the printed training module; and the module's content.

It has been stated that the purposes of the training module in this study were to assist regular school educators in understanding the following:

* The outplacement process at Clarke School;

* The nature of the handicap of hearing impairment;

* The challenges that face such a student in the mainstream;
The importance of a closely monitored system of supervision and support; and

Some effective ways to oversee and deal with such a student.

With these topics in mind, the focus of this phase of the study was on determining from the users the module's effectiveness for helping them prepare to work with a hearing-impaired student.

It was not always possible during each of the site visits to talk to every subject who had participated in the study. Each school was cooperative in assisting the author, but complex and busy schedules dictated the availability of the participants. In all cases, the attitude of the various professionals was positive and constructive.

In the visits made to each school in this study after the start of the year, the author's initial impression was that less direction and support would be required than was called for in other schools. It is believed that this may have been due in part to the effects of the orientation module and, perhaps, to the knowledge the teachers had that they were involved in this study. These schools seemed to have a slightly better understanding of the way in which a closely monitored support system might work, and the role of each staff member
in that system. This knowledge encouraged the participants to adhere, at least in part, to the system recommended. It should also be acknowledged that the hearing-impaired students had an important part in the success of the system. Their persistence and willingness to do their part made it possible for the professionals involved to see concrete results from their efforts.

The problems each of these schools experienced in mainstreaming their hearing-impaired student were, for the most part, very typical. Although the printed training module helped them prepare to begin working with the student and, in some cases, answered some of their early questions, it did not eliminate many of the misunderstandings and difficulties that normally arise when a deaf person is trying to function among hearing people. These problems always seem to appear. The positive element in each of these situations, however, was the staff's knowledge that misunderstandings and difficulties in this work are, in fact, normal. Having been exposed to the training module, they had a system to help them try to deal with these difficulties.

They knew there were simple answers to some of their questions, while others would resist quick solution. Their orientation helped them understand the importance of trying to anticipate difficulties before they occurred,
although they were frequently surprised at the things that would lead to misunderstandings and confusion. Some of them understood that many of the academic difficulties the students would have would be related to their limited understanding of the English language, and this understanding was an encouraging thing for the author to discover because it meant that specific help tailored to the student's needs could be provided earlier.

Another indication of a positive atmosphere around the three schools used in this study was the comment from the deaf students regarding the interest and helpfulness of the staff members. Each of the students indicated that going to regular school was a much greater challenge than had been previously thought, but there was appreciation for the willingness of the staff members to try to help them. This willingness of the staff members to reach out to the students encouraged the students to keep trying in their efforts to achieve success in their classes.

The parents of one of the students also indicated their satisfaction with the efforts of the school people. It had been suggested in the module that the school make contact routinely with the parents every few weeks to go over the student's program, but the Case Coordinator in this school established the policy of phoning the parents every Friday morning. This turned out to be ideal for
this family and student because the mother was able to feed information back to the school about the boy's comments and behavior at home, while the school was able to inform the parents of the boy's academic progress. The mother said, "My son comes home from school everyday very happy." This boy had an academic record that was slightly below average in terms of achievement, yet the school and home seemed to be working together well.

Despite the progress of most of the students in the schools involved in this study, it was still evident that the support system advocated in the module was going somewhat against the tide. Most high schools are organized in such a way that students must take care of themselves, must function as independently as possible. If a student has a problem in a class, he or she is expected to say something about it to the teacher or the guidance counselor, and then pursue some course of action to correct it. The rub for a hearing-impaired student comes because he or she may think that everything is going well when, in fact, a problem is rapidly developing. Because communication is such an imperfect process between the student and the teacher, the problem is often not revealed or discovered until it has reached large proportions. Asking busy staff members to devote a significant amount of time to the affairs of one student was asking a lot.
Most people were willing to attempt it, but the competing demands on their time were hard for them to overcome.

This does not mean that we believe the student should be relieved of any responsibility for his or her own learning. To the extent the student can be held reasonably responsible, the schools should do it. Experience has shown that the complexities of the English language make it difficult to predict when a problem will arise. Thus, close monitoring seems to be required.

The training module recommends regular checking and consulting so that as one teacher compares notes with another, or as the coordinator compares notes from the teachers with those from the student, disparities can be uncovered and then investigated. This seems to be the most successful system for mainstreaming. If a system of close checking is not used, the student and teachers will find it exceedingly difficult to remain positive.

The information received from professionals in each of the schools during the fall of 1981 also indicated that some of them were doing specific things mentioned in the training module. For example, when it was found necessary for two of the students to move from one class level to another during the early weeks of the year, the schools involved held meetings between the students and their new teachers to help them get acquainted and to get
communication started.

One of the schools' student-run newspaper interviewed its new student and ran this interview during the early part of the year. This informed the other students that there was a hearing-impaired student in their midst, and gave them information about the student that would be helpful in starting a conversation.

The training module recommended that each teacher be given a form during the course of the year on which he or she could record important things that had been learned about the hearing-impaired student's learning style, along with suggestions for new teachers to help them get started working with the student. Copies of these completed forms were made available to the author at the end of the fall semester by two of the schools, another indication that the module was being used.

It seemed from discussions held with the people in the schools that professionals who are just entering into this form of mainstreaming move through different levels of understanding in their learning about hearing impairments, each level taking them to a deeper understanding than the one before. For example, the teacher who is just about to begin working with a hearing-impaired student expresses concern about understanding the student's speech, about lipreading, and about classroom modifica-
tions. The person who has acquired some experience, on the other hand, asks questions about persistent language errors, about the student's occasional feelings of frustration, and about the dynamics involved when a disabled person attempts to make and keep new friends.

The deeper a person becomes involved with hearing impairment, the deeper the questions usually become. Each question is indicative of the questioner's level of sophistication and understanding. After talking with many people in the schools involved in this study, it was apparent that particular questions kept recurring, raising the possibility that one might group these questions according to level of experience and then organize the training module to fit. This is an interesting possibility to consider for the future.

The comments received about the training module indicated that the subjects found it helpful in the following ways:

* It conveyed information about this handicap that had not been previously known;

* It gave some of the subjects feelings of greater security as they approached this new experience;

* It gave useful suggestions to teachers for techniques that might be employed in the classroom to help the student get more out of class; and
It alerted the staff to situations in which the student would probably find learning to be unusually challenging.

Reactions to the Form of the Module

The chief benefit of having the training information in printed form was that each person could have a copy of it to take away and read, or reread, at convenient times. The subjects reported that the module was fairly comprehensive except that it did not contain enough information to help them understand the student's social adjustment.

It was understood by the participants that this book was only meant to be an introduction, a way of preparing them to begin working with such a student, rather than an encyclopedia about hearing impairments. Despite this, subjects mentioned several topics that they thought should have been included. A more detailed presentation of these will be made later in this section. It was the subjects' contention that the addition of these topics would broaden the scope of the manual and make it more useful to professionals well into the school year. Thus, they seemed to be requesting more than an orientation manual.

Several people offered the opinion that the module
should concentrate on providing practical material to help them in their direct dealings with the student. Once the school year begins, they become very busy and are interested in proven suggestions that will help them be more effective in their work. They cited the list of classroom suggestions and those for explaining that a hearing-impaired student is in the class as the sort of material they wanted.

There was some interest expressed by others in having more concrete examples given throughout the module of such things as the typical problems the students have and how one might go about trying to solve them. As one educator expressed it, "We agree that mainstreaming is a realistic possibility for a student like this, but we need to know more about how to do it."

There was the suggestion that a short quiz be included at the end of each chapter to help the reader determine if the main points of the chapter had been understood. This would give the reader the opportunity to confirm that the major points of each chapter had been noted.

Still another suggestion was that we include in the printed training module more information about the particular student who would be coming to the school. This seemed to include details about the student's past
performance and motivation, and samples of his or her past work. It was believed that teachers could then tie in what they were reading in the rest of the manual with information about the real student. This was an interesting suggestion, one that might be possible with the advent of electronic text processing equipment.

Finally, most people thought the module could be limited to chapters on communication; adjustment; and the specific roles of the key people involved in the student's case.

Reactions to Individual Chapters

Chapter I: Preparation for Mainstreaming

The reaction of most of the subjects to Chapter I, a description of the Clarke School academic program and the outplacement procedure, was that it was far too long and detailed. They appreciated having general information about the educational program at Clarke School, but did not find the description of the steps involved in placing students in regular schools to be of much use.

Study Habits. What they were more interested in was the length of a student's day at Clarke School; how often he or she was given homework; what a typical homework assignment might look like; and the material
covered in each course during the last year there. Information of this type, it was stated, would have given them a better understanding of the study habits and skills the students would bring with them to their new schools.

**Oralism.** Some of the participants didn't understand Clarke School's interest in oralism (talking and lipreading), as opposed to the approaches that use sign language. A discussion of this topic led some to conclude that there really does not appear to be a truly effective system for carrying out classroom communication without resorting to some kind of oral or sign language interpreting. This was somewhat troublesome for some of them because they were not at all sure they would be comfortable having an interpreter in the room with them during class.

**Preparation.** Another section of interest in the first chapter had to do with the hearing-impaired student's preparation for mainstreaming. They wanted to know if the student had a realistic understanding of what life would be like in a large public high school. As one teacher said, "What does the student expect when he or she comes to our school? What does he think will happen? How does he think he will get along?"

The discussion of this topic led to the question, "Why didn't this transition to mainstreaming get started
earlier? Why didn't the student come to visit our school a couple of years ago?" This question was a good one, particularly for those students who live within easy traveling distance of Clarke School. It should be remembered, however, that the school enrolls students from literally anywhere, and it is more difficult to handle such a transition when the student's new school is far removed.

**Ongoing Training.** A remark that was made several times was that it would have been better if the subjects could have received additional training periodically during the course of the school year, rather than having everything in the beginning. Although this is an excellent suggestion, it was one that was beyond the scope of the present investigation. This study was concerned with determining the effectiveness of a printed training module precisely because it is not possible to provide detailed on-site orientations and ongoing support for students who enter schools great distances removed from Clarke School and western Massachusetts.

Early in the study a few teachers made the remark that in lieu of regular training meetings, they would appreciate having ongoing suggestions and reminders from The Clarke School Mainstream Service. They were concerned that it would be difficult to keep the student in mind
once the year got into full swing. This comment, along with the one about ongoing training, led to the establishment of a monthly newsletter called "The Mainstream News." Although this newsletter is outside the scope of the present study, it was begun as an outgrowth of suggestions made by educators during the course of the study. (See Appendix E.)

**Support System.** The support system outlined in the module received generally favorable comments from the schools. They found it fitted in well with their customary manner of operation. It had been included in the module as a suggestion for those schools that did not already have a system organized, and they were encouraged to consider using it only if it seemed feasible in their particular situation. The system appeared to be followed more closely in one of the schools than in the other two. Each school, however, reported that the system they used in their respective schools was sufficiently effective on a day-to-day level to keep them well informed regarding the student's progress.

**Communication.** The level of communication among the staff members in the three schools was found to be more superficial than had been recommended, but the Case Coordinators in the schools said they were satisfied. The schools had to weigh the needs of the one hearing-impaired
student against those of thousands of hearing students. Perhaps we were expecting too much from the staff. We also understand that the Case Coordinators are busy people, but experience has shown us that frequent and detailed communication is the best policy.

Summary. From the point of view of the subjects involved in this study, the first chapter of the training module which was about the Clarke School program was too long and of only marginal interest to them. They would have preferred to have seen more specific information included about the skills, abilities, and habits the students would bring with them to their new schools. They thought the support system that was recommended was promising, but direct observations of it in action during the fall showed that its effectiveness was determined by the extent to which its members communicated with each other.

Chapter II: Communication

Hearing. Most of the subjects reported that they found the discussion of the causes of hearing losses informative. The description of the student's hearing loss was, in their eyes, abstract and of little practical meaning. The problem seemed to be that they could not see how this information would help them deal with the student in the classroom. The discussion about residual hearing
was received in the same way.

Hearing, something taken so much for granted, is a difficult thing to explain to people newly engaged in this work. More specifically, hearing losses and residual hearing are concepts which most people find ephemeral and perplexing. For example, two students can have identical hearing losses as measured by appropriate instruments, but make use sound in very different ways, thus making them appear to have different degrees of loss.

A visual analogy might make this clearer. One person might see the steel structure of a bridge as a collection of individual members arranged in such a way as to support heavy loads, while the other might see the same object as something akin to cobwebs stretching from one side of a doorway to the other. What we perceive is more than the thing our senses are focused on. Our perceptions also include whatever "color" is provided by our experience and imagination.

Providing the layman with a simple and accurate explanation of hearing and hearing losses is a challenge. Perhaps the best way to help people understand the sense of hearing is through the use of hearing itself. A tape recording simulating various types of hearing loss might have provided the subjects in this study with a more understandable demonstration of the extent to which
hearing might be useful to a hearing-impaired student.

Hearing is something all of the subjects asked about. Their most common question in this regard was, "Just what is he/she able to hear?" Most of them seemed to understand that a hearing aid would not correct the student's hearing loss, but it was unclear to them just what benefit the student would get from it. Because this part of the manual was not that helpful, many of them just assumed that the student heard nothing.

Receptive and Expressive Communication. The section on receiving and expressing information was found to be too simple and abstract. It was apparently hard for the subjects to appreciate the significance of what was written in the module without having a base of experience against which to relate it. They said that it meant much more to them after they had had some direct contact with the hearing-impaired student. This was rather disconcerting because the purpose of the training module was to orient educators prior to their first contact with hearing-impaired students.

Further discussions with school personnel clarified this matter somewhat. It was suggested that examples of the ways English is difficult for the student, taken from real life situations, could make the section about language more understandable. Another suggestion
was to provide a simulation in the module that would put staff members in the place of such a student so that they could see firsthand what it would be like to be hearing-impaired in a regular school. Still another suggestion was to include samples of a deaf person's speech.

All of these suggestions offer possibilities to the author for ways to improve the training module and make it more meaningful for staff members in regular schools. Perhaps a combination of these activities and strategies will better accomplish the stated purpose of the module.

The one comment regarding the student's linguistic functioning that was repeated again and again was that the language problem in real life is far greater than anything they had anticipated. In spite of the information in the training module, the educators had thought the student would be more knowledgeable about the English language than he or she turned out to be.

One or two reported that they had originally thought the student's imperfect speech would be the greatest problem, but as their experience with the student grew, they came to realize that the understanding and use of the English language was really the bigger problem. One teacher said, "You come to see how cut off they are and how much they need. It is hard to keep this from
overwhelming you because you don't know where to begin." Many commented about the need to "repeat things the student missed."

Balancing the Needs of All Students. The discussion of the linguistic and communication problems of the students led some of the teachers to begin asking questions about weighing the needs of the hearing-impaired student for structured information against those of the hearing students for a more rapid and freewheeling pace. Some felt that providing a tutor to catch up on information that was missed during class was just about the only way the communication gap could be closed and yet be fair to those who hear normally. They felt that the class could not be completely structured for the benefit of just one hearing-impaired student. Questions like these make one realize the challenge mainstreaming presents to everyone in regular schools.

Class Placement. Some staff members found themselves facing the dilemma that is most commonly associated with this form of mainstreaming. On the one hand, they were painfully aware that the hearing-impaired student did not have a large enough vocabulary or sufficient flexibility with the English language to allow him or her to fit easily into a particular class. On the other hand, they found that the student could handle many of the concepts
of the course. When they considered placing the student in a class on a lower level, they immediately realized that the ideas and concepts would not be sufficiently challenging. Yet the vocabulary and language load might be more appropriate.

Once again, the idea of providing a tutor seemed to be the best way to try to handle this disparity, although it sometimes seemed to be an imperfect solution. Through a careful combination of preteaching, closely coordinated support work with the classroom teacher, and a lot of hard work, it was often possible for the student to survive in the more difficult section of the course.

Value of Mainstreaming. Did this mean that mainstreaming was not worthwhile? Almost every subject in the study expressed the opinion that the student was receiving a great deal of benefit from mainstreaming. Comments were heard such as, "It's really great that .... can be a student in this school and can take part in the same things the hearing students do. She is such a good influence on the students who can hear, too. She's a good example for them."

Help for Hearing Students. The comment was made on more than one occasion that the training module should include material for doing some kind of instruction with the hearing students about hearing losses and about com-
munication with a hearing-impaired person. The staff said they had not really felt confident enough to present themselves to the students as experts on the subject and had, therefore, done very little other than just announce that the student was in the class.

During the course of the fall, some of them observed the hearing students "taking care of" the hearing-impaired student, talking for the student, or using sign language with the student. The teachers' point was that since no one had talked with the hearing students to tell them what the goals were for this new student, the students were doing the best they could on their own. There should be information available, just as there is for the staff members, to help the hearing students understand this handicap.

A few of the teachers reported talking briefly with the hearing students about the new student, but none of them did anything to develop these conversations into full scale discussions because of a lack of information about the topic and because of a concern that they might embarrass the hearing-impaired student.

Summary. The participants in this study reported that material in the training module pertaining to hearing was informative, as far as it went, but they thought it could have been more meaningful if they had been able to
hear recorded simulations of the various types of hearing loss. They said that the sections on receptive and expressive communication could have been better if more concrete examples had been included using other media, such as tape recordings. Some of the material was simply too brief and too abstract to enable them to understand its application to the classroom. They found that the student's language handicap was far greater than they had originally thought, and they quickly saw the ramifications this had on the student's placement. They uniformly supported the provision of a tutor to help them and the student to bridge this linguistic gap. And, finally, they stressed the need to educate the hearing students about deafness.

Chapter III: The Adolescent in the Mainstream

The comments of the various people we talked to about this part of the manual indicate that it should be reorganized. They felt that the tone of the chapter was too pessimistic. In an attempt to mention ways in which a hearing-impaired student can have difficulty in a regular classroom, one problem after another was mentioned. Gradually this list of problems mounted up to the point where some of the readers began to think that mainstreaming might not be a realistic alternative for a
student with this handicap. They suggested that the chapter be restructured so that it establishes a more positive emphasis while not overlooking some of the difficulties.

Class Discussions. They were especially critical of the section on lipreading a class discussion. They questioned whether it belonged in this chapter, and felt that it was left dangling without giving suggestions for controlling the situation. Wherever problems are mentioned, suggestions for possible solutions should also be given.

Written Tests. They acknowledged that the student they were working with had difficulty with written tests, but many of them still did not seem to understand clearly the reason for it. Some left problems of this sort to the tutor to clear up.

Social Integration. Most of the people we talked with felt that the social integration was a much more difficult thing to achieve than they had anticipated. It was unclear to them why it did not work more smoothly. They mentioned having observed the hearing-impaired student talking with some of the students in the hall or in the classroom before the bell rang, but usually attributed the student's lack of friends outside of school to his or her shyness. Similar comments were heard from the parents of
the hearing-impaired students. The out of school hours were sometimes lonely ones for the students, unless they were able to find a part time job or played on a sports team.

Some educators indicated that "something ought to be done" to help these students make a more complete social integration, but they were unsure how this could be done in a way that could be sustained without their intervention. Some of them had ideas for ways to get it started, but they didn't know how to keep it going without intruding into the process. Others indicated that teachers should stay out of it.

If there were no school activities of interest to a particular student, there seemed to be no solution available. This led some people to wonder if it would not be better for the student to go to a high school for the deaf, or to a school where there were several deaf students. Although this idea seemed to have some immediate appeal, it was quickly followed with the statement that had the student gone to a high school for the deaf, he or she "would have led a more limited existence."

One staff member indicated that there should be something on sensitivity training for the hearing students so that they will better understand the hearing-impaired student's disability and feelings. The question was how
and when this could be carried out, and by whom. How would the hearing students be drawn into it? The suggestion for a sensitizing experience for hearing students a good one, however.

Some of the tutors noted that when the hearing-impaired student was in a lonely period, they often felt that they had to fill in as "friends" for the student. There were days when tutoring could not be done because the student needed someone to talk with. The tutors were willing to fill this vacuum, but they also worried about lost time.

The hearing-impaired students we talked with had a pretty good understanding of the reason for their lack of social life and could talk about it openly. Even though they understood what must have been holding the hearing students back from being more friendly during out-of-school hours, they did not seem to have any ideas for ways to try to deal with the situation other than to endure it. Fortunately, two of the girls found boyfriends, and the other one became deeply involved in sports. The boy was able to get a part time job.

Thus, social integration seems to be one of the most, if not the most, difficult aspect of mainstreaming for many mainstreamed students. Schools are organized to deal with academic questions in a systematic manner, they
are not organized to deal with social questions in the same way. This social challenge in mainstreaming remains a priority for the future.

During the time the author has worked with hundreds of hearing-impaired students, many have had difficulty developing a social life with hearing students, while some have not. It is difficult to document the reasons for this. It seems that some students have the psychic strength to be able and willing to take a chance in a social encounter. They are not preoccupied with failure. They seem to enter into these encounters without a rigid set of expectations of what they must get from them. This enables them to accept a weak reaction of interest from a hearing person on the first encounter without feeling that the attempt was a failure. And they remain positive about future contacts.

It is the intention of the author to make a deeper study of this process to see what can be done in the way of bringing positive forces to bear upon it.

**Summary.** Chapter III was considered by the subjects to be too pessimistic in tone, although they found the social problems associated with mainstreaming were quite difficult to solve. They suggested that sensitivity training for the hearing students might be a good thing to try to improve this condition. The sections of this
Chapter IV: The Regular School Administrator

It was not possible to judge this chapter fairly because no administrators were involved in the study. It was our observation during the course of the study, however, that the administrators in two of the three schools did an excellent job introducing the whole process of mainstreaming to their staff. We had no contact with the administrators in the third school. Those who did become involved in the process of the transition followed some of our suggestions, but also went their own way when the needs of their particular school demanded it.

We have heard from many of the schools we work with that capturing and maintaining the interest of administrators in mainstreaming special-needs students is a challenge. Few schools report that the attention they receive from their administrators is satisfactory.

The complete explanation of the support system was made in this chapter. It now appears that it should be in a chapter by itself.
Chapter V: The Case Coordinator

The training module recommended that one person in each school be made responsible for the hearing-impaired student's program on a daily basis. This person we refer to as the Case Coordinator. In the three schools involved in this study, the case coordinator position was filled by three guidance counselors and one resource room teacher.

Heavy Demands. In the case of the guidance counselor, the feeling was expressed that although helpful, the module expected a lot, perhaps too much if it were followed in detail. One person said, "I have learned that this kind of work takes a lot more time than it does with hearing students, perhaps even more time than for other special-needs students." The guidance people were also responsible for 300 or more hearing students, making it very difficult for them to give any one student a great deal of time. Many of the demands made in the training module were of an ongoing nature, and all of them together required a large amount of time to satisfy.

In the school where the Resource Room teacher was the Case Coordinator, the duties she was already expected to perform overlapped with those assigned to the Case Coordinator in the module, and her caseload was rather small. Thus, she had no complaint.

All of the Case Coordinators agreed that the
hearing-impaired students required a large amount of time, but those who worked more closely with the student realized that it was time that had to be spent. They found the check lists of tasks at the end of the chapter helpful.

**Teacher Selection.** As far as selecting teachers was concerned, each of the Case Coordinators tried to choose people with whom they had previously worked successfully or those who were known to be flexible and cooperative. One coordinator stated that careful teacher selection was the key to successful mainstreaming.

**Behavioral Objectives.** Some of the Coordinators requested that we provide a list of objectives in the module for the special services the student would need in each subject area. Of course this depends upon the nature of each of the courses and upon the needs of the particular student, but it is probable that something along these lines can be provided for them in the future.

**Weekly Meetings.** A strong recommendation was made in the module that the adult chosen to be the student's tutor be trained or experienced in working with students on the secondary level. In two of the three schools this was done. In all three schools, the tutors had routine appointments with the classroom teachers. It appears that not all teachers were interested in doing this, but the
fact that it was stated in the printed manual made it possible to press for it in those cases where not much enthusiasm was shown.

The section on oral interpreting in the manual was almost completely disregarded. It was mentioned in the Case Coordinator's part of the module, and more details were given in the chapter for the tutors. One Coordinator said nothing had been done about it in her school because it appeared to be something the tutor should work out with the teachers. Two other coordinators said they didn't think teachers would be comfortable with an interpreter in the room. They saw tutoring as a better way to deal with communication gaps. One school, however, did provide someone to do interpreting work.

Discussions with the deaf students, and observation of them in class leads the author to conclude that this whole section of the manual should be revised because there are times when interpreting is the only way a deaf student can get information. Philosophically, we are interested in seeing the students function as independently as they can, but we have seen that it is almost impossible for them to do this in a group discussion or in the rapid give and take of a ski club meeting. This should be acknowledged early in the module and a clear explanation given of the oral interpreting process.
A recent decision in the United States Supreme Court has made the subject of interpreting a more difficult one to discuss with schools. The decision of the court in Board of Education of Hendrick Hudson School District v. Rowley was that local schools are not required to provide interpreting services to a student if the student is otherwise seen to be benefitting from the educational program. The choice of this case as a test of a local school district's responsibility to such a student was an unfortunate one because the child in question had a considerable amount of residual hearing and was earning high marks in her studies. The argument made was that the provision of an interpreter would enable her to maximize her potential. The court declared that a local school district cannot be held responsible for assisting every student to maximize his or her potential, but should be required to provide services to enable the student to benefit from the educational program.

Unfortunately, this case did not focus on the issue of the inability of a deaf person to be able to understand what is being said in some situations. To be required to sit in a room where an activity involving a rapid exchange of ideas is occurring, and to do so without the benefit of someone to keep the student informed about what is being said amounts to a great deal of wasted time.
for the student and, in effect, amounts to social segregation. If there are other ways the student can get the information, there should be a policy allowing the student to do that, and oral interpreting should be considered one legitimate means.

There are two obvious difficulties to be dealt with in providing an oral interpreter. The first is the expense, and the second is accessibility at various times throughout the school day. Experience thus far has shown that the most effective way to deal with these problems in the high schools is to train the tutor to do the interpreting work. The tutor probably knows the student better than anyone else in the school and, therefore, has the best understanding of the student's vocabulary and learning style. This knowledge provides a good basis for the interpreting process. Rewriting this section of the module to make the interpreting process a more important element in the support system will further strengthen the role of the tutor.

**Maintaining the Support System.** The Case Coordinators appeared to have done a good job making preparations for the transition of the student into their schools, but maintaining the support system once the year got underway became a more difficult thing for them to do. It was hard for them to keep monitoring the situation clo-
sely if no one complained of a problem. It appears that some ongoing outside force could be helpful in reminding them that information should be periodically gathered and sifted.

The Case Coordinators also indicated that there was nothing in their section about social integration or after-school activities. They wished there had been more. They were aware of the challenge involved in making friends, but felt that they had little time to devote to ameliorating this. They sometimes let time take care of it, unless the situation was obviously moving in the wrong direction, and then they would step in.

Three Case Coordinators expressed satisfaction that their students were generally succeeding and that the system was working. They also expressed the realization that it was hard for a teacher to have a student with this handicap in class, that it was much more difficult than they had first thought, but that people generally felt that it was working.

Summary. Comments from the four Case Coordinators involved in this study were that this section of the printed training module, though making heavy demands on their time, was sufficiently detailed to help them prepare for the student's transition from the school for the deaf. In most cases, they reported that the student and the sup-
port system in their school was functioning satisfactorily.

Chapter VI: The Classroom Teacher

In general, the teachers we talked with found the guide helpful in getting the year underway. As was mentioned earlier, they indicated the desire to have additional information regarding the student's skills and abilities at the time of entry.

Teacher Responsible for Instruction. They liked the idea of the overall support system, but some of them thought this meant that they would not have to do very much to accommodate the student in the classroom. All problems would be taken care of by the tutor. This was an incorrect assumption, and one that is contrary to the spirit of mainstreaming. It is primarily the teacher's responsibility to be in charge of instruction, with the tutor providing support whenever the student's needs become too great. It is, therefore, important for the teacher to understand what the student can and cannot do so that instructional plans can be made or modified. Thus, we think the teacher should be the first person to attempt to deal with an emerging problem.

Meeting the Student. Some of the teachers said they appreciated having the chance to meet the student
before the school year began so that they had already
taken a step in establishing communication. A few wished
they could have had more than one exposure to the
student's speech before school started. One of them
suggested that a tape recorded sample of the student's
speech would have been a way to have done this.

They also liked being able to see how the
suggested support system was going to work, and then
finding that it actually worked that way. They did not
feel that they were alone, but had someone to turn to for
support and encouragement. They appreciated knowing that
the school for the deaf was also in the background, ready
to provide help and encouragement. As one person said, "I
realize how important it is to have a school for the deaf
as a resource. You know more about this handicap and
about deaf people than we do, and we have to look to you
once in a while to tell us whether or not we are on the
right track."

Lipreading. We realized in our discussions that
lipreading is a hard area for someone just beginning this
kind of work to understand. It simply is not a perfect
substitute for hearing. Sometimes an apparent lipreading
problem is really a vocabulary problem. At other times,
it can result from the student having no conceptual
background on the topic.
One comment that surfaced fairly often was that it was hard to know just how much a student really understood in class. The teachers said they tried to look at the class as much as they could, and they often repeated something that had been said to make it clearer to the student, but they did not feel they had the time to be continually checking the depth of the student's understanding. Some of them admitted that they were afraid to get into this in class for fear the student would say something they couldn't understand. Thus, the tutor was used as the means of checking the student's understanding and, in cases where confusion was uncovered, to re-teach.

Language. Most of the teachers reported that they hadn't really understood from the training module just how deep the vocabulary and language problem was until the semester was well underway. They reported that the student had difficulty understanding most of the stories that were assigned, and a lot of extra help was needed from the tutor. They suggested that the module make a stronger statement about this, giving real life examples of some of the problems students have had in the past and possible remedies. This was another excellent suggestion, and one that can be easily implemented. Many high school literature classes read the same novels so that specific
suggestions regarding these books can be widely used.

**Classroom Suggestions.** The list of suggestions for the classroom that were in the manual were well received, but some teachers said they thought that each of the suggestions required significant changes of behavior or sensitivity. Some of them said it was hard to follow through with all of the changes because there was no one to observe them and give them feedback about what they were attempting to change.

As we discussed this situation further, it seemed that we might arrange the suggestions in groups according to their importance for getting the year started. For example, the first group might include suggestions to give the student printed information about the course, and to meet privately to establish communication. Early classroom suggestions would be limited to presenting information as visually as possible and limiting movement to the front of the classroom. As soon as the teachers feel they had accomplished this on a regular basis, they could advance to the next level, which might include note-taking and ways to check with the student to be sure he or she is understanding in class. By organizing the large number of suggestions into small groups according to priority, the teachers might find them more manageable.

**Class Discussions.** Several teachers reported that
group discussions were indeed difficult for a hearing-impaired student to follow without extra help. Most of the teachers said they tried to make the discussion more organized, and some said they repeated from time to time some of the important things that had been said by various members of the class, but they felt the hearing-impaired student got only a general understanding of what was said.

One of the teachers said she had learned that it is important to be ready to repeat in a different way something that has been said because she found that the student's understanding could hinge on a single word. If that word had not been understood, the student could miss the point.

**Training Module.** Once the year got into full swing, the teachers said they didn't use the manual very much. It seemed as though they tried to find a way they and the student could function, and once this was achieved, it was left this way unless the student or the tutor specifically requested a change.

**Student Problems.** One English teacher said that we should emphasize in the module the following student problems: difficulty following class discussions; limited vocabulary; difficulty doing composition work (structuring sentences properly); difficulty taking dictated vocabulary quizzes; and problems doing paragraph writing as being the
areas of greatest challenge.

Class Participation. One teacher suggested that classroom participation can be encouraged in the beginning by asking the student questions the teacher is sure the student will be able to answer. Being able to do this successfully, will give the student and everyone else confidence. Other said that in class, teachers should not be afraid to ask the student to repeat something that is not understood.

Written Tests. Everyone agreed that written examinations were difficult for the students. Apparently the readers did not get a clear enough understanding of this from the printed module, either, because most of them did not understand the reason for it. Some of those who did understand the reason didn't know how to deal with the situation unless the tutor took responsibility for it. Basically, the reason for the problems with written exams is that the student doesn't understand the particular way in which the question is phrased, despite the fact that he or she may have studied for the test. The module encouraged teachers to go over a test with the whole class, question by question, but this did not happen very often.

A more workable way to deal with this situation might be to have the student take the test in the resource
room with the tutor. The tutor could first make sure the student understands what each question is asking, and then the student could complete the test on his or her own.

In our discussions, it seemed that the tutor understood the reason for this test problem better than the teachers did, and this understanding seemed to come from the fact that the tutor was most familiar with the student's reading problems because of daily exposure. This will need to be strengthened.

**Informing Hearing Students.** The teachers said they found the section giving guidance for informing the hearing students about the presence of a hearing-impaired student helpful, but not all made use of it. A few said the hearing students already knew the student was there, but we could not avoid feeling that part of the reason was a persistent concern that the hearing-impaired student would be embarrassed.

Few of the teachers ever went beyond merely announcing that the student was there to help the hearing students further their understanding of the disability or the challenge that faced a student. The chief reason for this was the teachers' feeling that they could not talk very deeply about the subject with any clear understanding, but part was due, as mentioned above, to the wish not to embarrass the student.
Oral Interpreting. The section on oral interpreting was of some use in one school where this assistance was provided. The other schools did not make use of it. In the schools where it was not used, the teachers seemed to feel that between their efforts and those of the tutor, the student could get the important information of the course. Interpreting was not seen as something that was really essential. Although we do not entirely disagree with this conclusion, we are interpreting it as a weakness of the training module to make clear the legitimacy and value of interpreting in selected situations.

Notetaking. Notetaking, a particularly difficult task in a lecture class, was handled in a couple of ways. Some students were able to get photocopies of others' notes, while some others were able to handcopy the notes of another student. One teacher had several hearing students take turns doing the notetaking so that one of them would not feel completely responsible. A revised section on notetaking has already been written, giving more information.

Teacher Adjustment. One teacher remarked that "the calmer I am, the calmer the student is." This person went out of her way to give positive feedback to the student during the course, and spent extra time in the
beginning to get communication going smoothly. There seemed to be a real desire in this teacher to make the thing work, and a belief that it could work.

Another teacher said, "I used more and better visual aids to help this student, but the interesting thing is that when I did this, everyone in the class improved!"

**Teacher-Tutor Meetings.** All remarked that the weekly teacher/tutor meeting should be considered mandatory. The tutor needs as much direction as possible, even instruction, so that she can carry through with the teacher's intent during tutorials. In some cases, this assistance from the tutor encouraged the teacher to try to deal with the student in class because they knew the student's entire performance did not rest on them alone.

**Captioned Films.** The statement was made by a few teachers that more captioned films and captioned television shows are needed for students with this disability. The schools that used them found them helpful, but it is unfortunate that not all schools can qualify to receive them. The teachers thought more should be made of this point in the module.

**Grading Standards.** Nothing was said in the module about grading standards and teachers said they needed this. They thought it should be added because they often
found themselves asking, "Should I grade this student strictly on the basis of her performance in relation to the other students in the class, or should I try to evaluate her on the basis of what she seems to be capable of?" Others asked, "Should I just grade her for the ideas she seems to have, or should I also take into account the way she expresses them? If I grade her on expression, she is going to get a low grade all the time."

**Correcting Papers.** Another question they thought should be discussed is how to handle corrections of written papers. Some teachers marked errors, but then wrote in the corrections. Others just marked errors. Still others ignored errors and gave grades on the basis of the ideas. It seemed that the teachers needed help with this question in relation to all of their students, not just those with a hearing impairment.

**Summary.** The teachers reported that the printed training module was helpful in getting the year started, but they felt that much of what they were asked to do to modify their teaching behavior involved significant changes that were difficult to carry out on their own. They suggested that these recommendations be organized into small groups.

They all noted the importance of having a tutor available to assist them in teaching the student, but few
were strongly interested in the idea of using a classroom interpreter unless it was deemed unavoidable. Some were uncomfortable with the idea of having an outsider in the classroom, while others thought it would be distracting. They all seemed to understand the difficulty a hearing-impaired student could have trying to follow a class discussion, however.

Almost everyone said that the student's language and vocabulary problem was more serious than they had understood from the training module, so it appears this section should be stated more strongly, with more examples given.

Almost none of the teachers felt confident enough to have a class discussion about the student's handicap. Perhaps this will come later, as teachers become more familiar with deafness.

There were requests from a few teachers for information to be included regarding marking and correcting the student's written papers, and on appropriate grading standards.

Chapter VII: The Tutor

As it turned out, no tutors were involved in the questionnaire portion of this study because they were not hired by the schools in the study until the latter part of
the intervening summer. Later in the school year, each of them was given a copy of the module, and their comments were solicited regarding the information that was in it.

Difficult Position. People who serve as tutors often find themselves in a difficult position in a regular high school. They are usually not tenured regular employees and do not have any of the perquisites that go along with permanent status. Some of them develop feelings of being taken for granted because of their part-time status and because they often do not have regular contact with classroom teachers. Some of them reported having to resort to any means at their disposal with a student when he or she comes to them and asks for help.

A deliberate attempt was made in the printed training module to elevate the status of tutors because experience had shown the author how vital their help is to the success of many hearing-impaired students. The tutors in the schools in this study expressed appreciation for this attempt to emphasize their value. They said that by explaining the value of their assistance, along with the recommendation that they meet with each teacher once a week, they had become a more valued part of the student's instructional team. They no longer felt taken for granted but, on the contrary, they felt that the work was quite challenging.
Outside Support. Two of the tutors mentioned how important is was for them to have support from a school for the deaf, or someone familiar with hearing impairment. They reported needing reassurance when they tried to hold the hearing-impaired student up to standards that were consistent with the training module. They sometimes heard from the students that the new school was too hard, that the tutor was expecting too much of them when, in fact, this was not the case. The tutors needed to have reassurance from someone experienced in working with the hearing-impaired that what they were doing, though challenging, was not unrealistic.

Contact With Parents. One of the tutors had regular contact with the parents, and she commented how much she enjoyed it. Both she and the parents thought this kind of frequent communication worked to the student's benefit because both the home and school were coordinating their efforts.

Constructive Help. The training module encouraged tutors to expect the student to work as independently as possible. It was observed during the fall that one or two tutors had difficulty knowing when to step in and when to withdraw when assisting the student. Some of this seemed to be the result of a normal human desire to make matters as simple as possible for the student, while part of it
may even have been related to a need to be needed by the student. This is a very difficult position for any professional to be in without the close supervision and assistance of an experienced person. It is doubtful that the training module can provide this kind of help, although it could acknowledge the potential for the condition and make some recommendations for dealing with it.

Balancing Priorities. One tutor remarked how difficult it is for a tutor to establish priorities and maintain perspective when there is a great deal of work to be done in each of the courses the student is taking. It sometimes seemed to her that the amount of work was overwhelming. The manual, they felt, did not give them much direction in setting work priorities, and they thought that a section on this would be a positive addition.

Oral Interpreting. Oral interpreting was not used in the schools involved in this study according to the participants. Comments indicated an unclear understanding of the communication process and the positive role interpreting can play. There is clearly a need to improve this part of the module.

Teacher-Tutor Meetings. A guide for the suggested meeting between teachers and tutor was included in the module, and it was thought to be helpful. The tutors
indicated, however, that these meetings had to be handled diplomatically until the teachers saw that the tutors were genuinely interested in helping rather than controlling. The tutors emphasized the importance of being able to work cooperatively with the various teachers.

**Tutor as Advocate.** The tutors reported that some of the teachers did not seem to understand that the wording of test questions was sometimes too difficult for the student to understand without help. Some tutors reported going back to the teachers and demonstrating to them how difficult the questions were. In some cases, this resulted in the teachers allowing the students to take the tests in the resource room. As far as the section in the manual was concerned, the teachers were encouraged to try to deal with this situation in the classroom. Perhaps the tutors could assist in cases where classroom help is not possible.

**Understanding The Role of Tutor.** In one situation, the tutor was confused about her responsibilities. She was spending valuable tutoring time having the student do language workbook exercises that were unrelated to the course work the student was taking. Moreover, the student was having difficulty in some of her courses. This situation was an indication that the module had either not been read, or it is unrealistic to expect
everyone who reads it to follow the suggestions in it.

Language. All of the tutors talked a great deal about the severity of the vocabulary problem the students faced, and of their respect for the student's persistence in attacking it. They suggested that a stronger point be made about this in the module by including more examples of these difficulties. They found that the problem was much more widespread than they had thought it would be. In particular, they talked about the frustrations in using the ordinary dictionary.

Orienting New Teachers. One tutor remarked about the helpfulness of the module when the student was moved from one teacher to another. It was seen as a good tool to use to get a great deal of information into the hands of the new teacher quickly, and the tutor could encourage the teacher to read it by referring to helpful sections in it.

Resource Room. One school wanted to know how to handle a situation that had not been mentioned in the module. The student had not wanted to accept needed help in the resource room, and was reluctant to ask for extra help from the teacher. Discussions with the student showed that she had wanted to avoid the stigma attached to being seen entering the resource room, and had also felt that asking for extra help was a sign that she was not
doing her part in the mainstreaming effort. The discussion with her seemed to take care of the second problem, but she continued to feel negatively about going to the resource room.

**Part Time Jobs.** A couple of the tutors wanted to know more about the experience of Clarke School graduates after they complete high school. Some also wanted to know what kind of summer jobs the students are able to get. This information is available and can easily be included in the revised module.

**Problem Solving Skills.** Two of the tutors said that they thought the school for the deaf should do more to help the students learn to analyze and work out ways to solve real life problems. This was seen as an especially important skill for any student going to a regular school. The tutors gave as examples: arranging to make up tests, turning in work late, choosing between two courses that are offered at the same time, and asking for additional help without monopolizing the time of the teacher. Tutors apparently spend a lot of time helping students define problems and think of ways to go about solving them.

**Summary.** The tutors reported that the chapter of the training module written for them was helpful. In particular, they thought it underscored the importance of their role, and gave them added status in the eyes of the
other professionals in the school, thus making their jobs more enjoyable. They also remarked about the importance of having a school for the deaf serve as a resource to them on issues related to standards, materials, and teaching techniques.

Tutoring is demanding and, sometimes, lonely work. Most of the tutors agreed that it is often difficult for them to maintain their perspective in their relationship with the student. It is too easy to step in and do something for the student when the student would be better served by letting him or her attempt it independently.

The oral interpreting section was not used because too few people in the schools were convinced that it was an important service. Most thought that the tutor could be used to close any gaps in communication. This section of the module needs to be rewritten so that interpreting can be seen to be a legitimate and important service in certain situations.

Consistent with the comments of other readers of this module, the tutors said they discovered the student's problem with the English language was far more serious than they had originally thought. One remarked that it seemed to take a lot more repetition for a hearing-impaired student to learn the meaning of a word than it does for a hearing student.
It was discovered in one school that sometimes there is a stigma attached to the resource room. Hearing-impaired students can be sensitive about being seen entering such a room when it is known as the place where the students who have learning problems go.

Finally, the tutors asked that additional topics be included in the module. They were particularly interested in a list of part time jobs hearing-impaired students have gotten in the past, and a section on helping the students learn to solve real life problems.

Chapter VIII: The Speech Pathologist

The three speech pathologists who worked with the students in this study reported to us that the description of their role in the training module ran counter to their usual job responsibilities. Under the system of support recommended in the module, the tutor has primary responsibility for helping the student with the English language because the tutor is the one who works most intensively with the student, and is the person who helps the student grapple with homework assignments.

The speech pathologists informed us that this work traditionally fell within their job responsibilities. Further discussion of this issue produced agreement that the tutor was in the best position to do the bulk of this
work. In subsequent practice, the speech pathologists supported the efforts of the tutor by reviewing some of the new vocabulary words with the student during speech/language therapy. This meant that the tutor and the speech pathologists had to communicate frequently to coordinate their efforts.

Limited Experience. None of the speech pathologists reported being familiar with the speech techniques used with a deaf person; thus they were not comfortable working with a hearing-impaired student. Special techniques and a great deal of repetition and persistence are needed to bring about permanent change in the speech of someone who is unable to hear. The speech pathologists felt that there was a great deal they had to learn with respect to this type of work and they did not find the module to be of sufficient help. They would have liked to have had teaching materials that could have been used to help them sharpen their skills in this unfamiliar area. Such material is available, and reference to it can be made in the revised module. The author erroneously considered it to be beyond the scope of the present manual.

Use of Amplification. One pathologist asked about information on the FM hearing aid system used by the student. Specifically, the question related to its value in private tutoring sessions. This information can also be
included in the revised module.

Lesson Suggestions. Two people asked if suggestions could be included in the module for practical lessons with the students. They cited as examples: ordering something in a drug store, and ordering in a restaurant. These real life suggestions will be incorporated into the module.

Job Description. One person asked if information could be included about the limits of the speech pathologist's job. Something like this was used in the tutor's chapter to clarify the distinction between tutor and teacher responsibilities. The speech pathologist reported finding this helpful. She cited one instance in her school where she was incorrectly expected to help a student study for an exam.

Job Performance. One person raised an interesting and powerful point. She said that she felt she was under considerable pressure when she worked with a deaf student because she feared her performance would be judged by the quality of the student's speech at the end of the year. The chances, she realized, were not great that the student could achieve highly intelligible speech by then, and she was concerned that she would be judged critically because of that. Perhaps a statement concerning this should be included in the module.
Speech Intelligibility Tests. Finally, information about the various speech intelligibility tests that can be given to deaf students was requested. Some speech pathologists wished to make use of this type of testing for evaluating the student's speech at the close of the year.

Summary

The reactions of the teachers in the participating schools in this study were particularly helpful in determining the effectiveness of the training module. Perhaps the most important revelation was the teachers' need for ongoing support during the time the deaf student is enrolled in their school. In other words, the training module, though helpful, was not sufficient to enable these teachers to work with a deaf student on a continuing basis.
CHAPTER VI
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A series of legislative and judicial actions in recent years have produced a revolution in the educational treatment of disabled people. Beginning with the civil rights movement in the 1960's, steady progress was made in winning for the disabled the same rights and privileges as those with no handicaps. This progress culminated in 1974 in Massachusetts by the passage of Chapter 766. On the national level, Public Law 94-142, the Education for All Handicapped Children Act, was passed in 1975.

One feature of this new educational treatment of the disabled is the requirement that they first be given the opportunity to be educated with non-handicapped students in ordinary schools in their own towns. This requirement has resulted in the placement of large numbers of handicapped students in the regular educational system, a system that was not fully prepared to cope with their learning needs.

Few teachers in regular schools have been trained to deal with students with profound disabilities, yet instructional personnel throughout the country find themselves facing these students in their classrooms as a
result of these new laws. Schools have had to mount a variety of inservice training programs to help staff members quickly acquire a basic understanding of the individual handicaps confronting them. Following that, there is a continuing need for assistance from professionals in each area of special education to modify lessons and interpret the learning behavior of the children involved so that they can truly benefit from placement in these regular classes.

The study reported on herein was the outgrowth of the program of preparation for mainstreaming provided to regular schools by one private residential school for the deaf in New England. This school's graduates routinely attend ordinary high schools throughout the eastern part of the United States. As one part of the school's program for preparing regular schools to receive such a student, a program of teacher orientation is being developed.

The major problem facing the school in preparing such an orientation program is the wide geographic distribution of the receiving schools. It is financially prohibitive for the special school to send a representative to each receiving school to provide this training. On the other hand, attempts to have the receiving schools send representatives to the school for the deaf to be trained have not been completely successful, either.
A study was planned to evaluate the feasibility of using a printed training module to accomplish this important orientation. The training module, prepared by the author, included information about the handicap of deafness, the effects the handicap has on a student's learning style, ways to modify activities in the regular classroom so that the hearing-impaired student can be accommodated, typical learning and adjustment problems experienced by these students, information about the students' previous schooling, and, the delineation of a philosophy aimed at the inclusion of such a student in a regular school.

The design of the study incorporated a test-retest procedure using a questionnaire developed by the author. The experimental treatment occurred between administrations of the questionnaire. Subjects in the Experimental group were exposed to the printed training module, while the Control subjects received no special training. The questionnaire was six pages long and contained 30 items, most of them multiple choice. The questions examined the subjects' understanding of deafness at these two different times. Each of the questions represented one or more of the major areas covered in the training module.

The schools eligible for inclusion in the study were those to be attended by the eight members of the 1981 graduating class of the Clarke School for the Deaf. Each
subject included in the study was randomly selected from the pool of people chosen to work with the hearing-impaired student in each school. None of the schools had ever enrolled a student with a profound hearing impairment prior to this, and none of the educators had had previous experience with any students from the Clarke School.

Twenty-two subjects in three schools were finally included in the study. Although the subjects were limited in number, they constituted virtually all of the subjects available to participate because of the low number of hearing-impaired students involved, and because of a reduction in school personnel resulting from the passage in the Massachusetts legislature of a severe cost cutting measure.

The first administration of the questionnaire occurred in June 1981, prior to summer vacation. Following the completion of the questionnaire, subjects in each school were randomly assigned to Experimental and Control groups. Those in the Experimental Group were each given a copy of the printed training module to study during the summer vacation. Those in the Control Group were told that they would receive extra attention in the fall to help them deal with the newly entering hearing-impaired student. Both groups were asked not to read anything else related to hearing impairments until they
had completed the second questionnaire.

Following the summer vacation, the same questionnaire was re-administered to the members of each group. This resulted in two sets of scores for each group: one completed prior to the experimental treatment and one after.

Fourteen of the 29 items on the questionnaire were scaled questions. The responses to these questions were encoded for statistical analysis. A t Test done on the pretest questionnaires showed that the means and the variances of the Experimental and the Control groups were similar. With this information in hand, a t Test was done on the post test scores to see what changes had taken place during the intervening summer. Results showed that the means and the variances of the two groups on this set of data were now sufficiently different to consider the two groups non-similar.

A t Test was then performed on the difference scores between the pre and post tests for each group. This produced a t value of 2.44 for the Experimental Group, which exceeded the critical level at the .05 level of confidence. Thus, there was a significant difference between the mean difference scores of the two groups.

A Pearson Correlation Coefficient was then run to examine the relationship of the pre and post test scores
for each group. This produced an $r$ of .69 for the Control group and an $r$ of .45 for the Experimental group, indicating a closer relationship between the two sets of scores for the Control group. The lower $r$ for the Experimental Group was due to the raising of the lower scores on the post test, an apparent result of the experimental training.

The hypothesis of this study was: There is no significant difference in information post test scores between subjects who were exposed to the printed training module on hearing impairments and subjects who were not. The results of the statistical tests done on the pre and post test data indicated that a significant difference did exist between the responses of the experimental subjects and those of the control group on the fourteen scaled items on the post test questionnaire, and that this difference was not random. Thus, the null hypothesis that there is no significant difference between the groups was rejected at the .05 level.

An important assumption in the study was that the members of the Experimental group had, in fact, studied the training module during the intervening summer. This assumption was not tested further.

It was also assumed that the questionnaire was both valid and reliable, although no further checks were
made to confirm this assumption other than to have knowledgeable professionals evaluate it.

The second administration of the questionnaire was carried out during the first days the staff members were back in school following their summer vacations. It is possible that some of them might not have made a complete adjustment to being back on the job. Answers they gave in the fall might not have reflected the same degree of consideration as those given in the preceding spring or vice versa.

How much effect was produced in the subjects' responses by the simple knowledge that they were taking part in a research study? Those who were asked to study the training module during the summer were probably aware that they would be expected to have information in the fall that the other group would not. Whether or not they studied the module carefully, their answers on the questionnaire in the fall may have been more considered than they were in the spring.

An item-by-item examination of subject responses on the questionnaire showed that the Experimental group made noticeable learning gains on questions related to the language handicap imposed by hearing loss, and on the ways in which hearing-impaired students would differ from their hearing peers. The module also seemed to sensitize the
Experimental subjects to the hearing-impaired student's need for greater attention than is normally required.

Only slight gains appeared to have been made on questions pertaining to communication between hearing-impaired and hearing students, on the importance of sound, and on the effects of a hearing aid because the subjects seemed to have a greater understanding of these issues on the pretest than had been anticipated.

The training module seemed to make a slight positive difference in the subjects' thinking regarding the issue of informing the normally hearing students about the presence of a hearing-impaired student in the class. This is usually seen by regular teachers as a topic of potential embarrassment for the deaf student, and they commonly avoid it. Of course, this runs the risk of making the situation much worse for the deaf student because the hearing students misinterpret the deaf student's apparent indifference.

The module also seemed to produce a slight positive change in the subjects' perceived need for discussions with the hearing students about hearing losses and about communication with a deaf person. The subjects had noted earlier that they were concerned about the effectiveness of communication in the classroom for the deaf student, and his or her ability to adjust to the
demands of the new school. It was disappointing that the change induced by the module was not greater. It appears that no one is really comfortable about leading such a discussion in the classroom.

No apparent differences resulting from the experimental treatment were observed on the items concerning the causes of hearing impairment or the feelings of the participants about working with a hearing-impaired student. The subjects demonstrated a better understanding of the causes of hearing loss on the pretest than had been anticipated. As far as their feelings about working with such a student were concerned, everyone looked forward to the experience with concern, but also with some degree of optimism.

As far as issues related to the adjustment of the hearing-impaired student in the new school were concerned, the training module apparently had very little influence on the members of the Experimental group. Their thinking remained almost the same regarding integration into the life of the school. They said they believed the student would make a successful transition, but in this small sample the women appeared to see it as a more complex process than did the men.

There were almost no changes in the opinions of the Experimental subjects on questions having to do with
who should be responsible for the student's program, how often the program should be reviewed, the degree of professional support that should be provided, the importance of meeting to discuss the student's progress, the impact this student's presence would have on their professional workload, or in the best ways to go about establishing a working relationship with the student. The ideas presented in the training manual on these topics were simply suggestions, and it appears that the subjects had their own views based on the organization and administrative procedures that existed in their own school. It would be unrealistic to expect the subjects to adopt suggestions that do not appear to fit their own situation.

The subjects were asked to indicate the type of information they needed in order to work more effectively with a deaf student. They replied that the most valuable types of information would pertain to the typical educational and social problems of hearing-impaired students, and to the student's academic history. The two topics they expressed the least need for were information about hearing losses and information about the family. A particular point had been made in the training module about the importance of the school and family working together in the educational programming of the student. It was disappointing to the author that this message did not
receive a more understanding response.

This study did not test the value to the professionals of having the training module in their hands during the time they actually worked with the hearing-impaired student the year after the study had been completed. We do not know how many times these people went back to the training module during that year to re-read portions of it or to look for answers to specific questions, although anecdotal reports did indicate some of them made use of it.

Anecdotal Reactions of Subjects to the Training Module

During the fall semester following the administration of the post test questionnaire, the author visited the schools in this study to speak with many of the subjects about the training module. It was refreshing to visit these schools because most of the people working with the deaf students were familiar with the information in the training module. If any problems had arisen, there was evidence that steps had been taken to deal with them. The only thing that seemed to be lacking was the knowledge of what is typical social and learning behavior of hearing-impaired students, something that comes with experience.
The deaf students, themselves, reported how helpful their teachers were in trying to help them learn. The parents of one student also made favorable comments.

In general, the subjects reported that the training module had been informative and helpful in getting them started, but they requested that more information be included in it about the particular student a school is going to receive, along with more concrete examples of teaching techniques that had been proven successful.

Several subjects reported thinking that a transition of this kind from a special school to a regular school was so complex for both the teachers and the student that it should be done in a more gradual manner over a period of two or three years. This leads to still another question. How could a gradual transition be effected when the students involved often live several states away from the sending school?

Most of the subjects reported that they would have liked to have received ongoing training to work with this student. They seemed to be referring to short periodic reminders and "hints" for ways to help the student. They said that they often became so busy during the year that it was easy to forget about a special needs student. They thought these periodic training lessons would remind them
that the student was still there. The complicating factor in these discussions was their remark that they had little time to devote to more meetings! Something on the order of a newsletter seemed to be the answer.

Reactions to individual chapters in the training module revealed that the subjects believed the suggested support system to be workable, although two of the three schools did not adopt it completely. They thought the module would benefit from more frequent use of concrete examples in all chapters. They suggested that tape recordings be used to demonstrate different hearing losses and their associated speech patterns. Slides or videotapes could be used to demonstrate classroom seating arrangements and teaching techniques.

They suggested sensitivity training for hearing students to acquaint them with this handicap and the feelings a deaf person might have when attempting to integrate into a large public high school.

The Case Coordinators found that overseeing a hearing-impaired student in their school made heavy demands on their time, more than for almost any other special needs student, but they said the training module was sufficiently detailed to help them get started. They, too, thought that periodic reminders would help them avoid forgetting about the student in the rush of their daily
activities.

The teachers said they had found the training module helpful from the standpoint of providing information and suggestions; however, they reported that modifying their teaching behavior according to some of the suggestions in the module really involved significant changes that were difficult for them to carry out on their own. What they seemed to be talking about was the need for systematic observation and supervision of their teaching.

The tutors reported that the training module had been helpful for them, but they asked many more questions of a specific nature than did the others involved in this project. This indicated to the author that they need the most detailed knowledge about mainstreaming because they are working on the student-counselor level. They had the most requests for detailed information about teaching and counseling techniques, and about helping the students learn to manage their own lives and negotiate with others about their difficulties.

The speech and language pathologists found the approach suggested in the module potentially troublesome because they are the ones responsible for helping students with language problems. The training module suggested that the tutors are in a better position to do this par-
ticular work while helping the students with their coursework. The suggestion was also made that the speech pathologists limit themselves to work on articulation, rhythm and voice problems. The pathologists said they had never worked with a deaf student before, and were unsure of the techniques that could be used. They would have appreciated seeing more information about this in the module.

Conclusions

This study attempted to demonstrate the feasibility of using a printed training module to orient secondary level educators to the handicap of deafness and its impact in the regular classroom. Assuming the validity of the module and that it was studied as intended, the resulting data, though limited by the small number of subjects involved, indicated that it was marginally effective. A study involving several programs for the deaf throughout the country would confirm this and would produce additional suggestions for further strengthening the body of information in the module.

Is such a module sufficient for orienting people in regular schools who will be working with a hearing-impaired student from a special school? On the basis of the present study, it appears that the module is helpful,
but not sufficient. Additional information is needed in several sections of the module, and information packaged in other formats seems advisable. For example, audio tape recordings of some of the information, particularly information about the speech of a deaf person would be helpful.

**Recommendations and Further Activity**

It is suggested that a follow up study be conducted using many more subjects than were included in the present study. Interpreting the statistical data was difficult since the number of cases was so small. Prior to initiating such a study, the questionnaire should be examined once again for possible revisions. One item that might be included would be to ask the Experimental Group members if they did, in fact, read the training module. In the present study, it was assumed that they had.

It is also suggested that the training module's value be tested by many more schools in more diverse settings throughout the country to determine its potential for broader use. The need for training materials for regular school educators is great and the number of educators actively involved in the education of the deaf is small. More hearing-impaired young people can be helped in their attempts to get a good education if professional materials are written with an eye to broad application.
Although the basic purpose of the training module was to orient educators to the handicap of deafness, it would be interesting to inquire during subsequent studies how often the training module was used during the ongoing instruction of the deaf student. Participants in the present study indicated that the module contained so much information that it was difficult to assimilate all of it prior to having direct experience with the student. No attempt was made to determine the extent to which the module was used following the study.

This study revealed that revision of the training module should include:

1. A realistic, yet positive, discussion of the adjustment challenge presented in a regular school. Suggestions should be included for ways deaf students might try to cope with this new environment.

2. A stronger attempt to explain the importance of the family in the student's educational programming, with suggestions for ways the families and educators can work together.

3. Strategies for helping teachers implement instructional suggestions made in the module. Supervision approaches such as those devised by Goldhammer (1969) should be considered.

4. More detailed information for the tutors to aid them in assisting the student academically and psychologically.

5. More detailed information for speech pathologists about the specific techniques that might be used for evaluating and remediating the student's speech.
It is also suggested that a broader view of the orientation of regular educators be considered. The present study indicated that information packaged in a variety of media formats could be potentially more effective in helping people understand the nature of this handicap and its impact on teaching and learning. Videotape recordings could be useful in demonstrating classroom and interpersonal communication techniques. Computer assisted instruction in the form of simple programmed lessons, or programmed instruction combined with videotaped demonstrations that are presented through the computer screen could present concepts more clearly with greater impact than can be provided by print alone. In short, a multimedia package of materials might offer the greatest opportunity for effective instruction of professionals who are widely dispersed from the sending school.

In conversations held with the study participants during the year following the study, it was revealed that they would have preferred to have had ongoing training and support during the time the student was enrolled in their school, rather than concentrating all assistance in the beginning. This was an excellent suggestion, even though it was understood that providing ongoing support was beyond the scope of the present study.

Following the study, the author decided to insti-
tute a series of monthly newsletters to be sent to all people directly involved in mainstreaming former Clarke School students. Titled "The Mainstream News," this monthly publication began in September 1982. Each issue contains articles for guidance counselors, classroom teachers, tutors, speech pathologists, parents, and students. Feature articles on various aspects of the handicap are included from time to time. The newsletter is presently being mailed to more than 600 people each month.

As word of the newsletter's existence spread, many requests for copies have been received from professionals and interested parties not formally connected with Clarke School. It was decided to investigate ways to offer the newsletter to a nationwide readership. In March 1983, "The Mainstream News" became a regular feature on the CompuServe Information Service, a popular information service for owners of personal computers headquartered in Columbus, Ohio. This has made the newsletter available to more than 40,000 readers throughout the United States.

This series of events has led the author to question the possibility of installing and testing a revised training module on a computer network for widest possible application to educators throughout the United States.
BIBLIOGRAPHY


Chaffin, J. "Will the Real 'Mainstreaming' Program Please Stand Up! or ...Should Dunn Have Done It?" Focus on Exceptional Children 6(5), 1974.


20 United States Code, 1401.
APPENDIX A

Human Subjects Review Waiver
June 1981

The purpose of this study is to assess the present understandings and feelings of high school educators about hearing-impaired students so that an effective training module can be developed to assist educators with mainstreamed students.

Your participation in this study is voluntary and you have the right to withdraw from it at any time.

Thank you for your cooperation.

David Manning

Your signature indicates that you understand the purpose and the conditions of the study.
APPENDIX B

The Questionnaire
QUESTIONNAIRE

Code Number:  (Your mother's first and last initial)

Sex:  M  F

Position: ____________________________

This study is attempting to assess the present understandings and feelings of high school educators about hearing-impaired students so that an effective training module can be developed to assist educators with mainstreamed students. We would appreciate your answering the following questions even though we realize that you have not seen the hearing-impaired student you will be working with next fall. Your answers will be kept confidential.

Thank you.

1. Please check the terms below that best describe how you feel about working with a hearing-impaired student in the fall.

   (Check all that apply.)

   _Resentful  _Fearful  _Nervous  _Concerned
   _Hopeful  _Confident  _Pressured

2. Which do you expect to be the most important method for the hearing-impaired student to received information from you?

   (Check one.)

   _Sign Language  _Lipreading (speechreading)  _Reading

3. What do you expect the most important method will be for the hearing-impaired student to get information to you?

   (Check one.)

   _Talking  _Writing  _Talking plus writing  _Sign Language
4. Check the three statements that are important to successful lipreading (speechreading)?

(Check three.)
- The speaker should use visual aids to help convey the message.
- The speaker should talk in single words only.
- The speaker should keep perfectly still while talking.
- The student must have preferential seating.
- The student must have some understanding of the topic.

5. Check the three statements that might indicate the hearing-impaired student is having difficulty understanding you.

(Check three.)
- The student has poor spelling ability.
- The student doesn't show up for appointments.
- The student never volunteers to do extra work.
- The student misses announcements.
- The student's behavior is inappropriate.

6. Please check your agreement with the following statement:

"Sound is of great value to most hearing-impaired people."

(Check one.)
- Strongly disagree  Disagree  Don't know
- Agree  Strongly agree

7. Check all the following which you think can cause hearing impairments.

- Heredity  Disease  Diet  Drugs  Injury
8. Please check your agreement with the following statement:

"A hearing aid corrects a hearing loss in about the same way glasses correct a vision problem."

(Check one.)

Strongly disagree  Disagree  Don't know  Agree  Strongly Agree

9. Please check the terms below that best describe how you think the hearing-impaired student might feel about coming to your school.

(Check all that apply.)

Isolated  Resentful  Fearful  Nervous  Concerned  Hopeful  Confident

10. Please check your agreement with the following statement:

"Hearing-impaired students are often embarrassed if you try to communicate with them about their hearing loss."

(Check one.)

Strongly disagree  Disagree  Don't know  Agree  Strongly Agree

11. How easy or difficult do you think it will be for a hearing-impaired student to adjust to the routine of your school? (length of classes; daily schedule; noise and confusion)

(Check one.)

Difficult  Rather difficult  Don't know  Rather easy  Easy
12. How easy or difficult do you think it will be for a hearing-impaired student to understand whatever is discussed in class each day?

(Check one.)

- Difficult  - Rather difficult  - Don't know
- Rather easy  - Easy

13. How easy or difficult do you think communication will be between the hearing-impaired student and his/her hearing peers?

(Check one.)

- Difficult  - Rather difficult  - Don't know
- Rather easy  - Easy

14. How important do you think it will be to inform the hearing students that there is a hearing-impaired student in the class or school?

- Not important  - Somewhat important  - Important  - Very important
- Don't know

15. How important do you think it will be to discuss with the hearing students the nature of hearing impairments and communication with the hearing-impaired?

(Check one.)

- Not important  - Somewhat important  - Important  - Very important
- Don't know
16. Check those activities you think a person with impaired hearing might have difficulty with in your school.

(Check all that apply.)

__ copying mechanical drawings
__ computing mathematical equations
__ reading a novel
__ playing basketball
__ writing a composition
__ solving a chemistry equation
__ drawing a sketch
__ completing a written exam

17. Compared with hearing students, the hearing-impaired student will have which of the following characteristics?

(Check all that apply.)

__ Shortage of important vocabulary.
__ Interest in being accepted by his/her peers.
__ Difficulty understanding reading material.
__ Lack of proficiency in the use of spoken English.
__ Lack of proficiency in the use of written English.
__ Lack of knowledge of concepts about the world and life.
__ Chronologically older than most classmates.

18. How confident do you feel right now about your success in working with a hearing-impaired student?

(Check one.)

__ Not very confident
__ Neutral
__ Somewhat confident
__ Very confident
__ Don't know
19. What kind of information do you wish you had right now to help you prepare to work with this hearing-impaired student?

(Check as many as apply.)

- Student's educational history (test records, grades, etc.)
- Information about hearing losses (causes; treatments; hearing aids)
- Communication (lipreading; sign language; fingerspelling; speech; language; reading; composition work).
- Information about the student's family background.
- Typical educational and social problems of the hearing-impaired.
- Specific suggestions for assuring that the student is able to succeed in class.

20. How much individual attention do you think it will be necessary to provide in your school for this hearing-impaired student?

(Check one.)

- Considerably less
- Slightly less
- Slightly more
- Considerably more
- Don't know

21. How often do you think this student's progress should be routinely reviewed by those people with whom he or she works?

- Once each marking period.
- Once a month.
- Twice a month.
- Once a week.
- Don't know.
22. Which person within the school do you think should have primary responsibility for monitoring this student's progress?

(Check one.)

Principal  Assistant Principal  Special Ed. Director
Tutor  Guidance Counselor  Adjustment Counselor
Speech Pathologist  Psychologist  Classroom Teacher
Resource Room Teacher  Admissions Director
Director of Studies

23. How much professional support do you think staff members who work with a hearing-impaired student in your school should receive?

The same as usual for other students.
Somewhat more than usual for other students.
A great deal more than usual for other students.
Don't know.

24. How important do you think it will be for all the people working directly with this student to have regular meetings to discuss the student's progress?

(Check one.)

Not important  Somewhat important  Very important

Don't know

25. Given the limited time you have to work with one student, and considering the nature of the challenge facing a hearing-impaired student in a regular school, which of the following is the most effective way to establish a good working relationship with this student?

(Check one.)

Be pleasant when you talk to him/her.
Meet privately to get acquainted and to discuss your work.
Give the student a handout explaining what you want him/her to know.
Ask one of the other students to explain what you want the student to know.
Phone the student's parents.
26. To what extent do you think the hearing impaired student will be able to participate in the life of your school academically?

(Check one.)

____ Very little  ____ Somewhat  ____ Quite a bit  ____ A great deal
____ Don't know

27. To what extent do you think the hearing-impaired student will be able to participate in the life of your school socially?

(Check one.)

____ Very little  ____ Somewhat  ____ Quite a bit  ____ A great deal
____ Don't know

28. To what extent do you think the hearing-impaired student will be able to participate in the life of your school athletically?

(Check one.)

____ Very little  ____ Somewhat  ____ Quite a bit  ____ A great deal
____ Don't know

29. With a hearing-impaired student and his/her support services, what do you think will happen to your work load?

(Check one.)

____ Decrease  ____ Remain  ____ Increase  ____ Increase  ____ Don't know

____ the same  ____ slightly  ____ greatly

30. We would appreciate any comments you may have concerning the assignment of a hearing-impaired student to your school.
APPENDIX C

List of Participating Schools
Participating Schools

1. Holyoke High School
   Holyoke, Massachusetts

2. Grafton High School
   Grafton, Massachusetts

3. Minnechaug Regional High School
   Wilbraham, Massachusetts
APPENDIX D

The Training Module
CHAPTER I
THE CLARKE SCHOOL PROGRAM

Outplacement

Initial meeting with parents.
Parents search for schools.
Current options for outplacement.
  Regular high school.
  Private high school.
  Special program in a regular school.
  High school for deaf students.
Placement of recent graduates.
Parents make final selection.
Student orientation to mainstreaming.
Regular school orientation to mainstreaming.
Outplacement meeting.
Final approval from parents and student.
Preparation of regular school staff.
  Training Session for Teachers.
  Establishment and maintenance of support system.

Follow-Up Program

Mid-year conference at Clarke School for regular school personnel.
Achievement testing.
Occupational interest inventory.
Assistance with college guidance.
CHAPTER I
PREPARATION FOR MAINSTREAMING

THE CLARKE SCHOOL PROGRAM

The Clarke School for the Deaf was founded in 1867 as the first private residential school in the United States to teach deaf children to talk and read lips. The school's decision to employ the oral method of instruction exclusively was based on the belief that hearing-impaired children are better prepared to live and work with the hearing people around them if they have been trained to communicate through talking and lipreading. Clarke School's goal of teaching hearing-impaired children the skills they need to live with their hearing peers has meant that the school has been engaged for more than 100 years in the work of preparing its students for mainstreaming. The school's program intentionally ends at the 9th or 10th grade level, making it possible, in most cases, for the graduates to complete their secondary education in regular schools with hearing students.

The educational program offered at Clarke School is an intensive one that is designed for profoundly deaf children between the ages of four and eighteen years. The program for the youngest children concentrates on the development of oral and written communication skills, while the program for the older students emphasizes instruction in the traditional school subjects. Classes are limited to eight students, and the oldest classes rotate from one teacher to another during the day. An active after school program includes a wide variety of sports and extra curricular activities.
such as photography, wood working, and television broadcasting. Students have nightly supervised study hours and become thoroughly familiar with written homework in most subjects.

Over the course of the last 100 years, thousands of Clarke School graduates have continued their education in regular schools with hearing students. Those who have gone on to post secondary schools have entered more than 200 colleges and universities throughout the country. Among Clarke School's alumni are many college graduates, and a growing number who have earned advanced degrees. The Clarke School graduates have distinguished themselves in the educational mainstream by their determination and persistence. We have full confidence in their ability to succeed in regular schools.

**Outplacement**

Initial meeting with parents. About a year-and-a-half prior to mainstreaming, a meeting is held at Clarke School with each student's parents to help them learn about the challenges of mainstreaming and the various types of programs they might consider for their child. The major issues discussed are:

1. The child's recent psychological and social development. Will placement in the mainstream provide the child with the opportunity to build on present strengths and overcome current weaknesses?

2. The child's recent educational history and a description of
the child's current learning style. Is the child equipped with the needed learning skills and strategies to enable him or her to survive and grow in the mainstream?

3. The general status of the family's home life. Will the parent(s) be able and willing to oversee the child's education, and give the necessary support during the secondary years?

4. The supportive services the child will need in the mainstream situation. Will the regular school be able to provide the particular type of program and the needed staff to enable the child to succeed?

5. The experiences of previous students from Clarke School who have mainstreamed. What have been the typical challenges faced by students, parents, and teachers involved in mainstreaming?

6. The various types of high school programs available. What are the advantages and disadvantages of each type of program for this particular student? Information concerning specific programs is given.

Parents search for schools. Armed with the above information, the parents and student begin looking for appropriate programs. They are encouraged to investigate both the public schools and other alternatives. It is important that the family does this rather than Clarke School because the choice of a
particular school depends on much more than just the educational program it might offer.

Some of the characteristics the family will be interested in are:

1. Type of school (coeducational, all girls, all boys; boarding, day)
2. Type of academic program (college prep, general; competitive, non-competitive)
3. Size of school and size of classes
4. Location of school (New England, other; urban, suburban, country)
5. Tuition expense
6. Programs emphasizing a particular academic subject or sport
7. The type of physical facilities
8. The social backgrounds of students already enrolled
9. Teacher-student ratio
10. Post secondary placements of its graduates

All of these elements will be found in varying combinations in each school, and it is the parents and the student who must decide which combination best fits them.

Current options for outplacement.

Regular high school. This option places the student in regular classes with hearing students, but makes supportive services available if the student wants them. The regular classroom offers a significant challenge to a hearing-impaired student because the teachers are usually untrained and inexperienced in this kind of work. The pace of
communication and study are more rapid than the student has been accustomed to at Clarke School. Class discussions are very difficult to follow unless an oral interpreter is used or the hearing impaired student sits next to someone who is outlining the discussion. The student who chooses this option must be ready to deal with people who are inexperienced with hearing impairments and, therefore, be prepared to deal with occasional gaps in information.

Most of the regular schools are now providing inservice orientation sessions for teachers to alert them to potential problems.

Some advantages:

a. The challenge to the student to try to function independently
b. Exposure to normal learning environment
c. Exposure to a wider variety of people
d. The challenge to the student to learn to live with his deafness in the everyday world
e. Normal peer models

Private high school (Prep School). This alternative is considered attractive by some parents because the atmosphere in these schools is highly similar to that found at Clarke School. The staff in one of these schools usually demonstrates a high degree of interest in individual students.

A commitment to teaching despite low wages is the rule. Classes are small, yet expectations are high. Students are individually encouraged to develop their potential. School spirit is usually high.
The rules and customs are usually similar to those found at Clarke School. The change from Clarke School to one of these schools presents the student with a significant communication challenge, but the academic challenge is seen as a logical progression from Clarke School's program. The form of communication in these programs is oral.

Some advantages:

a. All of those found in regular high schools
b. Continuation of high standards
c. Orientation toward higher education
d. Strong encouragement to students to develop individual interests and abilities
e. Wide variety of academic programs available across schools
f. Students are more well-rounded since sports and other extracurricular activities are required
g. Strong interest of teachers both in and out of school.
h. Less heterogeneous student body
i. Fewer students, allowing for more attention per student

Some disadvantages:

a. Significant expense
b. Atmosphere can sometimes be too intense; should be chosen very carefully
c. Some people view these schools as not representing the real world
d. Some parents are interested in finding an atmosphere that is different from the private school type Special program in a regular school. This approach makes use of a cluster of classrooms within a regular high school that are set aside for the hearing-impaired students. For those students not yet able to mainstream, special teachers provide all of the instruction. Usually these students would mix with hearing students only for gym and art. Those students who are academically ready to be mainstreamed are placed with hearing students in one or more courses. Language instruction and other support services are provided in the cluster, while interpreters are sent out to the regular classrooms. The most common form of communication in these programs is a combination of talking, lip reading, and signing.

Some advantages:

a. There is a high level of social-emotional peer support.

b. Student has the option of either academically structured classes for hearing-impaired students or normal classes for hearing students.

c. Teachers in the special classes are trained and/or sympathetic to the needs of hearing-impaired students.

d. Support services are provided as a regular part of the program.

e. There is at least some administrative support and interest.

Some disadvantages:
a. The hearing-impaired students, even those more heavily mainstreamed, see their home base as the cluster of special classrooms.

b. Sometimes the special classrooms are too structured; therefore not challenging enough.

c. Special teachers are sometimes too understanding, resulting in student dependency.

d. Experience has shown it to be difficult to get the hearing and hearing-impaired students to mix socially.

e. Those students who are more fully mainstreamed often are given "watered down" work to do.

High school for deaf students. Although these programs are usually not considered to be mainstream programs, they do offer an alternative for certain types of students. Usually found in state residential schools, these programs offer a complete array of academic and vocational/pre-vocational courses. The teachers are usually trained and highly experienced with deaf students. All supportive services are integrated into the regular program. The form of communication used is a combination of talking, lipreading, and sign language. These programs are usually primarily residential.

Some advantages:

a. There is a high level of social-emotional peer support.

b. Classes are designed specifically for deaf students.

c. Teachers are trained, experienced, and sympathetic to the
needs of deaf students.

d. Support services are provided as a regular part of the program.

e. There is administrative support and interest.

Some disadvantages:

a. Hearing impaired students are segregated from hearing students and normal classrooms.

b. Students are indirectly encouraged to be like all other hearing-impaired students.

c. Classes are often too structured and unchallenging.

d. Teachers are sometimes too understanding, resulting in student passivity and dependency.

e. Students are too removed from the everyday world.

Ultimate placement of each Clarke School graduate depends upon the strengths offered by each program; on the abilities, weaknesses, and interests brought to the situation by the student; and on the family's current status and long range goals.

<table>
<thead>
<tr>
<th></th>
<th>Regular Program</th>
<th>Special Program*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public School</td>
<td>83</td>
<td>8</td>
<td>91</td>
</tr>
<tr>
<td>Private School</td>
<td>23</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>106</td>
<td>8</td>
<td>114</td>
</tr>
</tbody>
</table>

*Special Program is one that is substantially different either in terms of the courses offered, the amount of time the student is out of the regular mainstream classroom, or the amount of adult assistance given when the student is in the regular classroom.

Parents and student make final selection. Once the family makes its choice regarding the new school, Clarke School becomes more directly involved. Representatives from both schools get together to learn about their respective programs and how to insure a smooth transition for the student.

Of course in the case of a private school, the family will have to wait for the child to be accepted by the new school before much can be done to prepare for mainstreaming.

Student sessions for orientation to mainstreaming. The Clarke School Guidance Counselor presents a series of discussion meetings for the students during their senior year to help them understand the transition to their new schools, and the things that will be expected of them. An important feature of these informal meetings is the opportunity for the seniors to discuss
their feelings about leaving the special program at Clarke School, and to ask whatever questions they might have about the future. These meetings are usually lively, and often give the staff ideas for additional steps to add to the transition program.

Some of the topics that are discussed are: the benefits of being mainstreamed in a regular high school; informing the hearing students about your hearing loss; the responsibilities of the tutor; the responsibilities of the notetaker; informing the teacher of the need for assistance; getting daily announcements; how the Clarke School Mainstream Service can help mainstreamed students; oral participation in class; making friends; how to handle a group discussion; and so forth.

**Regular school orientation to mainstreaming.** About midway through the student's senior year at Clarke School, a one-day orientation meeting is held for personnel from the new schools. Hosted by the seniors' parents, this meeting brings together the regular and special educators to exchange information about hearing impairments and the steps that should be taken to insure a smooth transition between the two schools. During the meeting, the seniors and their new school representatives are brought into direct contact through observations in the classroom and through activities requiring them to work together as a team. An agenda for one of these meetings is given.

**Conference of New School Representatives**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>Registration, name tags, beverage</td>
</tr>
<tr>
<td>9:45</td>
<td>Introduction of leaders; identify participants and the posi-</td>
</tr>
</tbody>
</table>
tions they hold

Explain purposes of workshop; Clarke School's philosophy; parents' goals

10:00  Senior profiles to be filled out by school representative after interviewing the student

10:05  Description of Clarke School's educational program

10:25  Questions from the audience

10:30  Explanation of Hearing Impairments

10:50  Questions from the audience

11:00  Observation of upper school classes

12:00  LUNCH

12:45  Discussion of the academic, communicative, and psycho-social differences and similarities between Clarke School and regular schools; coping strategies

1:30   Seniors present panel; answer questions

2:00   Seniors and their parents mix with their respective school representatives; refreshments

2:20   Presentation by teachers and guidance counselors who are presently working with mainstreamed students

2:50   Questions from the audience

3:00   Brief description of Clarke School Mainstream Service; steps that need to be taken by the regular schools between now and the end of the school year

3:20   Workshop evaluation forms distributed

Thank yous.
Outplacement (I.E.P.) meeting. At the end of the winter, a formal outplacement meeting is held at each senior's new school. Participants are: the student, parents, Clarke School staff, and regular school staff. This meeting serves three purposes: first, Clarke School uses the meeting to turn over most of its records on the student; second, all parties participating in the meeting assist in formulating the student's Individual Educational Program (I.E.P) for the following year; finally, there is a discussion regarding the organization and maintenance of the support system the new school will implement.

Final approval from parents and student. Once the Individual Educational Plan (I.E.P) has been formulated, it is sent to the parents for their final approval. This is indicated through their signature. In the case of a private high school placement, there may not be an I.E.P. because the local education authority would not be involved other than for knowing where the student has been enrolled.

Preparation of regular school staff.

Training session for teachers. The Clarke School Mainstream Service provides an orientation workshop for the teachers in regular schools. It is recommended that this workshop be conducted during the spring prior to the student's enrollment in the new school so that the teaching staff can have plenty of time to plan. The focus of the workshop is on establishing communication between the student and his or her new
teachers and, for that reason, the student also participates.

Establishment and maintenance of support system within school. Clarke School provides the new school with a plan for organizing a support system for its new student. (See later chapters in this manual.) Once the key members of the student's instructional team have been chosen, the Clarke School Mainstream Service maintains monthly contact to monitor the operation of the system. This is done through telephone calls, school visits, and visits of the student to the Mainstream Office. Cumulative files are maintained on each situation so that specific suggestions can be made to school personnel regarding the progress of the student's educational program.

Follow-Up Program

Mid-year conference at Clarke School for regular school personnel. A conference is held at Clarke School about the middle of the student's first year in the regular school. Members of the student's instructional team are invited to partipate in this all day meeting. Invitations request that each participant bring to the meeting a list of the problems and difficult situations the support staff has encountered thus far. During the meeting, these problems are discussed in an open forum with all of the other participants, and group solutions are solicited. In addition to this, informative programs, such as panel discussions, are conducted to help the participants broaden their understanding of hearing impair-ments. The final portion of the conference is a group discussion with members of the Clarke School teaching staff regarding the strengths and weaknesses our students
demonstrate in the mainstream setting. The information gained from this discussion is used to modify Clarke School's program of preparation for future students.

**Achievement testing.** Experience has shown that most high schools do not presently use standardized achievement tests each year. Until minimum competency tests are administered uniformly throughout the schools, the Clarke School Mainstream Service will conduct a yearly achievement testing program for cooperating graduates using the Metropolitan Achievement Test. This is the same test used throughout the educational program at Clarke. Under this testing program, the regular schools are provided with a free copy of the achievement test to be administered to the deaf student. Once the test has been given, Clarke School will have it scored, and will return a copy of the scores to the high school along with some instructional suggestions for those areas where the student's performance appears to be weak.

**Occupational interest inventory.** We have found over the years that most of our graduates have no idea what they want in terms of vocational goals for the future. Even though many hearing teenagers have this same problem, it is of more concern for a deaf student since we have found that hearing-impaired students have a very poor understanding of vocations. This is another body of knowledge that hearing teenagers acquire simply because they hear people around them talking. To help the hearing-impaired student begin to develop some understanding of occupations, we have begun administering the Kuder Occupational Interest Inventory. The best time to give the test
appears to be when the student is in high school. The Clarke School Mainstream Service, therefore, provides schools with a copy of this test and a copy of the results once it has been administered. We have found that this inventory can point a student in the direction of possible vocational choices, and this information can then be used to help the choose sensible electives during high school.

Assistance with college guidance. Students who complete their high school education often consult the Mainstream Service for assistance in locating and choosing appropriate colleges. Although most students have reached a high degree of independence once they have completed regular high school, it is still necessary to go about college selection with care. In some ways, a college education is more difficult for a hearing-impaired student than a high school education because of higher expectations, larger classes, and greater competition. Some hearing-impaired students find that the best college program for them is one that has been specifically designed for the hearing-impaired, but the vast majority of Clarke School graduates enter regular colleges. The Mainstream Service is available to help students find colleges and decide which programs are the most appropriate.
CHAPTER II
COMMUNICATION

Hearing losses.

Hearing aids.

Receptive and expressive communication.

Receiving information.

Expressing information.

Indicators of communication breakdown.
CHAPTER II
COMMUNICATION

This chapter will give a brief explanation of hearing losses, the rationale behind the use of hearing aids, the effects of the hearing loss on receptive and expressive communication, and a short discussion of the communication systems used with hearing-impaired people.

Hearing losses. Hearing losses result from one or more of the following causes:

1. Heredity

Some families have hearing impairments covering one or more generations.

2. Drugs

Modern drugs save lives but often leave the stricken individual impaired in one or more ways.

3. Disease

Spinal meningitis and maternal rubella (measles) are examples of diseases that can cause hearing loss.

4. Injury

Loud noises or a blow to the head can lead to hearing loss.

The student you will be working with has a loss of hearing located in one of three places: the inner ear, the auditory nerve to the brain, or in the part of the brain where sound is received and recognized.

The degree of loss this student has is either:
Mild (30 to 50 dB); 
Moderate (50 to 70 dB); 
Severe (70 to 90 dB); or 
Profound (above 90 dB).

The more severe the loss, the more difficult communication is and, therefore, the greater the educational handicap. The greater the hearing loss the more carefully the educational environment will have to be structured so that the student can get as much information as possible.

This student's hearing loss, at least for the immediate future, will not get better. All legitimate medical remedies have already been exhausted. The only known way to help this student live with his or her hearing loss is through training and education.

Most hearing-impaired people, despite the severity of their loss, have some small amount of usable hearing. It is possible for these people to use this tiny remnant of hearing to monitor and control their own speech if a hearing aid is provided and they are taught to understand whatever small amount they hear.

Hearing aids. A hearing aid is simply a small public address system, containing a microphone, an amplifier to make sounds louder, and a tiny speaker. A hearing aid can make sound loud enough to be received by the ear of someone with a hearing loss, but it will not guarantee that the sound will be "clear" or will make sense. This is because the tiny remnant of hearing referred to above quite often does not function normally. In other words, it often functions like a faulty needle in a stereo phonograph.
system. You can turn the volume up and down, but the sound is buzzy or intermittent. This means that the hearing aid might be able to assist the hearing-impaired person, but it will not correct the hearing loss.

The primary way in which the student you will be working with understands those who talk to him or her is through lipreading. But the student's tiny remnant of hearing also helps the student. If the speaker stands within five or ten feet of the student, the sound of the speaker's voice will be made louder by the student's hearing aid and that will help the student as he or she tries to lipread. An example using a similar situation might help make this clear. If you try to lipread someone on television with the volume turned down, you will find it quite a challenge. If you turn the volume up until you just barely hear the person's voice, you will find that you will understand more than before, even though you still might not be able to understand every word.

In summary, despite the fact that the student you will be working with has a significant loss of hearing, he or she still has the ability to make use of sound. It is important to keep in mind, however, that the hearing aid does not restore the student's hearing to normal. Most of the information the student gets will be gotten through the visual mode.

Receptive and expressive communication. As you work with this hearing-impaired student, your understanding of the pervasiveness of the handicap will grow. The communication problems a hearing-impaired person faces are great, but they are not hopeless. In later sections of this manual, we will explain some of the techniques you can use to help the student understand
more when you communicate with him or her.

It is important that you understand the effects the hearing loss will have on the student you will be working with. The two main areas we will consider are the reception of information and the expression of information.

Receiving information. The hearing impaired person does not receive a complete signal through the sense of hearing.

A visual analogy:

( Good Morning

Effects--

1. The sound of the speaker's voice (which aids in understanding what is being said) is not heard. This makes it more difficult for the hearing-impaired person to understand exactly what is meant.

2. The hearing-impaired person is forced to try to get the missing part of the information through lipreading.

3. The lack of hearing means that the person does not hear new words being used over and over again, meaning that old words used in new ways are not heard. Opportunities for learning are thus missused.

4. In classes where new material is discussed, it is difficult for the hearing-impaired person to get a full understanding of it because he/she does not receive all of the information.

5. This difficulty in hearing the English language and in learning
new concepts through hearing means that reading is difficult. The student is continually reading about things he/she has never heard of before.

The student who does not hear normally is cut off from important information, vocabulary, inflection, and the repeated use of the English language. This has a powerful effect on the student's ability to function in a regular classroom without special supportive help.

**Expressing information.** The hearing-impaired person's attempts to communicate orally and in writing are usually below the standard expected of someone the same age.

1. Unable to hear his or her own voice clearly, it becomes difficult for the hearing impaired person to control the quality of his or her speech. This leads to difficulties for the hearing person trying to understand what the hearing-impaired person is saying. Communication breakdowns are common. The speech of a hearing-impaired person is sometimes described as "muffled" or "monotonous." Repeated exposure of the hearing person to this kind of speech will make it more understandable.

2. Vocabulary used by a hearing-impaired person is often simple because the student has been cut off from hearing more sophisticated words.

3. Written and spoken sentence structure are simple because the student has been cut off from hearing more sophisticated
language. The student usually does not have the "feel" for the language that a hearing person does. Some people find it helpful to think of this person as a student from a foreign country. There are some similarities.

4. Some people think hearing-impaired people have a naive view of the world. This is probably due to not hearing people talk about their experiences.

It can be seen from the above information that a hearing-impaired student, unlike a hearing student the same age, has heard only a limited amount of information. Hearing students base much of what they say or write on things they have heard from people around them.

A hearing-impaired person, because of his or her handicap, has a much smaller background of information to call upon.

Despite these difficulties, there are techniques educators can use to help the student get the needed information in school. A later section of this module will go into these techniques. It is important to remember here that not 100% of what is said in an ordinary classroom is important or even worthwhile. In addition, there are redundancies and repetitions in much of what we say that give the hearing-impaired person more than one opportunity to get the needed information.

**Indicators of communication breakdown.** Many educators newly engaged in work with the hearing-impaired ask us how they can be sure the student is understanding them during class or in a meeting. Experience is probably the best teacher, but we can alert you to some of the classic warning signals
that should assist you in answering this question. It is important that you understand that the appearance of one or two of these signals does not necessarily mean that the student is not understanding you, but it should be sufficient cause for you to do a little probing to be sure that everything is all right.

1. Student chooses to sit in a place that is inappropriate for lip-reading. Sometimes a hearing-impaired student will want to sit near a friend in the back of the classroom, but the knowledge that this person has a hearing impairment should tell you that this should be discussed with the student first. This does not mean that you must assign the student to a particular seat. It means that you should probably talk the situation over with him/her.

2. The student's facial expression is "blank," "bewildered," or "frustrated" while you are trying to talk to him/her. If the student's facial expression is inappropriate for the tone of what you are saying, you have sufficient cause to ask yourself if the student is really understanding you. Sometimes a mere rephrasing of your remarks will cause the expression to change from one of confusion to one of understanding.

3. A student who sits passively in class or in a meeting could be letting the information pass right over his/her head. Calling on the student or talking with the student after class will sometimes encourage the student to be more attentive or to reveal the cause of his/her passivity.
4. The student frequently turns to a classmate to ask a question. Although there are times when students can become involved in an irrelevant chat, this type of behavior could also be an indication that the student is having difficulty following what you are saying and is asking for clarification from someone nearby. We believe that this kind of situation should be avoided because it can interfere with the hearing student's opportunity to hear important information. If such a situation occurs in your presence, we suggest that you talk with the hearing-impaired student (and also the hearing classmate) privately to find out what the problem is.

5. The student reads textbook, cleans out notebook, or is otherwise inattentive during the class or meeting. We have heard of a few students doing this when they were unable to keep up with what the teacher and the other students were discussing. Although we understand the hearing-impaired student's problem, we do not agree that the student should engage in rude behavior to get attention. What is needed is for the student to indicate to you that he or she is having trouble keeping up with the discussion so that you can take steps to alleviate the problem.

6. The student smiles and answers "Yes" to the speaker's remarks or questions. This is a classic indicator that the student has not understood what has been said. Although we try to encourage the students to be forthright in their communication with others, we realize that they sometimes feel compelled to resort to
this technique when they do not want to offend. If this response is given in your presence, we suggest that you indicate to the student your concern that he or she may not have understood what was said. Then, a simple rephrasing of the previous remarks will often eliminate the confusion.

7. The student does not seem to have knowledge of assignments given or announcements made. The cause for this could be a lipreading problem or it could be the result of inattention. You cannot assume either one without first talking with the student.

8. The student misses an appointment. This is another classic indicator that the student has misunderstood what was said regarding the next meeting. Again, it can reflect a communication breakdown or a simple problem of inattention. The best way to determine this is to discuss the matter with the student. An additional complicating factor can be that you might have thought the student said one thing when, in fact, he or she said something different.

9. The student does not stop after class or after a meeting to double check or to verify assignments. In and of itself, this does not mean the student has misunderstood you because he or she could have gotten the information from a classmate. If, on the other hand, the student is also receiving poor marks in homework, it is possible the student is confused. Once again, it is important to discuss the situation with the student privately to determine the cause of the problem.
10. The student's written homework has obviously been copied from a book. This is a habit that many students, hearing and hearing-impaired, fall into. We do not allow the students at Clarke School to copy information from a book in place of original writing, but this does not stop them from trying. We suggest that you not accept work of this kind, and we also suggest that this might be another signal that the student is confused. Further discussion with the student should clarify the situation.

11. The student's written work in the classroom is poorly done or the answers seem inappropriate. This could indicate confusion about the nature of the response required or it could also indicate a misunderstanding of the question itself. Test questions cause our alumni a lot of difficulty because of the wording of them. We often suggest that the teacher go over each test question with the entire class before the test is given to be sure that everyone understands exactly what is being asked.

12. Homework not done, or done incorrectly. There could be a variety of reasons for this, so we usually suggest that you write assignments clearly on the blackboard so that they can be copied directly into a notebook. If the student doesn't understand what is to be done, he or she can easily turn to a parent for added explanation.
CHAPTER III
THE HEARING-IMPAIRED ADOLESCENT IN THE MAINSTREAM

Expectations of the Regular School
Communication in the Regular School

Speechreading.

Speech.

Language.

Course work.

Psychosocial Adjustment in the Regular School

Extracurricular Activities in the Regular School
CHAPTER III
THE HEARING-IMPAIRED ADOLESCENT IN THE MAINSTREAM

The hearing-impaired student who enters a regular high school with hearing students, after receiving an education in a private residential school for twelve years, faces a psychological, social, and educational challenge. In the residential school, the small and highly structured design of the facility surrounded the child with people who were trained and experienced in communicating with him, understood his learning problems, and provided companionship. In this setting with small classes, the student was able to acquire a basic foundation in communication skills and school subjects in an atmosphere where the effects of the deafness were minimized.

The experience the student did not get, however, was that of learning to live and work on a daily basis with hearing peers. It is believed that this will be one of the major benefits the student will derive from being mainstreamed.

When the student enters the regular high school, he finds himself in an environment where very little is known about hearing impairment. High schools today, especially if they are regional high schools, are large, complex environments, with layers of officials, large teaching staffs, involved routines, and two to three thousand students, many of whom have different special needs. This is a much different setting from the one the hearing-impaired student has been accustomed to, and it will take time to adjust to it.

Some of the confusions the student experiences at the beginning of the
school year are quite normal and are just like the ones hearing students have. Understanding the basic design of the new building, the daily rotating schedule, and the rules and regulations are examples of these. If the school staff has been prepared for the student's entry, there should be someone available to help him deal with the strangeness of the situation. If, on the other hand, there has been inadequate preparation and no one is aware that the student is entering the school, confusion can occur such as described in this excerpt from the letter of a parent.

No one seemed to have known that my daughter was entering the school this fall, despite the meeting we had at the central office. The first day of school, Betty sat through four lunch periods because she didn't hear the bell and she kept waiting for the lunch room to empty. This caused her to completely miss one of her classes. She had difficulty following the schedule, and twice, ended up in the wrong class. She went to the auditorium, but had no idea of what was going on. It must have been an indoctrination meeting of some sort. She said she was very nervous because, suddenly, a whole group of kids got up and walked out of the auditorium and she didn't know why, then a second group did the same thing. Well, when the third group got up and left, she left with them - and she was late for the next scheduled class (Smith (pseud.), 1979).

**Expectations of the Regular School**

Students in regular high schools are encouraged to be independent, and to take care of themselves. As the students have grown up in the school system, they have been trained to be independent at this level. Teachers and guidance counselors in high schools need to understand that an entering hearing-impaired student will need specific help in making the transition to this way of living. The school the student came from did not provide as many opportunities for the student to develop these skills. This means the
student will need time and a little guidance to learn to live this way. It is difficult for people inexperienced with hearing impairments to understand quickly the pervasive effect a hearing loss has on a student. It affects everything the student does. True appreciation of this often does not occur for a new teacher until about three-fourths of the way through the school year. In the meantime, it is often difficult for teachers to know what to hold this student accountable for in class or how to make homework assignments relevant in terms of language and concepts. This underscores the need for special education consultants to be available to work closely with these teachers.

The student also finds that there is more apparent freedom in this school than in the last. There are not as many specific checks to see if he has turned in his homework or if he has understood what has happened in class. Many students report that their teachers never call on them in class, leading them to the conclusion that they only have to watch what goes on and not make trouble in order to pass the course. Persevering in the face of this apparent indifference is a lesson these student needs to learn if they are going to learn to function independently in the world.

Communication in the Regular School

From the sound of the opening bell in the morning to the closing general announcements in the afternoon, schools function auditorily. Anyone with a hearing loss is faced with a challenge. A blind student, though restricted as far as physical movement and reading are concerned, can spend a day in
school listening and not lose much. A hearing-impaired student, on the other hand, can finish the school day having seen all of his classes, but having only a vague idea about what has been said. In some ways, a hearing-impaired student this age is in a position similar to that of a student from a foreign country who has only an elementary understanding of Standard English. There is a continual shortage of important vocabulary and a rigidity in dealing with syntax. There are some modifications which can be made in teaching style, organization of the class room, and in assignment preparation which can help the student get additional information about activities in class. Once these are implemented, the student should be able to participate with the understanding that is needed.

Speechreading. Speechreading, or lipreading, is more than just watching lip movements. Comprehension increases if the lipreader first knows something about the topic to be discussed. Favorable seating is helpful to gaining a clear view of the speaker's lips. As the teacher talks, the student lipreads and gathers in supporting clues from gestures, posture, facial expressions, and visual aids. It is also very helpful if the teacher presents the topic according to a logical plan of development. An additional aid can be the opportunity to look at the notes of a nearby student.

Hearing-impaired students usually begin their high school years with the intent to lipread every word the teacher says. What they find, however, is that some people, particularly men, are not easy to lipread. A bushy beard can obstruct the view of the speaker's mouth making it difficult to get more than an occasional word. Even if the teachers are easy to lipread,
it is difficult for the student to concentrate on someone's mouth for an entire 45 minute period. It is common to hear from conscientious students that they have frequent headaches from trying to concentrate for such long periods of time. This puts them in a double bind sometimes, though, because teachers often become upset when the student looks away because they think the student isn't paying attention.

Students report that they come to realize after a few days in their new school that teachers repeat themselves a great deal. If the students keep up with the reading in the textbook, they will find much of the same information the teacher discusses in class. This leads them to relax a bit and work out a more realistic balance between lipreading and visual relaxation. In reality, this is the same way in which hearing people use their ears. They tune in and out frequently during the course of a class to see if something new or interesting is being discussed. The thing the hearing impaired student must do to make sure his system of looking serves him well is to keep up with the reading and to keep checking with the other students and the teacher to be sure that something not mentioned in the text is not brought up in class.

Probably the most frustrating lipreading situation for a hearing-impaired person to manage in the regular classroom is a discussion. The conversation moves rapidly around the room, often in an unstructured manner. Lipreading is not a perfect substitute for hearing. The student finds it almost impossible to keep up with and will usually not persevere with it. The best solution thus far devised to this problem is to use an oral
interpreter, but this is not always possible for a variety of reasons. Other techniques are often needed to try to control this problem.

As students leave the classroom, teachers have been known to announce that there will be a short quiz the following day. This way of giving an assignment has caught more than one hearing-impaired person unaware because they have not heard what the teacher has said. Painful experience will teach them that they have to check with another student or with the teacher after every class to be sure no extra assignments were given at the last minute.

Speech. The speech of many hearing-impaired people is difficult for the novice to understand. Experience has shown, however, that the more time a hearing person spends with a hearing-impaired person the more they both adjust to the manner in which each of them speaks. In the high school setting, this means that the teacher and the student have to meet privately a few times to get to know each other. They will have to struggle in order to establish communication at first, but the more they do it the more successful they will be. This is the only way it can be done. High school teachers will often say they do not have time for this, but expect the adjustment to take place simply because the student is in their class. Experience has shown that these people never call on the student in class and that the student never volunteers to talk, making any hope for adjustment unrealistic. Naturally, most people would find this struggle to communicate embarrassing and even threatening. It is important to understand that the hearing-impaired person has lived with this problem since birth and
will not be embarrassed by the teacher's efforts to communicate. The student will appreciate the teacher's interest and attempts to establish a relationship.

It has often been uncommon for a hearing-impaired student to speak in a regular high school classroom. The teacher has rarely called on the student and the student has not often volunteered information even when he or she was sure of the correct answer. A certain amount of this reluctance to speak is natural for many teenagers, but it is particularly hard for someone who knows that his or her speech is difficult to understand. This person realizes that the potential is great for a communication breakdown and resulting embarrassment. But this way of thinking is produced by situations in which the classes have probably been too large and people have had incorrect expectations. We believe that if the teacher and the hearing students in the class have basic information about the hearing-impaired student's hearing loss, the connection between the sound of his voice and the hearing loss, and what the student has managed to overcome thus far, there will be a much different atmosphere in the classroom; one that is more supportive. In classrooms where this information has been supplied, hearing-impaired students have been able to participate regularly even though there have been communication blocks from time to time. It is a situation that can be managed, but it needs the help of someone who understands that it is possible.
Language: Hearing-impaired students suffer from an immense lack of everyday vocabulary, another result of their hearing loss. The emphasis in high schools generally is on acquiring a large amount of information and this means the need for a rapidly expanding vocabulary increases. A student in a literature class finds a dictionary very useful. A hearing impaired student in the same class finds it indispensible and frustrating. An average page in a novel might contain fifteen words that are completely new to the eyes of this student. When the definitions are found in the dictionary, they are found to contain still more words that are new and must be looked up. Once the student has secured a meaning for a word, it is necessary to understand what part of speech it is and how to use it correctly in a sentence. All of this takes time and means that entire evenings must be given over to homework, after exhausting days of lipreading in school. Stamina and perseverance are necessary if the student is going to succeed.

Much of the language used in high school classes is very abstract, the hearing-impaired person's language is usually more concrete. The use of figures of speech such as simile, metaphor, personification, and alliteration present unusual challenges. Tutorial help is usually necessary for this kind of work. It is not uncommon, however, for students who have been assigned a tutor to think this indicates a failure on their part. This leads some to resist the help. The students at Clarke School are now being told about the advisability of having a tutor in a regular school so that they will accept this as an indication of the school's desire to see them succeed rather than as a sign of their incompetence.
Written tests often contain questions that hearing-impaired students find are worded in difficult and confusing ways. A simple and straightforward question such as "What happened after the president made this decision?" might appear on a high school test as "What were the far-reaching effects of the president's decision?" Most hearing-impaired people will understand the simpler version but be confused by the other one. Even though the student has studied for the test, it will not be clear what is being asked and the student is apt to answer it incorrectly. Again, the student might be reluctant to speak up for help, or think that he or she understands what is being asked.

Report writing is a major hurdle because there must first be a great deal of reading and dictionary work. When it comes time to write, the chronic language problems will have to be struggled with if the text is going to be comprehensible. Hearing-impaired students often benefit from having extra time to complete assignments of this nature.

Course Work. Mainstream placement on the secondary level is carried out by balancing the student's achievement level and age. We have seen above that a hearing loss interferes with the acquisition of language and this, in turn, leads to delayed academic development. By the time the student enters the tenth grade in high school, he or she is two or three years behind age-appropriate peers. The hearing students are usually fifteen years of age, while the deaf student is seventeen or eighteen. Many of the hearing students might achieve at the eleventh or twelfth grade level on standardized tests, while the deaf student is probably a bit below or just at the tenth
grade level. This presents the student with two potentially embarrassing situations. On the one hand, he or she might have awkward feelings about being two years older than the others in the class, while on the other there will be the quick realization that the other students are more advanced in terms of their knowledge and skill.

The most difficult adjustment the student must make as far as academic work is concerned is to accept the fact that he or she will have to work harder than the hearing students to accomplish the same basic work required for the course, and his/her grades will probably be lower. This is a very hard thing for some students to accept, particularly if they have siblings who bring home higher grades having done a lesser amount of work. Sometimes a hearing-impaired person will come to the erroneous conclusion that he is really not as smart as he had thought previously because no matter how hard he works, he cannot measure up to his peers. It does not seem realistic for the regular school to give the student high grades simply for effort. Most hearing-impaired students do not want this. They do want to know, however, that people around them understand that the lower grade does not mean they are dumb. This is a problem the parents and the school must be aware of so they can explain it to the student before the first grades are received.

The various aspects of communication discussed above present repeated challenges to the person who cannot hear, making it difficult for him or her to produce verbal evidence of learning. The potential for misunderstandings and misconceptions is usually high. Despite this, with careful planning and guidance, it is possible for many hearing-impaired students to achieve a high degree of success in the regular classroom.
Psychosocial Adjustment in the Regular School

A new student in-school feels like an outsider the first few days, and a hearing-impaired student is no exception. He may have the added feeling to live with, however, of knowing he is the only person in the school with a hearing loss. It has been suggested by many professionals that groups of hearing-impaired students should attend regular schools together so they will not run the risk of experiencing loneliness and isolation. This is a reasonable course to take with those students who are more sensitive about their handicap, or who are particularly interested in the social aspects of school. There are some students, however, who do want to attend regular high school on their own. The degree to which an individual student in this situation is able to be successful in making friends is based on the same elements that are important when two hearing students establish a relationship, but also on such things as the intelligibility of the hearing-impaired student's speech, his ability to lipread adequately, his feelings about his hearing loss, and his willingness to risk getting hurt. The high school can take steps to assist the student in getting to know his peers, but this is something that has to be handled carefully and unobtrusively.

The hearing-impaired student who was a leader in the smaller residential school often arrives in the new high school with the expectation of getting involved in a similar way, but his hearing peers generally are slow to involve him. This is usually because the hearing students don't know this new student; don't know his background; are not sure the student will understand them if they talk to him; and often find it hard to understand
his speech. Many of them think the student is mentally retarded because of the way he talks, and so the student must first prove himself in some way. Many of the hearing students lead active lives and don't take the time to find out about the new student, even though they are aware that he is in one or more of their classes. Until the student can achieve a place for himself in the social climate of the school, he will need the support and encouragement of important people in his life, the parents and, often, the tutor.

One of the more difficult things for the student to learn is when to speak up about his hearing loss. Those who continually remind everyone around them that they have a hearing loss quickly become bores. People see them as trying to use their handicap. Those who don't acknowledge it, on the other hand, are thought to be trying to avoid their disability. It is hard for a young person to know when and when not to do it. It is another one of the double binds disabled people find themselves caught in so often. It is probably safe to say that most hearing-impaired people wish to be involved in life, and want to carry their share of the responsibilities, but they know there are situations where they will have a more complete understanding and thus be better able to do their part if those around them know that they cannot hear. Only experience will teach them when to speak up and when to keep quiet.

**Extracurricular Activities in the Regular School**

There are areas in which the hearing loss does not separate a student from his hearing peers. It is not necessary to hear in order to be a good
soccer player, cross country skier, swimmer, football player, or tennis player. Neither is it necessary to hear in order to be able to draw a flower, sketch a landscape, or paint a sunrise. The visual aspects of sports and art enable hearing-impaired people to participate in them on a more or less even footing with hearing people, making it possible for them to feel equal. The students say that these activities also provide them with a way to get rid of some of the frustrations resulting from classroom communication challenges while getting the chance to meet hearing peers and demonstrate their abilities.

The next chapters of this module are directed at the particular members of the regular school staff who will be working with the hearing-impaired student. The primary concern in this discussion will be to present a plan for supporting and supervising the student's educational program. Each of the upcoming chapters will review this recommended plan, describe the duties and responsibilities of the particular staff members, and make suggestions for ways to carry out the various jobs.
THE ADMINISTRATOR

A Recommended Support and Supervising System

Parents.
Case coordinator.
Teachers.
Tutor.
Speech pathologist.
CHAPTER IV
THE ADMINISTRATOR

Clarke School for the Deaf welcomes this opportunity to work with you and your staff in mainstreaming a hearing-impaired student in your school. In the past 105 years, thousands of Clarke School graduates have completed their education in regular schools, demonstrating repeatedly that mainstreaming is no idle dream.

The Clarke School Mainstream Service is a consulting service which follows up on former Clarke School students as they complete their education in regular schools. It provides both the students and their new schools with information, guidance, and assistance free of charge. We offer this service for a couple of reasons: first, our school believes in the concept of mainstreaming, and we direct our entire program toward achieving that goal; second, few educators in regular schools have had direct experience with hearing-impaired students, and they usually need help in adjusting their activities and techniques to accommodate them. Although there are growing numbers of materials and sources available today for providing information about hearing impairments, there are not many that are specifically designed for the secondary level, and none meant particularly for the graduates of Clarke School.

This training module is meant to help you and your staff succeed in this work. It will provide you with information about Clarke School and the things we have learned over the last several years working with public and private high schools in New England. Many of the ideas came from our school,
but a large number came from people in schools just like yours. We want the information to be helpful to you and are always interested in knowing when it does not meet your needs.

Experience has shown us that the degree of success achieved by most schools in efforts to mainstream special needs students is largely dependent upon: the way in which mainstreaming is introduced to the staff; the assignment of specific people to do the work; and on the establishment of a strong support system for all those involved. These elements are all within the administrator's area of responsibility. Said another way, it is the administrator's job to prepare the school environment for the arrival of special needs students.

The first suggestion we would like to make to you is to visit Clarke School. We have found in the past that administrators are usually more enthusiastic about mainstreaming if they can first learn something about the disability involved, and then about the student's present program of preparation. We think it will be very helpful to you to come to visit our school to observe the student in action and to discuss the whole concept of mainstreaming with the people here who are directly involved in it.

The next suggestion we would like to make is that you explain to your staff what has been learned from visiting Clarke School. Your staff will want to know your view of the student's apparent potential for mainstreaming once you have seen the student in action. Your staff will need to know that you believe the challenge before them is reasonable and possible. In other words, we have seen that an administrator needs to communicate to his or her
staff that mainstreaming is a practical possibility, and that he or she will do all possible to support those who become involved in it.

Following this, we recommend that you explain to your staff your plan for organizing a support system once the mainstreaming has begun. This is usually best done by laying it out, preferably on a chart, and explaining the complete design. We can suggest the following plan:

A discussion of the elements of this chart follows.

Parents: Chapter 766 in Massachusetts and the national Public Law 94-142 both indicate that the school is required to provide an Individual Educational Program (I.E.P) for each student. The parents are recognized in this process as the child's ultimate case manager and they should be completely involved in formulating all parts of the plan. They have a much broader view of the child than does anyone at your school and they have the authority for determining how the child's education ought to proceed. Even after the student has passed his or her 18th birthday, the sensitive admi-
strator will see to it that the parents continue to be involved in their child's educational planning.

Case coordinator. It is not practical on the day to day level for the administrator to be deeply involved in the student's program. This can be handled very adequately by another staff member; for example, the guidance counselor. Specific job requirements are given in the next section of this book. The choice of person to fill this role is critical to the student's ultimate success and so we caution that this person be chosen very carefully.

Teachers. We view the classroom teachers as the student's instructional team leaders. They are the ones who have primary responsibility for the student's instruction and academic progress. Therefore, whenever the student needs extra help in a subject, we think the student should go to the teacher. By working directly with the student, the teacher will gain valuable information about the student's academic strengths and weaknesses. In some cases, the student might need more help than the classroom teacher is able to provide, so some of the work will then be referred to the tutor. We believe that the classroom teacher, however, should continue to be responsible for the student's overall instruction even though he or she may have outside tutorial assistance. This makes it mandatory that the teacher and tutor have a close working relationship.
Tutor: We see the tutor as the right arm of the classroom teacher. For example, the tutor can help the student preview work to be taken up in class so that the student can enter the classroom familiar with the new vocabulary and new concepts that would otherwise impede his ability to function. The tutor can also postteach as a means of fixing concepts which received only limited coverage in the classroom. Preteaching and postteaching do not mean, however, that the teacher is relieved of responsibility for the student's learning. It merely means that the tutor can provide the extra measure of assistance needed to help the student complete his or her learning. The person selected for the tutoring position should be chosen carefully for his or her ability to work with and support the classroom teachers, for lipreadability, and for experience in teaching secondary school subjects. We do not believe that a trained teacher of the deaf is needed for this work unless the student has very serious learning problems.

Speech Pathologist: Experience has shown that the speech of our graduates improves after they enter regular schools, but there is not usually a dramatic improvement. Speech therapy has been found to be very important for maintaining the student's present level of intelligibility. There is much the speech teacher can do to support the student in his or her work. The names of teachers, courses, buildings, and clubs are a good place to begin. As the year progresses, there should be a steady flow of new vocabulary coming from each course for the student to learn to lipread and say. The tutor should see to it that this material is passed on to the speech teacher.
It has been shown that mainstreaming has been most successful in schools where the administrators have been generous in supporting the efforts of the staff. In one recent study, the overall success of mainstreaming efforts was found to be directly related to the teachers' own perceptions of success with the special needs student. The higher the level of administrative support the teachers received and the more available resource services were, the more successful the teachers felt.
CHAPTER V
THE CASE COORDINATOR

Suggestions for I.E.P. Objectives

Preparation

Choosing courses.
Choosing teachers.
Meeting the instructional team.
Amplification.
Favorable seating in class.
Notetaking.
Oral interpreting.
Check list.

Supervising Next Year

Long Range Follow Up

Teacher information form.
Check list.
CHAPTER V
THE CASE COORDINATOR

You have been asked to be the case coordinator for the hearing-impaired student who is about to enroll in your high school. In this position, you will be responsible for overseeing and coordinating the preparations for the integration of this student into your school and, later, for following up on the student as he or she goes through your program. If you have read the first part of this manual, you will understand that this student is currently enrolled in a program that prepares students to be mainstreamed into regular high school programs; that mainstreaming presents the student and the regular school with a significant challenge; and that a closely supervised support system will be needed.

Suggestions for I.E.P. Objectives

One person, a case coordinator, will be assigned to supervise and be responsible for _______'s program.

1. The case coordinator will be available to the student daily, if needed, to assist the student with questions and/or problems.

2. The case coordinator will routinely make contact with the student twice a week to monitor the student's progress and to contribute needed assistance.

3. The case coordinator will contact the tutor once every two weeks to receive a report on the student's progress in each course and to contribute any needed assistance.
4. The case coordinator will be available to assist teachers or to answer their questions as needed.

5. The case coordinator will contact the parents every two weeks with information gathered from the tutor, teachers, and the student regarding the student's academic and social status at the school.

6. In the event a problem arises with the student and/or teachers, the case coordinator will be responsible for seeing that the problem is resolved to the satisfaction of the parties involved.

C.F.G.

**Preparation**

As the case coordinator, you are going to be the person primarily responsible for this student's case. We suggest that you first be sure that all people working with the student know that you are the case coordinator. Then, you should have routine contact with them at least once a week in the beginning of the year to be sure that you receive a continuous flow of information from them about the student and his or her program. You will find that this student will require an unusual amount of time and consideration in the beginning, but as the student becomes adjusted to your school, the time requirement will lessen.

A tutor who is well versed in secondary school subjects is probably going to be needed. It is not essential that this person be a trained teacher of the deaf, although this is often helpful. It is important that this person be personally interested in the deaf student and be willing to
do more than what is minimally required to assist him or her. The tutor should arrange a weekly appointment with each teacher to review and preview the work the class will be doing, and not wait for the teachers to send material the hearing-impaired student needs help with. Tutorial sessions should lean in the direction of preparing the student for what will be coming up in class, rather than reviewing what has already happened. This approach will make it easier for the student to lipread the teachers in class. In addition, the tutor will also need to serve as the student's advocate and confidant, helping him or her explain to others the kind of help that is needed, while on the other hand explaining the actions and feelings of others to the student. Misunderstandings and misinterpretations are common problems.

The teaching staff of your school should be informed early that this student will soon be enrolling in your school; that a specific person will be in charge of his or her case; that the student is able to talk and read lips; that supportive help is going to be available; and that the student will be assigned only to those teachers who are willing to have him or her in class. The teachers should then be polled to determine which ones would be willing to work with the student. We have found in large schools in New England that about 25% of the teaching staff will sign up. Once the teachers have identified themselves, the student's program should be hand scheduled using the teachers on this list.

Those teachers who have finally been chosen to teach the student should be notified early that they will have the student, preferably during
the previous spring so that they can consider any modifications in their courses. They should also be required to take part in an orientation meeting prior to the beginning of school the following fall. Placing a hearing-impaired student in a regular class imposes constraints on the functioning of the class that are equivalent to the addition of several other hearing students. It changes the way the class works as a unit, and it is a significant challenge to the teacher. Under no circumstances should school begin without such an orientation for the teachers.

We recommend that selected members of the student body should be invited to plan and assist with the social integration of this student into your school. In addition, we suggest that the general student body of the school be informed of the student's imminent entry into the school, and information regarding his or her handicap be made available to the students so that they know that the hearing impaired student can function in spite of the disability. This should not be a difficult thing to accomplish.

Once the year begins, those students enrolled in the hearing-impaired student's classes should be informed of his or her presence by teachers who have already had the proper orientation mentioned above. It is important that this explanation to the students be given in an unemotional and matter-of-fact way. If the goal of mainstreaming i.e., participation, is going to be achieved, everyone in the class will have to know that even though the student is hearing-impaired, he or she has the ability and the motivation to do the work.
Choosing courses. Most hearing-impaired students in regular schools enroll in four major subjects (science, social studies, English, and math) and select one or two electives. We suggest that all of these courses be chosen with an eye on the typical work load per course, the student's academic history, and the quality of the teachers who are available to teach the courses. A few schools even prefer to have the student take one fewer major course the first year as a safeguard against trouble and failure. Information about the requirements of each course should be given to the student as early as possible. Reading lists, for example, should be given during the preceding spring so that the student can have the opportunity to get some of the reading out of the way during the summer vacation when there is time to spend.

Choosing teachers. Even though many teachers might express an interest in working with the hearing-impaired student, we suggest that care be taken in making the final choices. Teachers who can be lipread must be among the first chosen, along with those who use either a traditional lecture approach to class or have the students engage in cooperative, small group learning. The teachers should be aware that they will be expected to take part in an orientation workshop and in occasional meetings during the course of the year concerning this student.

Meeting the instructional team. Once the courses and teachers have been chosen for the student's first term in your school, we suggest that you invite the parents and the student to an informal get together with the
instructional team. A student and family that is nervous about the change of schools will be relieved if they can meet each person with whom they will be working. Often this will also calm nervous teachers. It would be wise at this meeting for the teachers to give the student any information they can about their course. Textbooks, course guides, outlines, or handouts will help the student and his family get a better idea of the scope of the course and the difficulty of the challenge they face. Also, having the opportunity to meet each teacher separately affords both the student and the teacher the chance to get started in learning to communicate with each other. Those schools that have held such meetings have felt that they gave a positive boost to the entire mainstreaming effort.

**Amplification.** There are some hearing-impaired students who have a significant amount of residual hearing, and need amplification to benefit from it. You will be notified if the student you will be enrolling is one of these people. In the event the student does need amplification, a wireless FM hearing aid system will be recommended. Information concerning that equipment can be found in this manual under the section for teachers. We suggest that the request for this equipment be submitted early so that it will be sure to be included in the budget for next year.

**Favorable seating in class.** We always recommend that the hearing-impaired student be permitted to sit in a part of the classroom that will make it easier for him or her to lipread. The student has been trained in locating this place so there will not be any specific need to assign a seat. It is
important that you and the staff know, however, that the best position for a hearing-impaired person to sit in is in the front half of the room on the side nearest the windows.

**Notetaking.** It is virtually impossible for a hearing-impaired person to take notes and lipread at the same time. If the teacher requires notes to be taken in class, a hearing classmate or two should be requested to assist. Pressure sensitive paper is available from most stationery stores for this purpose. The use of this paper produces a carbon copy automatically. A sample of this paper and the address of a supplier are included.

**Oral interpreting.** Probably the most frustrating lipreading situation for a hearing-impaired person to manage in the regular classroom is a group discussion. The conversation swings back and forth from the teacher to students so rapidly that there must be a lot of headturning. It also requires an instant adjustment to the way in which each speaker moves his lips and expresses himself. Hearing-impaired people are advised to sit toward the front corner of the room so they can turn part way in their chairs and thus be in a position to look back and forth quickly, but a few moments' observation during one of these discussions makes it evident that this is not a sufficient answer. All of the students in the class sit on the same level so that it is difficult for the hearing-impaired student to see over the heads of those nearby to find and then lipread the speaker. This requires some bobbing and weaving to get a clear view. Once the speaker has been found, it is still difficult to lipread because high school students often
talk with their hands in front of their mouths, with their heads down and/or give short answers. By the time the hearing-impaired person has located the speaker, the remark has usually already been made.

Hearing-impaired students find this frustrating and most will not persevere with it. Some will daydream or open a book and read, and this will be misinterpreted by the teacher as a lack of interest or as rudeness. There are ways in which to attempt to control this situation for the benefit of the hearing-impaired student, but there is nothing the student can do on his own that will enable him to follow the conversation completely. The best solution devised so far has been to use an interpreter. Arrangements for such assistance should be made before the student enters the school. A more complete treatment of oral interpreting may be found in the section for the tutor.

Check list. Here is a check list of the case coordinator's preparatory tasks.
<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
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<tbody>
<tr>
<td>1. Visit the sending school (case coordinator, teachers, and students).</td>
<td></td>
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<tr>
<td>2. Make plan for the social integration of the student.</td>
<td></td>
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<tr>
<td>3. Notify full staff that the student will enroll next year.</td>
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<tr>
<td>4. Notify student body that the student will enroll next year.</td>
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<tr>
<td>5. Invite hearing-impaired student to come for an extended visit at least twice during the year.</td>
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<tr>
<td>6. Invite parents of hearing-impaired student to come for a visit.</td>
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<tr>
<td>7. Team Meeting for formulating the student's I.E.P.</td>
<td></td>
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<tr>
<td>8. Teachers should be polled to see who is interested in having the student in class.</td>
<td></td>
</tr>
<tr>
<td>9. Choose courses.</td>
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<tr>
<td>10. Choose specific teachers.</td>
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<tr>
<td>11. Acquire tutor (Student should have final approval).</td>
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</tr>
<tr>
<td>12. Acquire speech pathologist. (Student should have final approval.)</td>
<td></td>
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<tr>
<td>13. Distribute copies of the student's academic records to each teacher.</td>
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<tr>
<td>14. Arrange for an orientation session for the instructional staff.</td>
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<tr>
<td>15. Host a get-acquainted meeting for student and parents with the instructional staff. (Copies of course materials should be given out at this meeting.)</td>
<td></td>
</tr>
<tr>
<td>17. Requisition FM wireless amplification equipment.</td>
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</table>
Supervising Next Year

Following up on the hearing-impaired student once he or she has entered your program is simply a matter of checking frequently with the various members of the instructional team, and with the student, to see that everything is working smoothly. Whenever a problem is discovered, we suggest that you assume responsibility for seeing to it that a satisfactory solution is reached as quickly as possible. This often requires that you call together various members of the instructional team, the student, and perhaps the parents to discuss the problem, its causes, and to agree on a plan for resolving it. It is important that the student be included in all of these meetings to answer for his/her own actions, and to learn how to oversee his/her own case more independently in the future.

One of the most common difficulties regular schools experience in this area is that the professionals will meet to discuss the situation without the student being present. Alone, they will decide what the problem is, the cause for it, and the needed solution. This is then imposed on the student. Even in cases where the student is invited to a meeting with the teachers, the teachers will often discuss the matter while ignoring the student. Neither of these approaches is fair to the student, nor does either help the student learn how to handle his/her own case in the future.

The student should check in with you according to a regularly scheduled time to be sure that he or she is meeting all responsibilities. This meeting is also a good way to make the student aware of a problem whenever
one occurs. The situation should never be allowed to drift on its own without your careful attention. When difficulty occurs, it should not go unresolved, and no sports schedule or bus schedule should be permitted to prevent such a resolution.

Our advice to you to watch over the student so closely during the first year in your school might raise the question in your mind about this student learning to be responsible for his or her own education. There is no doubt that this should be the eventual goal; however, the student must grow into the exercise of this responsibility gradually.

Much is made in this manual of the need for you to set up written and routine schedules for checking with the student and instructors. We do this because experience has shown that unless such an arrangement is made, the case coordinator will rarely ever hear from the teachers about the student's performance and the entire situation will drift into a state that is so confused and ambiguous that it is almost beyond resolution. The fact of the matter is that most people in schools are very busy with their work, and find it difficult to remember the hearing-impaired student until a serious problem erupts. We have seen on more than one occasion that regular and frequent meetings between the case coordinator and teachers lead to problems being exposed while they are still small, thus allowing them to be solved without everyone getting emotional. When problems are allowed to drift until they become serious, emotions can run high and it becomes very difficult to clear the air. Such situations lead to the development among school personnel of unfortunate attitudes toward hearing-impaired students.
and these attitudes grow and mature. This makes the student's future in the school more difficult to control. We encourage you to keep on top of the student's situation, particularly during the first year. In the long run, the time you spend now will pay real dividends.

If a tutor is working with this student, you should keep in regular touch with that person to find out how the program is going. If a tutor has not been supplied for this student, the case coordinator will be responsible for checking with the teachers. A section offering suggestions on how to go about this can be found under the section in this manual for the tutor.

Long Range Follow Up

Schools commonly spend a large amount of time making preparations for a special needs student to enter. Experience has shown, however, that once the student has enrolled the amount of attention given to the case decreases markedly. Where this happens, the student soon runs into trouble. We want to emphasize that preparation is not enough. There must be an ongoing system of supervision and support. Granted, the longer the student is in your school, the more he or she becomes familiar with the way it functions. But this is no guarantee that your teaching staff will become increasingly familiar with the way the student learns. Everytime the student gets a new teacher, there will need to be another orientation session to help that teacher understand the student's handicap and the ways to help him or her learn. We are continually surprised how little information about a special needs student is routinely accumulated by a school and then passed on to the
student's new teachers the following year. This means that every year the school has to re-discover the wheel!

We are including on the next page a form which you might send to each teacher once or twice during a course to gather important information that could be helpful to future teachers. You are welcome to use it.

One last word, just because you send out this form, don't think that an inservice orientation won't be needed. The form does not go nearly far enough to help a teacher truly understand hearing impairment, or give the needed encouragement to persist with the student. The best kind of inservice program is a meeting between previous teachers and new teachers. The Clarke School Mainstream Service can assist you in getting one of these meetings organized.

Teacher Information. The purpose of this form is to gather information regarding the hearing impaired student in your course. Your comments will be passed on to future teachers for their reference. We believe that sharing this information with other teachers in this school will save them much valuable time in getting to know and learning to work with this student.
Teacher Information Questionnaire

Thank you for the time and consideration you are able to give to the following questions. Please return your completed questionnaire to me at your earliest convenience.

Today's Date: __________________________ Teacher's Name: __________________________
Course Title: __________________________ (Semester/Full Year) Course

Communication:

1. a. How well did you understand this student's speech during your initial contacts with him?
   b. How well was this student able to understand you initially?

2. What suggestions can you give future teachers to make initial oral conversations with this student easier?

3. How do you think this student and his hearing impairment should be presented to a new class of students? (Be as specific as possible with your recommendations.)

4. What suggestions can you make to the new teacher about getting this student to participate orally in class work?

5. Class discussions are often difficult for a hearing-impaired student to follow simply because they go so quickly. Were you and this student able to work out ways for him to follow the discussions in your class? (Please describe the methods you think will be helpful to future teachers.)
Subject Related Information:

1. Please list specific strengths this student demonstrated in your course.

2. What specific weaknesses did he demonstrate in your course?

3. In what ways did you attempt to help this student make progress in the various problem areas mentioned in #2? How much progress did he make in each area?

4. What visual aids were helpful in teaching him?

5. What suggestions can you give future teachers for ways to make use of the tutor this student has?

Note: This form was co-authored by David Manning and Carol Gabranski.
Case Coordinator's Check List

1. Arrange to have student come in to office at least twice a week ______
2. Arrange to meet with tutor at least once a week ______
3. Arrange to meet with each teacher at least once every two weeks ______
4. Arrange to contact the parents once a month ______
5. Arrange to have educational consultant visit your program during the first month of school to meet with each member of the instructional team ______
6. Arrange to telephone educational consultant once a month to report on the student's progress ______
CHAPTER VI

THE CLASSROOM TEACHER

Hearing

Speech

Lipreading

Group discussions.

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Informing the Hearing Students

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CHAPTER VI
THE CLASSROOM TEACHER

You have been asked to accept a hearing-impaired student in one of your classes next year. This self-instructional guide is meant to help you develop a basic understanding of hearing impairment and its effects on the young adolescent; the challenges facing the student in a regular classroom; and some of the modifications you might consider making in your course so that you and the student can work together successfully.

You are encouraged to read the first three sections of this manual at this time if you have not already done so.

There are basically three reasons this student has entered your high school rather than a special high school for the deaf: 1) the parents have set this as a goal for their child; 2) the student has been enrolled for the past 10 or 12 years in a school that has prepared him or her for regular school; and 3) this placement is consistent with the mandates of Chapter 766 and Public Law 94-142. You have already learned by reading the first part of this manual that thousands of Clarke School students have completed their high school education in regular classrooms with hearing students, and we are confident that the student you will be working with will be able to accomplish the same thing.

Although we have said that this student has reached a level of development where a regular high school is a realistic alternative, we must keep in mind that the student is still hearing-impaired and thus will find mainstreaming a challenge. The following pages will give you more specific
information concerning the things you might expect in your work with this student.

**Hearing**

This student wears a small, personal hearing aid. This aid provides him or her with limited information about his or her own speech and any noises in the immediate environment. Wearing this aid, however, does not mean that the student can understand you through hearing alone. Auditory activities, such as listening to a recording or a tape, will be difficult, if not impossible. Consult the student's hearing test results (audiogram) in the file for more specific information. If you have been notified that this student will be using a wireless FM hearing aid in your classroom, there is detailed information about this equipment at the end of this section.

**Speech**

This student talks and lipreads. Sign language should not be used. You will find the student's speech fairly understandable, although there may be a word here and there that you won't get. This is normal and will improve as you get to know the student better. Be sure to indicate when you have not understood something the student has said. He or she is used to repeating. To aid you in becoming accustomed to the student's speech, we suggest that you meet with the student privately several times just to talk. A few short meetings of this sort will usually bring about a significant improvement in communication.
Lipreading

Contrary to popular belief, successful lipreading does not require the deaf person to understand every single word that has been said by the speaker. Redundancies, or repetitions, in the English language make it possible for the student to fill in some of the missing information. The thing this student will have to adjust to is the particular way each teacher talks. This should only take a short time, and you can help the process in your class by checking periodically to be sure the student is understanding you. We suggest that you talk naturally, but do move your mouth.

In class, it will be important for the student to be able to see the blackboard and the face of the person who is speaking. The light should be good and the student should not sit farther than about 15 feet from the person who is talking. The best place for the student to sit is so his or her back is to the windows. This allows the light to fall on the face of the speaker. You may find it possible to arrange your class in a semi-circle so that it will be easier for the student to see the faces of the other members of the group. Do not do this unless the class is small and the nature of the work you are doing lends itself to this kind of physical arrangement, however.

It will be difficult for the hearing-impaired student to take notes in your class at the same time he or she tries to lipread you, so it would be helpful if a copy of another student's notes could be provided, and/or a copy of your lecture notes. Special pressure sensitive paper should be available for this purpose from the case coordinator.
Group Discussions: It is difficult for a hearing-impaired student to keep up with a class or group discussion. The natural tendency of teachers is to assume that the reason for this is that the student is a poor lipreader, and they often recommend that the student receive specific lipreading exercises to overcome this problem. In most cases, however, our experience has shown that the true problem is that the student has had no orientation to the particular topic being discussed, or is unable to keep up with the rapid pace of the discussion as it moves around the classroom from one person to the next. It is important for you to watch for such occasions in your class and to try to get them resolved as soon as they have been noted. The best way to approach this is to talk the situation over with the hearing-impaired student privately. If it appears that the trouble stems from the student's lack of background information about the discussion topic, it may be necessary to provide the student with additional information or some specific tutoring. The important thing is to keep checking with this student to see just how much he or she is actually getting from the class.

Other steps that might be taken to help alleviate this group discussion problem are:

1. Give the student a general outline the discussion will probably follow.

2. Suggest that he or she sit where there will be a clear view of all students.

3. Write the key points of the discussion on the blackboard.

4. Ask a nearby hearing student to outline the discussion on paper as
it proceeds.

5. Ask a hearing student or the student's tutor to sit opposite him/her in class and to repeat in a very soft whisper everything that is said. This is called oral interpreting and there is a complete discussion of it in the tutor's section of this manual. Please read that section before attempting to use this technique in class.

Written Examinations

This student should be able to write examinations in the same way as your other students. You will need to determine at the time the test is given, however, if the student actually understands the meaning of each of the questions. In other words, this is a reading problem that is associated with the hearing loss and should be addressed before the student is expected to write. One way to check comprehension is to go over the questions with the whole class to see if they understand them. If the hearing-impaired student has difficulty with any of them, you can re-word them or point out the kernel question form in them. (e.g., "This question is simply asking why.") Once the student understands the questions, he or she should be expected to complete them in the same way the other students do.

Tutorial Support

This student will probably have the assistance of a tutor to guide him or her in school work. You, however, are still considered responsible for
the student's learning. The tutor has been advised to get in touch with you on a regular and prearranged basis to coordinate the tutoring work with yours. In general, the tutor will probably attempt to prepare the student for upcoming class work, rather than spending a lot of time clarifying material that has already been covered. The goal will be to try to stay a little ahead of the work you are doing in class so that this student can be better oriented to the specific lecture/discussion material when he/she arrives in your room.

The English Language

The true educational problem this student and all hearing-impaired students face is understanding and using the English language. So far, this student has developed the basic skills to communicate, but he or she is still behind hearing peers in terms of the amount of vocabulary learned and the facility with which he or she understands and formulates sentences. This condition, in turn, affects the student's ability to reason critically and to summarize. Since each school subject has its own vocabulary and its own way of saying things, each teacher will have to consider himself or herself a basic skills teacher to some extent, seeing to it that this student can say, read, and write the information of the course in an understandable and appropriate manner. The tutor should be able to assist in this work.
Suggestions for the Classroom

1. Let the student choose a seat toward the front of the classroom which will allow him or her to have a good view of the blackboard, you and the other students. The best place is usually somewhere near the front of the room, near the windows. Generally, the student should not be farther than 10 or 15 feet from the speaker.

2. Face the student when you speak so that it will be possible to read your lips. Don't stand in front of the windows.

3. Speak in your natural manner.
   a. It often takes a couple of days for a hearing-impaired student to adjust to the speech patterns of a stranger.
   b. Men are sometimes harder to lipread than women. Often this can be overcome if the men talk a little more deliberately.
   c. It is not necessary for a hearing-impaired student to see every word on the lips of the speaker. No one lipreads every word. Lipreading is a combination of reading the speaker's lips, gestures, and facial expressions, along with other cues offered by the situation.

4. When a hearing-impaired person doesn't understand what you have said, it is often helpful if you just rephrase it. "Did you get the assignment?" "Do you know what you are supposed to do for homework tonight?"

5. It will be very helpful to this student to have printed information about your class (e.g., a course outline).
6. Your use of the blackboard or an overhead projector will make it easier for the student to understand you. Even a single word written on the board can make clear just what you are discussing.

7. In classes where notetaking is required, it will be helpful to this student to get a copy of another student's notes or a copy of your lecture notes. The simple reason for this is that the student cannot keep one eye on a notebook and the other on the speaker. Full attention must be devoted to lipreading the speaker.

8. Video tapes, audio tapes, slides, films, and filmstrips also present problems for a person trying to lipread because they require subdued light or depend too much on sound. A written script of the filmstrip is sometimes available or perhaps you could write a brief summary. Often, the school library will have a copy of a book which presents the same information as the film or tape you plan to show. Try to direct this student to these written materials the day before the film is shown.

9. The most important suggestion we can make to you is to talk with this student and get to know him. The more times you do this the more comfortable both of you will be because you will have the chance to adjust to each others speech. You will also learn things about each other that will be helpful in future communicating. And, the student will see that you are interested in him or her and that you want to help.

10. At first, you may have some difficulty understanding everything this
student says. This is normal. As you become more familiar with him or her, you will understand better. When you don't understand, speak up. The student is familiar with this problem and will not be embarrassed by it if you handle it in a sensitive manner.

11. This student has been taught to speak and read lips, not to use sign language. His parents do not want signing to be used in school, and we ask those of you who might know how to sign to refrain from using it.

12. You and the student should work out some system for getting homework assignments. Some teachers write the assignments on the blackboard each day, others give them out on a printed sheet. If you give them orally, the student should check with you after class to be sure that the assignment has been lipread correctly.

13. This student will need information about the daily announcements made over the public address system each day. This can be done in different ways: he or she could stop off at the office during the morning and just after school to read the announcements; the announcements could be posted on a bulletin board; or the student could ask a hearing member of the class for the information. Whatever way is used, we think the student should be held responsible for knowing what is going on in your school.

14. The reason this student is in your school is to participate in a normal educational situation. We emphasize the word participate because we do not believe it is enough for him or her to sit and watch the other students. We believe that this student is fully capable of
taking an active part in the life of your school and, with your help, it will be possible.

15. If you have any problems related to working with this student, we encourage you to take them up with him or her. If the problem persists, it is important that you speak to the case coordinator. Speaking up early about a small problem can save a lot of grief later on.

16. This student is excited about coming to your school and expects to meet all of the requirements for your course. You should expect him or her to complete all of the homework assigned to the class, although there may need to be some modifications from time to time in the way this is done. An example of this would be to let the student begin preparing a report several days ahead of the rest of the class because of the reading and writing problems associated with impaired hearing. The assignment date should be the same as the date for the other students. This student will appreciate your discussing any such modification possibilities with him or her beforehand. You will find the student very willing to help solve any academic difficulties which may arise.
Informing the Hearing Students

We believe that it is desirable for everyone in the school, particularly for those in the student's classes, to know that this student is hearing-impaired. This is because the student's behavior might otherwise be misinterpreted. Many teachers ask how this should be done. We always suggest that the matter first be talked over privately with the student to see what he or she would prefer, but we stress that the hearing loss should be made known.

Here is one way you can introduce the student to your class:

(The First Day)

"John Smith is a new student in the school and he is hearing impaired. He talks and lipreads so that it shouldn't be hard to communicate with him. Just be sure he's looking at you when you talk to him. If you don't understand something he says, just ask him to repeat."

(On Another Day)

"From time to time, it may be helpful for John to have an interpreter in class, particularly when we have a class discussion. This makes it easier for him to follow when a lot of different people are talking. The interpreter will just sit off to the side of the room and repeat everything that is being said without using her voice."
"Also, on the days when I ask you to take notes, John will need to get a copy of someone's notes. He can't lipread and look at his paper at the same time. I will be asking some of you for help with this. "Let's go on."

Notetaking

Hearing impaired students need to have lecture notes the same as other students if they are going to pass their courses. But the limitations imposed by the handicap make it necessary for the student to enlist the help of another student, or students, in your class to get this information. We encourage you to help with this situation by talking it over with the hearing-impaired student and, in some cases, assisting in finding someone in the class who would be willing to serve as a notetaker.

Information Needed: In essence, lecture notes should briefly and faithfully impart the content and the spirit of whatever transpires in the classroom. Facts are important, but so are the enriching details. The most common complaint voiced by hearing-impaired people who have notetakers is that important, enriching information is often not included in the notes. Naturally, it will take some time for an interested hearing student to develop into a good notetaker. The hearing-impaired person should keep letting the hearing student know of the suitability of his or her efforts.
Choosing the Notetaker: Experience has shown that a student who does above average work in a course usually takes the best notes. Since this is not true 100% of the time, the teacher is advised to check the student's notes from time to time to be sure they are of the desired quality.

Experience has also shown that it is rarely wise to choose the hearing-impaired student's best friend to do this notetaking work. The relationship between the hearing student and the hearing-impaired student in this particular situation should be friendly but businesslike so that the resulting product will satisfy the academic needs of the hearing-impaired student.

We have also found it wise not to ask any one student to shoulder complete responsibility in your class for the notetaking job. Although something like this can be a novelty in the beginning, it can also quickly become a chore, and the student who is doing the work should always have the option of getting away from it when it loses its meaning.
We mentioned earlier that class discussions are difficult for a deaf student to follow no matter what physical arrangements have been made to improve the student's line of vision. Oral interpreting is the simplest and best way for the student to follow group interchange. As we have suggested before, talk over the need for an interpreter with the student privately to learn of his or her feelings about it. Some students prefer not to have an interpreter because it is very visible to the other students in the room.

In essence, oral interpreting involves having someone from outside the class sit across from the hearing-impaired student and tell him or her what is being said. As you and the other students talk, the interpreter simply repeats what you are saying, but does so without using voice. This means that the hearing-impaired student does not have to bob and weave in his or her chair to see who is talking, and does not have to adjust and readjust to the lip movements of different speakers.

The best person to interpret is someone who has been specifically trained to do this kind of work, but such a person is not always available. In some schools the student's academic tutor has performed this extra service, and with good results. In some ways, the tutor is the best person for the job because he or she has the best knowledge of the hearing-impaired student's language and of the learning difficulties that could interfere with understanding. In still other schools, a hearing student has filled this role, but we think this is something to be approached with caution because the interpreting can quickly degenerate into a gab session if both
parties are not disciplined.

For a more complete treatment of the topic of oral interpreting, see the information in the tutor's section of this manual.
Classroom Amplification

Audiological testing may have indicated that the hearing impaired student you will have in your school has a significant amount of residual hearing which can be an important aid to the student in understanding what is going on in a regular classroom. If this is the case, this student will probably use an FM wireless hearing aid system in your class. The following pages explain the system and answer some of the more common questions asked by teachers.

FM wireless hearing aid. Although several types of FM wireless hearing aid equipment are available, the PHONIC EAR® is the particular system we will discuss in this section.

Description of the system. The basic Phonic Ear system consists of four parts:

1. The teacher's microphone (battery powered)
2. The student's radio receiver (battery powered)
3. Two rechargeable 9-volt batteries
   (The type used in transistor radios)
4. Two battery chargers
(A lapel microphone is also available, but this is not used by all students.)

How the system works. The teacher wears the small, lightweight Phonic Ear microphone (A) during class. The teacher's voice is picked up by the
microphone and is beamed to the student's special radio receiver (B). This special receiver then passes the sound on to the student's small personal hearing aid(s) worn behind his ear(s) (C). In this way, the teacher's voice travels directly to the student's ear(s) and is made much louder than would otherwise be possible. This makes a significant difference in the student's ability to understand what is being discussed in class.

It is important to remember when using this equipment, however, that even though the teacher's voice is made louder, it is not necessarily made clearer because this student's ears are still defective and are still unable to receive sounds as clearly as a hearing person's. Consequently, it is still very necessary for this student to lipread throughout every class. It is through the combined use of lipreading and the strong signal from the Phonic Ear that this student will best understand.

Advantages of the phonic ear system.

1. The teacher's voice is made much louder for the student's imperfect ears.

2. The teacher's voice is no longer made difficult to receive by:
   a. other noises in the classroom
   b. its echoing off of walls and uncarpeted floors.

3. The hearing impaired student can follow the class lesson with greater ease.

4. The system is small enough to be worn comfortably and inconspicuously by both teacher and student.

5. Since the teacher is responsible for many students during each class
period, the Phonic Ear microphone can serve as a reminder to the teacher that the hearing impaired student is present in that particular class.

6. The hearing-impaired student can be responsible for daily operation of this system because it is very simple.

7. Malfunctioning equipment can be sent to an east coast repair center and be on its way back to you within 24 hours of the time it is received.

8. In addition to classroom use, the equipment can be worn in group meetings and assemblies, making it possible for the hearing impaired student to get more information in these situations.

Suggestions for classroom teachers.

1. On the first day that the Phonic Ear is used in your class, very briefly explain the purpose of this equipment to the whole class. In this way, the hearing-impaired student won't have to deal with embarrassing questions from classmates. You could say something to this effect: "You will notice that I am wearing a microphone. It works like a small radio station in that it broadcasts directly to the student so that my voice is louder for him. He still has to lipread, however. Let's go on with class."

2. This student will bring the microphone to you everyday before class starts. Be sure to receive it with a positive facial expression or positive comment.

3. Some teachers have been confused about knowing when the teacher's
microphone is on and off. Two small symbols appear next to the microphone switch on the teacher's unit:

```
<p>| | |</p>
<table>
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</table>
| "On" | "Off"
```

4. If the system you use has the optional lapel microphone included with it, you and the student will have to determine together whether it enables him to understand better. In the event you decide to use it, it plugs into the small outlet on the side of the regular microphone unit.

5. If the battery in either the teacher's unit or the student's unit should die during class, please allow him to leave the room to replace it.

6. When you use a film, videotape, filmstrip with record, or tape recording in class, the deaf student may be able to get some of the audio information via your Phonic Ear microphone. You and the student can experiment on a trial and error basis by placing the teacher's microphone near the speaker of the tape recorder or projector. The success of this will depend on the student's hearing level and the quality of the sound track.

7. When you have a private discussion out in the hall, be sure to turn off the microphone so the student can't hear what's going on.

8. When your class has finished you can switch the microphone off. The student will pick it up to take to the next teacher.
Suggestions for student and advisor.

1. Daily Use
   a. The hearing-impaired student should be responsible for the Phonic Ear equipment on a daily basis.
   b. He should pick up the equipment every morning and take it to each teacher as the day progresses.
   c. He should give the microphone to each teacher in a pleasant, appreciative way.
   d. If the system has the optional lapel microphone, the student and the teachers can decide together if it is better than the regular microphone in the teacher's unit.
   e. The student must balance the volume setting on the receiver with the volume setting on his personal hearing aid. He understands about this and should be able to do it without help.
   f. If one of the batteries dies in class, the student should inform the teacher so that he can go replace it. Ordinary 9-volt transistor radio batteries can be used for this purpose.
   g. If a film, filmstrip with a record, videotape or tape recording is used in class, the student should ask the teacher if the microphone could be placed near the loudspeaker to pick up the narrative. This will often enable the student to understand part of what is being said. Once in a while, however, the quality of the sound track will prevent this from working.
   h. The Phonic Ear equipment should be stored in a specified place
every afternoon after school.
i. The batteries should be recharged in that same place.

2. Malfunctions

a. If the Phonic Ear isn't working properly, the student should inform his advisor. The advisor should then ascertain if the batteries are charged or dead. If the batteries are charged, the Phonic Ear Repair Center should be called.

b. A repair technician will guide the caller through a step-by-step evaluation of the equipment over the phone. If it is determined that any of the equipment should be sent to the repair center.

Common questions.

Q: "Will I have to change the way I teach when I wear the Phonic Ear?"
A: No, you won't. This equipment should not affect your teaching in any way. It only makes it possible for the hearing impaired student to receive your voice more powerfully.

Q: "Will the Phonic Ear change my voice for the other students?"
A: No. The teacher's microphone won't change your voice for the hearing students in class. It won't make your voice sound louder, softer, or distorted in any way to them.

Q: Does the teacher's microphone ever squeal like P.A. systems often do?
A: No. This system is set up so that squealing ("feedback") will not occur.

Q: "Can my voice be picked up on an FM radio in a room nearby?"
A: No. No other receiver or FM radio can pick up the teacher's voice because this system is on a specific channel which can only be received by the student's special Phonic Ear radio receiver.

Q: Will this equipment ever give me an electrical shock?

A: No. There is no danger of shock with this equipment.

Q: "How far away will the Phonic Ear work?"

A: Your voice can be beamed to the student's radio receiver up to a distance of about 100 feet.

Q: "Will wearing this equipment mean that this student understands everything I say?"

A: Well, this really depends on the amount of residual hearing the student has. In most cases, the student will be able to understand some of what you say, but it will still be necessary for him to lipread you to get the complete message.

Q: "Why is it so important for this student to be able to conceal the equipment?"

A: Many hearing-impaired students want to conceal this equipment because they don't want to appear "different" or "handicapped" to their classmates.
Check List

Here is a list of the preparatory activities you might consider doing.

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
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<tbody>
<tr>
<td>1. Take part in an orientation meeting with the other teachers.</td>
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<tr>
<td>2. Read the student's file, taking particular note of the samples of uncorrected work. These will give you an idea of the level of work you might reasonably expect from the student at the beginning of the year.</td>
<td></td>
</tr>
<tr>
<td>3. Find out who the case coordinator is and go in for a talk.</td>
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<tr>
<td>Decide when and where you will meet for your routine weekly meeting.</td>
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<tr>
<td>4. Deliver a set of textbooks and handouts concerning your course to the student and the tutor.</td>
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</tr>
<tr>
<td>5. Read this manual so that you will understand how each part of the support system works.</td>
<td></td>
</tr>
<tr>
<td>6. Visit Clarke School if there is an opportunity.</td>
<td></td>
</tr>
<tr>
<td>7. Attend the informal gathering for the parents and student in the spring.</td>
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<tr>
<td>8. Attempt to communicate with the student as often as possible when the student visits your school this year.</td>
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<tr>
<td>9. Prepare the statement you are going to make to the other students in your class explaining that there is a hearing impaired student in the class.</td>
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</tbody>
</table>
10. Be thinking of people to be notetakers.

11. Be thinking of visual aids you could acquire to enhance your lessons for next year.

12. If the student is going to have a tutor, make contact with him or her.
Teacher's Guide for Weekly Meeting With the Tutor

1. Report on the student's general performance over the past week. Attendance; attitude work; class participation; socialization; and homework.

2. Specific information on any problems the student had.

3. Explain what you are planning to cover during the next week. Point out relevant sections in the text and explain which things you are particularly interested in the student learning.

4. Give some thought to the work you will be doing in the next weeks and months. If there will be a long term assignment, or you expect to begin a novel, give the tutor the information so that work can begin with the deaf student soon.
Check List

Here are some check lists you might find helpful to use at various intervals after you have begun working with the hearing-impaired student.

1. Use this list after the first few days of school to see if you are consistently using modifications that will be helpful to the student.
   a. Have you informed the other members of the class that one of their classmates is hearing-impaired?
   b. Have you met with the student privately to explain your expectations for your course, and to show the student that you are interested in helping him or her?
   c. Have you been using a variety of visual aids in your class?
   d. Have you been writing assignments on the blackboard everyday?
   e. Have you been looking at the class as you talk?
   f. Have you spoken to the student's case coordinator about anything connected with this case that worries or puzzles you?

2. This list can be used after the first couple of weeks of school.
   a. Have you and the student reached an agreement - after discussing it - about the way you will handle classroom recitations?
   b. Have you arranged a way for the student to follow class discussions?
   c. Do you usually try to talk to the student either before or after the class?
   d. Have you talked with or written the parents about the student's performance in your class?
e. Have you spoken to the student's case coordinator about anything connected with this case that worries or puzzles you?

3. After the first month, you might consider these questions:
   a. Have you been asking the student questions in class?
   b. Have you spoken privately with the student about his/her weaknesses? Do you know the cause of these problems?
   c. Have you gone over tests with the class as a whole before administering them; or have you gone over the questions privately with the hearing-impaired student to be sure he/she understands what each one means?
   d. Have you been meeting regularly with this student's case coordinator? Have you spoken up about anything that bothers you about this case?
CHAPTER VII

THE TUTOR

Suggestions for I.E.P. Objectives

The Tutor's Training

Contact with the Teachers

The Tutor's Job

Check List

Getting Started

Oral Interpreting

Points for consideration.

Homophenous words.

Facial/Body expression.

Natural gestures.

Tutor's Guide for Weekly Meeting with Teachers
CHAPTER VII
THE TUTOR

The tutor assists in academic courses where the teacher's efforts need to be supplemented. This means that the teacher is in charge of the student's learning in a given course.

Suggestions for I.E.P. Objectives*

1. The student will receive individual tutoring to support academic coursework ___ times per week, each session lasting ___ minutes.
2. The tutor will meet with each of the student's academic teachers weekly for ten to twenty minutes to share information regarding:
   a. the student's performance in the course during the past week.
   b. coursework anticipated, preparations necessary for next week.
   c. the student's learning style and resulting implications for teaching.
   d. how to improve teacher/tutor coordination.
3. The tutor will relay information about the student's progress and/or problems directly to the parents or through the case coordinator to the parents every two weeks.

The hearing-impaired student you will be tutoring is enrolling in your school because he or she has demonstrated sufficient academic ability and communicative skill to be able to mainstream successfully. In addition, the student and the parents want the student to complete the high school years.

*These objectives were written by Carol Gabranski.
with hearing peers. If you have not read the first three sections of this manual, we suggest that you do this now.

The Tutor's Training

You have read in the earlier sections of this manual that this student has been prepared to enter a regular high school program. This means that the student has the basic academic foundation to do the work, but tutorial assistance from someone knowledgeable in secondary school subjects will still be needed. If you are not a trained teacher of the deaf, do not be overly concerned. Experience with many hearing-impaired students in regular schools has shown that they are in far greater need of assistance from someone who knows how to do the academic work than they are for someone trained to work with small deaf children. If, on the other hand, you are a trained teacher of the deaf, you will still need to keep the coordinator informed on a weekly basis concerning your work with this student, particularly in the event a problem develops.

Contact With Teachers

One of the most important elements of your job will be to keep in close contact with this student's teachers. Experience has shown us that this will not happen by itself, nor will it be initiated by the teachers. You must make it happen. The best system we have found is for the tutor to have a routine, scheduled appointment with each teacher once a week for about 15 minutes. The meetings should be businesslike and should focus on all aspects of the student's participation in the class. It is through these
meetings that you will learn about the student's performance in class, ways in which you can help, and the teacher's goals and objectives. All of this information will be needed if you are going to perform your job successfully.

The Tutor's Job

It is our philosophy that the student you will be assisting should be helped to learn how to function as independently as possible. Everything we suggest in this manual will be focused toward this end. We must realize, however, that it will take time and experience for the student to develop this independence in every area. This is one of the reasons we have suggested that a tutor be added to the instructional team.

Prior to leaving Clarke School, we had many discussions with this student about his or her goals for the future. The same thing was done with the parents. Implicit in these goals and objectives is an indication of the amount of effort and work the student is willing to put forth once he or she arrives at your school. The parents have also been giving thought to the standards they will try to enforce. We believe this is as it should be because, ultimately, the matter is their responsibility.

We have found in those situations where a tutor has been used that the tutor has been able to provide one or more of the following types of assistance:

To the student

1. information missed in class.
2. someone to confide in.
3. frequent encouragement and guidance regarding academic and social matters.
4. academic assistance through instruction.
5. guidance in reviewing and studying for exams.

To the teachers

1. information about the student's learning behavior.
2. encouragement in working with the hearing-impaired student.
3. information about areas in which the student is lacking in background information or skills.
4. instructional assistance through previewing and reviewing material. This includes work on new vocabulary, language, new concepts, or unusually complicated classroom discussions or lectures.
5. information regarding the student's emotional state and relations with others.

To the case coordinator

1. information regarding the student's progress in each subject.
2. information regarding the student's general frame of mind, and social relationships with others in the school.
3. information regarding particular learning difficulties, and such other information the case coordinator needs to help the student set up future course schedules or choose new teachers.

One of the early questions asked by tutors concerns the amount of
pressure they should apply in work sessions to see that the student does assignments promptly and well. We believe that this is an area which should be discussed with the students and the parents so that some agreement can be reached that is fair to you. From our point of view, you should not be expected to have to keep prodding the student to study. If the student is academically motivated, as most of our graduates area, it is up to him or her to do the assigned work without being pressured by you. On the other hand, if the student chooses not to do the work or to do it only superficially, that is also a choice he or she should be free to make. The parents should be kept informed on a routine basis about the student's work and motivation.

A more definitive statement of the tasks we believe tutors should perform might be helpful. We believe that it is the tutor's job:

1. To encourage the student at all times in work that will sometimes be difficult and frustrating.

2. To expect the student to do as much of the assigned work as possible without direct help from you.

3. To refer the student to the particular teacher whenever a problem develops. (In cases where teachers are unavailable for extra help or where the student's needs are simply too great, it may be your job to provide this assistance.)

4. To help the student only if he or she has already attempted to do at least part of the work independently.

5. To give assistance only to the extent that it is needed, letting the student proceed independently once the immediate problem has
been surmounted.

6. To keep the teacher(s) informed concerning specific learning problems.

7. To instruct the student in areas where the student is lacking in background information or skills. This includes previewing upcoming classroom lessons that will make use of much new vocabulary, language, new concepts, or unusually complicated classroom discussions or lectures.

8. To guide the student in reviewing and studying for exams.

To help clarify the tutor's responsibilities, we can suggest some things we think are beyond the province of the tutor. We believe that the tutor should not be expected:

1. To do homework assignments with the student unless the material involves many unfamiliar concepts or an unusual amount of new and unfamiliar language.

2. To leave the student to "sink or swim."

3. To go to the teacher to solve an instructional question when the student should be doing this him/herself.

4. To take over from the teacher the responsibility for teaching the student.

5. To see to it that the student continually does excellent work; always fulfills his or her responsibilities; or maintains a high level of motivation.

6. To be responsible for getting the student's homework assignments
from the teachers.

We realize that there will be many gray areas a tutor will encounter in working with the teachers and student, and that compromises will sometimes have to be made. However, we believe that the primary responsibility for learning must be shared by the student and the teacher. The tutor's job is to assist.
Check List

Here is a check list of the tutor's preparatory tasks.

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>1. Find out who the case coordinator is and go in for a talk.</td>
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</tr>
<tr>
<td>Decide when and where you will meet for your routine weekly meeting.</td>
<td></td>
</tr>
<tr>
<td>2. Find out where you are supposed to meet the student each day for your work sessions.</td>
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<tr>
<td>3. Get a copy of the student's schedule and the names of the teachers.</td>
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<tr>
<td>4. Go see the teachers for any orienting information you can get. Also pick up a copy of the textbook for each course.</td>
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<tr>
<td>5. Read through the student's file. It is particularly important that you read the samples of uncorrected language in the file so that you can see the quality of work the student can do independently. This information will be helpful to you in determining when the student has done his or her best.</td>
<td></td>
</tr>
<tr>
<td>6. Read this manual so that you will understand how each part of the support system works.</td>
<td></td>
</tr>
<tr>
<td>7. Visit Clarke School if there is an opportunity.</td>
<td></td>
</tr>
<tr>
<td>8. Make contact with the parents and see if you can get together with them to become better acquainted. Set up a time for routine reporting.</td>
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</tbody>
</table>
9. Try to meet the student as early as possible, even if only for a few minutes.
Getting Started

The first thing you must establish in your work with this student is a positive and businesslike relationship. Everything else depends on this. It is important to remember that the student comes from a program that he or she has known intimately for the past 10 or 12 years. This means that he or she will probably be nervous in the opening days of the school year, and will be looking for a familiar face. We suggest that you try to begin your work with the student as soon as possible, certainly a day or two before the school year begins. Start out by not talking about school. Get to know each other as people first. As soon as you have done this, you might begin talking about the physical layout of the school, its rules, and some of the activities that will be going on there. You might also go around the school with the student a day or two before classes begin to drop in on the teachers. This will give both the student and the teachers one more chance to start becoming accustomed to each other's speech.

Once the school year begins, you should check with the student to be sure he or she is understanding what is happening in the classes. Serious problems should be reported to the case coordinator immediately. Check to be sure that those classes in which the student is supposed to be helped by a notetaker are working satisfactorily. Is the notetaker getting the special paper? Does the student feel that the notes contain enough information?

In those classes where there is much group discussion, you may be asked
to do some oral interpreting. The following pages explain the interpreting process, but experience will probably be the best teacher. It is important when you are interpreting that you keep checking with the student to be sure he or she is getting enough information.
Oral Interpreting

(This information was written and compiled by Carol Gabrauski.)

Oral interpreting for hearing-impaired people refers to the act of "translating" or repeating what is being said by a speaker. An interpreter is used in situations where the hearing-impaired person either has difficulty keeping up with the pace of a discussion, finds the speaker to be difficult to lipread, or is too far away from the speaker to be able to see the speaker's lips clearly. Oral interpreting involves having a nearby hearing person mouth the words of the speaker clearly and silently. The presence of an oral interpreter in no way relieves the teacher of the responsibility for the hearing impaired student's education. The teacher should expect to direct information to the student during class and should expect the student to participate in classwork.

The interpreter needs specific knowledge and skill in adapting to and controlling the interpreting environment so that information may be transmitted faithfully in both spirit and content.

Points for Consideration

C.F.G.

I. Elements of Communication

A. Accurate lipreading depends upon contextual clues, so avoid speaking in single words.

B. Different words look the same on the lips. These words are called homophenous words. See Pages 362 and 363 for examples.
Don't memorize the lists; only be aware that these may be the cause of confusion.

C. See Page 364 for options regarding homophenous words.

D. Facial/body expression can aid in oral interpreting
   See Page 364 for examples

E. Natural gestures can aid in oral interpreting
   See Page 366 for examples

II. Convey The Complete Message: Content and Intent

A. If the speaker conveys information that the interpreter considers to be unimportant:
   1. that information should still be conveyed to the student
   2. the student can then decide if the information is important or not

B. If the speaker gets off the track:
   the interpreter can preface that information with, "This is off the track but..."

C. When a quick joke is made, everyone laughs, and the speaker returns immediately to the lecture topic:
   1. the interpreter should tell the student that he/she will explain the joke after class; then
   2. the interpreter should make a quick note of this; then
   3. the interpreter should say, "Now we're talking about ______ again..."

D. If there is enough time to explain the class's laughter:
1) the interpreter should explain the joke; then
2) the interpreter should reorient the student by saying, "Now we're talking about _______ again."

e. Try to convey the moods, feelings and attitudes of the speaker
See Page 365.

f. Try not to interject personal opinions or bias when oral interpreting

3. Potential problems

*Note: Before any of the following problems arise in class, the student and interpreter should decide how to handle such situations.

a. If the student can't lipread a word or phrase that the interpreter is saying:

1) see options regarding homophenous words on Page 364.
2) point to the word on any written materials in front of the student
3) write the word on a piece of paper
   a. show it to the student
   b. repeat the word for lipreading practice
   c. keep track of all difficult words for future tutorial practice

*Note: Options used must be tailored to the amount of time available.

b. If the student doesn't understand the meaning of a key concept:
1) refer back to notes in front of the student if this concept has already been covered

2) try to explain new concepts as briefly as possible with synonyms; then note them as needing reinforcement in tutorial sessions

3) in cases where there isn't enough time,
   a. tell the student, "I'll tell you about that later"; then
   b. note the need to do this
   c. tell the student to wait and listen carefully because the teacher might say more about that concept later in the class period

*Note: Again, options used must be tailored to the amount of time available.

c. If the student wants to participate, but another student has already answered the teacher's question by the time the question has been orally interpreted for the hearing-impaired student:
   1) the interpreter must try to boil down the question to its briefest form next time
   2) the interpreter should quickly write the question down for the student
   3) student must accept this time lag as part of the interpreting situation. The interpreter and student should discuss this fact.
d. Student and interpreter together must frequently evaluate the degree of success and satisfaction afforded by this oral interpreting service.

1) Is the student able to lipread the interpreter most of the time?
2) Is the interpreter going too fast? too slowly?
3) Is the interpreter giving enough detail? too much detail?
4) Is the interpreter overdoing the facial/body expression? underdoing it?

e. Student and interpreter must be sure that all vocabulary, conceptual and lipreading problems identified in the oral interpreting situation are carried to the tutoring sessions for remediation.

4. Reverse interpreting

If the student participates in class and the teacher is unable to understand the student's answer, the following options (discussed beforehand by the student, teacher, and interpreter) should be considered:

1) The teacher can ask the student to repeat the answer no more than two more times.
2) Another student in class may understand the student's speech; if so, the teacher gets the answer but must ask the hearing-impaired student to repeat the answer again so the teacher/class can get more accustomed to the student's speech.
3) The interpreter can repeat the student's answer. (See Number 2 above)

4) The teacher can say, "I don't understand your answer, would you like to write that on the board; once written, the student repeats the answer so the teacher/class can get more accustomed to the student's speech.

5) If the student doesn't want to write on the board, she/he can write the answer on paper, the interpreter or another student read it to the teacher. The student then repeats the answer so the teacher/class can get accustomed to the student's speech.

*Note: Options 1-5 should be as brief as possible to avoid disrupting the flow of the lesson as much as possible

Homophenous words - homophenes*

1. face-vase-phase
2. fast-vast
3. fail-veil
4. ferry-very
5. sheep-cheap-jeep
6. shop-chop-job
7. share-chair
8. sharp-charm
9. beech-peach
24. feet-feat-feed
25. feel-veal-field
26. rhyme-ripe
27. seat-seed-seen-scene
28. boat-moat-moan-mode
29. fine-vine-fight
30. fat-fad-fan-vat-van
31. fault-vault
32. bound-mound-pound
<table>
<thead>
<tr>
<th></th>
<th>Words</th>
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<th>Words</th>
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<tbody>
<tr>
<td>10</td>
<td>bill-pill-mill</td>
<td>33</td>
<td>died-tied-dine-tight-night</td>
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<td>11</td>
<td>boys-pose</td>
<td>34</td>
<td>piece-peace-bees</td>
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<tr>
<td>12</td>
<td>bail-pail-mail</td>
<td>35</td>
<td>batter-madder-matter-banner</td>
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<tr>
<td>13</td>
<td>bath-path</td>
<td>36</td>
<td>white-wide-whine-wine</td>
</tr>
<tr>
<td>14</td>
<td>bush-push</td>
<td>37</td>
<td>done-ton-nun-none-nut</td>
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<tr>
<td>15</td>
<td>baste-paste</td>
<td>38</td>
<td>mold-bold-mould-bowled-polled</td>
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<tr>
<td>16</td>
<td>bore-pore-more</td>
<td>39</td>
<td>time-dime-type</td>
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<td>17</td>
<td>choose-juice-shoes</td>
<td>40</td>
<td>fine-fight-find</td>
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<td>18</td>
<td>chip-ship-jib</td>
<td>41</td>
<td>leaf-leave</td>
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<td>19</td>
<td>chin-shin-gin</td>
<td>42</td>
<td>joint-join-joined</td>
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<td>20</td>
<td>much-bunch-punch</td>
<td>43</td>
<td>boast-most-post-posed</td>
</tr>
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<td>21</td>
<td>bump-jump</td>
<td>44</td>
<td>tame-name</td>
</tr>
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<td>22</td>
<td>baggage-package</td>
<td>45</td>
<td>belt-melt</td>
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<td>23</td>
<td>blade-plate-plane-played</td>
<td>46</td>
<td>chain-shade-jade</td>
</tr>
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<td>47</td>
<td>limb-limp-lip</td>
<td>52</td>
<td>bead-bean-beet-beat-meat-meet</td>
</tr>
<tr>
<td>48</td>
<td>lamb-lamp-lap-lab</td>
<td>53</td>
<td>bare-bear-mare-pair-pare-pear</td>
</tr>
<tr>
<td>49</td>
<td>dose-doze-nose-toes</td>
<td>54</td>
<td>straight-strayed-strained</td>
</tr>
<tr>
<td>50</td>
<td>June-chewed-shoot-jute</td>
<td>55</td>
<td>blaze-plays-place</td>
</tr>
<tr>
<td>51</td>
<td>metal-medal-meddle-peddle-petal-pedal</td>
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<td></td>
</tr>
</tbody>
</table>


Many times an homophenous word will not cause lipreading confusion because the context of the sentence in which it appears provides the clue to
its identity. For example, "My infant daughter likes to sit on my..."

lamb, lamp, lap, lab.

In cases where an homophenous word does cause lipreading confusion, the following options should be considered:

1. Clearer enunciation
2. Use of clarifying word
3. Use of clarifying action or gesture
4. Substitution of a synonymous word that is easier to lipread
5. Spell the word orally

Facial/body expression*. Gestures are often misunderstood when used in isolation. It is important to include the use of facial and body expression when conveying the intent of what is being said.

The various parts of the face and body which might be used are:

1. eyebrows - might be raised or lowered
2. cheeks
3. eyes
4. shoulders
5. trunk (might turn slightly, move forwards or backwards slightly)
6. arms and hands
7. head and neck

Some helpful techniques when interpreting are:

1. shift the body slightly to indicate speakers
2. shift the body slightly to indicate a series of activities
3. shift position off slightly to indicate choice or comparison
4. shift the body to indicate or direct attention to a demonstration activity (blackboard or other)

When oral interpreting for a student, the use of natural gestures is helpful in portraying the feelings, mood and intent of the speaker. It also assists in providing clarifying cues as to who may be speaking at the time, the introduction of a dialogue between two or more people, etc.

Gestures can be helpful when:

1. you are conveying a series of points - ex. first point or issue, second point, etc.

2. you are conveying or identifying a question from the audience - who is presenting the question (indicate area the question comes from)

3. you are identifying a speaker in a group meeting or panel discussion

4. you are conveying emphasis

5. you are conveying vocal intonation; what you do with your body and face gives intonation information to the deaf person

Consider how you could use your facial/body expression with a minimum of natural gestures to convey the following moods, feelings or attitudes:

1. anger
2. fatigue
3. disgust
4. indecision
5. support

16. enthusiasm
17. concern/empathy
18. snobbishness
19. prudishness
20. egotism
6. indifference
7. fear
8. puzzlement
9. curiosity
10. suspicion
11. caution
12. excitement
13. disappointment
14. shame
15. surprise
16. sarcasm
17. humility
18. shyness
19. confidence
20. happiness
21. sadness
22. seductiveness
23. shock
24. poutishness?
25. naivete


Natural gestures*.

1. Hello
2. Goodbye
3. Come here (Command)
4. Come here (Request)
5. Where?
6. There, or over there
7. Shame on you
8. Scolding
9. That
10. Yeah!!
11. Contemplation
12. Relief
13. Hot
14. Cold
15. So what!
16. Wanna fight?
17. Reject
18. In favor of
19. Conveying something private
20. Oops!
11. Me
12. You
13. Numbers
14. Please (Pleading)
15. Please (Requesting)
16. No, no, no
17. Come on (Positive)
18. Come on (Negative)
19. Phooey (Negative)
20. Forget it (Negative)
21. Time (What times is it?)
22. Just like that!
23. Shhh!
24. Wait a minute
25. Stop!
26. Hurry!
27. Oh no! (Open palm hit forehead)

Tutor's Guide for the Weekly Meeting with Teachers

We have stressed this year the importance of frequent, regular, and scheduled meetings with each of the student's classroom teachers so that you can be kept up to the minute concerning the student's work in class. This does not mean the student or the teacher are relieved of any responsibility. The student is expected to get each day's assignments, participate in class, and complete the homework. The teacher is expected to try to include the student during class, and to be available outside of class for extra help. It is important for the teacher and tutor to have close communication so that both will be working together, having the same goals and objectives, and understanding exactly what has been covered and what has not.

When you meet with each teacher, we suggest you provide:

1. Information about the learning characteristics of the student. Be specific.

2. Information regarding the student's feelings about the class, and his or her relationship with the teacher and other students. Be specific.

3. Encouragement and reinforcement to the teacher, especially when he or she demonstrates special interest in the student. Encourage the teacher to talk over specific problems with the student, or in other ways to give the student direct feedback about expectations set for the class, or about the student's performance.

We suggest you request the following information from the teacher:
1. A specific description of the student's performance in class during the previous week. You should be interested in such things as attendance; promptness; class participation; attitude; homework; and any particular problems with the work. Both you and the teacher should try to avoid talking in generalities.

For example:

Tutor: "How was the student's participation in class?"
Teacher: "Good."
Tutor: "In what ways?"

Make note of difficulties so that they can be either remediated or discussed with the student.

2. Ask the teacher what work he or she plans to cover during the coming week. Don't simply ask how you might help because from his or her perspective, it might not be clear how you can help. As your conversation progresses, you can suggest areas where you might be able to assist by previewing material with the student, or providing background information about the topic.

In some schools, the tutor assists the teacher by administering tests to the hearing-impaired student. This happens when it is not possible for the teacher to check with the student in class to be sure that all of the test questions have been understood.

3. Try to determine if any large projects are being contemplated for the future. Research projects, long term assignments, or novels are all activities that require much extra work from the hearing-
impaired student, and he or she will need to start work early.

4. Always be on the lookout for the chance to suggest ways the teacher or the hearing students might learn more about hearing impairments. For example, a science class might investigate hearing and hearing losses during its normal study of the senses. A literature class might try to learn more about deafness in conjunction with its reading of the play about Helen Keller, "The Miracle Worker."

We have found that the overwhelming majority of teachers we have worked with have valued the assistance of the tutor. For the relationship to be successful, however, these two professionals must talk about their common work frequently.
CHAPTER VIII

THE SPEECH PATHOLOGIST

Suggestions for I.E.P. Objectives

Suggestions for the Speech Teacher
CHAPTER VIII

THE SPEECH PATHOLOGIST

If you have not already done so, we suggest that you read the first three sections of this manual for a general orientation to working with this student.

Suggestions for I.E.P. Objectives

1. The student will receive speech therapy on an individual basis ___ times per week, each session lasting ___ minutes.

2. The speech pathologist will contact the tutor weekly to coordinate speech and language instruction related to the student's academic coursework.

Suggestions for the Speech Teacher

Now that you are familiar with this student's background, we would like to discuss some items that pertain specifically to your work.

1. Each student at Clarke School has a forty-five minute speech correction class each day. The emphasis in this class is on articulation. In general, it can be said that the normal practice when doing remediation work is to break down difficult words into their component syllables for ease of instruction. Once the student learns to produce the problem syllables intelligibly, they are reunited to form the original whole. Work is then done on

* These objectives were written by Carol Gabranski.
mastering the integrity of the overall utterance. The danger in using this method of articulation work is that it can often lead to speech rhythm that is syllable-timed rather the normal stress-timed form. This is particularly true in cases where the therapist or pathologist has overlooked restoring the syllables to the complete form of the word or phrase.

It is suggested that you place major emphasis in your speech work with this student on stress timing so that the integrity of the phrase and the sentence can remain intact. Only when the student is unable to produce intelligible speech should the word be reduced to its component syllables. In all cases where this is done, be sure to return to the more global form. Some speech teachers have indicated to us in recent years that it is their belief that a deaf person can be understood better if he or she talks more slowly and deliberately. Our studies have shown this to be untrue. Speech that is slow, deliberate, and distorted in terms of its prosodic features is more difficult for the listener to comprehend. For this reason, we encourage you to put major emphasis on stress timing.

2. A description of the specific work this student did during the final year at Clarke School will be forwarded with the student's academic records at graduation. You should get a copy of this information from the case coordinator at your school. If you have not received one by the end of the summer, ask the case coordinator
for it.

3. We recommend that you work out an arrangement with the student and with the teachers whereby you will periodically receive a list of the new words from each class. Experience has shown us that speech time can best be spent working on the words the student needs to use in his or her daily classes.

4. Many speech pathologists believe that they should also be responsible for teaching vocabulary and language. We suggest that on the high school level this work be left up to the classroom teachers and the tutor. Once again, experience has shown us that say. Of course, it would be helpful if you would take a moment or two during your work to see if the student understands what each word means.

5. Many teachers ask us what phonetic system our students are accustomed to using. Such a system is helpful in indicating proper pronunciation of words. Clarke School uses a system known as the Northampton Charts. This system was devised at Clarke School many years ago and is used with the students most of the way through the school. During this student's final years, however, a transition was made to the standard set of symbols found in Webster's Dictionary. A complete explanation of the Clarke School speech program is available in book form from Clarke School. Many speech teachers have found it helpful.

6. Each year, Clarke School conducts a speech intelligibility test
with its students. In essence, this test involves having the students read a list of carefully chosen sentences. Each student's speech is recorded on tape, and is then analyzed by a group of listeners. The test recordings and scores are accumulated over the years. The speech department at Clarke School also makes this test available to our graduates free of charge. If you wish to have your student take part, simply contact the Mainstream Office for a date for the student to return to make the recording. The test will take only a few minutes, and the results will be sent to you and the student within a few days. Most alumni take this test in the spring.

7. The first few days of the school year can be spent helping this student work on the names of teachers and courses. The student should be able to lipread, say, and write the name of each of these. By the time this work has been completed, you should be receiving a large amount of new vocabulary from the various subject teachers. These words should be the focus of your speech work from then on. Again, we say that words should not be practiced in mere isolation, but should be included in a normal phrase so that the prosodic features, particularly the timing, will be that of the entire phrase rather than the single word.

8. We suggest that you perform a thorough speech evaluation at the beginning of the year. From this evaluation, you will be able to identify speech features needing remediation.
9. Remediate speech through the student's use of residual hearing as much as possible.

10. A case coordinator has been chosen at your school to oversee this student's educational program. If you have not been told who this coordinator is, we urge you to find out right away. We also urge you to keep the coordinator informed concerning your work with this student as the school year progresses, particularly in the event a problem develops.

11. If you have additional questions or suggestions concerning the student's program, feel free to contact your case coordinator. If you feel it would be helpful to talk to anyone on the Clarke School staff, feel free to call the Mainstream Office.
APPENDIX E

The Mainstream News
13 WIN DIPLOMAS

13 mainstreamed students followed by Clarke School are graduating from their respective high schools this month. We want to congratulate both the students and their schools on this accomplishment.

The names of the students and their schools are:

Kathy Borromeo
Eugene Calabrese
Maureen Corkery
Eric Cjembing
Nina Hall
Diane Hankey
Jackie Hawley
Arthur Moore
Matthew Pauline
Curtis Reid
Ceci Tisdall
Steve Vickery
Sharon Wade

Columbia High School
Bloomfield High School
Northampton High School
Northampton High School
Newton North High School
Chapel Hill-Guercy Hall
Gateway Regional High School
Hopkins Academy
Woonsocket High School
The George School
The Wincendon School
Kent-Meridian High School
Stoneham High School

GOOD LUCK TO ALL OF YOU!

SPECIAL EDUCATION DIRECTORS

If you will be looking for a new tutor to work with your hearing impaired student next year, we would like to suggest you consider the following:

1. Try to find a person who is an experienced teacher of secondary school subjects. We often hear from alumni that many tutors are inexperienced in high school subjects. This makes them of limited help when it comes to the tutoring sessions.

2. People who have had experience teaching students with learning disabilities often understand the unique problems of a hearing impaired student more quickly than those who have not.

3. We suggest that you try to find someone who will not be easily overwhelmed by the amount of work the student will face. Once the year gets started, the tutor and student will be busy with the barrage of daily assignments. They will also be working pretty much alone without the stimulation that other deaf students or tutors could provide.

4. The person doing the tutoring needs to be able to function in this kind of situation, breaking down seemingly large tasks into small achievable parts.

5. Assertiveness is an important quality because the tutor will have to contact classroom teachers on a regular basis to coordinate efforts.

At the same time, we think the person you are considering needs to understand that the role of the tutor is to assist the classroom teachers, not to direct them or to take away their responsibility for teaching the student.

6. It is important for the tutor to understand that one goal of mainstreaming is to help the student learn how to learn independently, and how to be responsible for his own education.

7. Another important quality is willingness to learn about the special needs of a hearing impaired student. This carries with it the understanding that one’s teaching style may need to be adjusted to meet these needs.

8. The final test of the person’s suitability for the tutoring position is whether or not the hearing impaired student can understand her. The hearing impaired person is the best person to make this determination. It will take only a few minutes of conversation between the student and the tutor to settle this question.

Once the tutor has been found, the following suggestions should help get the year started off right:

1. Make sure the tutor reads the student’s file in the school office. It contains information from Clarke School and your own school that should give a comprehensive background on the student.

2. The student and the tutor should begin working a couple of days before school officially starts next fall. In that way, their working relationship will be established before the work gets heavy. Some of the things they can do before the first day of school are: go over the names of the courses (for lipreading and speech); review the schedule of courses and the layout of the building; begin going over the early parts of each textbook to work on new vocabulary; and check in with each of the subject matter teachers for a get-acquainted chat.

3. The tutor should be told about the importance of structuring the tutoring time so that the maximum amount of work can be accomplished in the limited amount of time.

4. Have the tutor try to visit each of the student’s classes early in the year to get direct knowledge of how the classes run and the teachers’ different instructional styles. These visits should be talked over with the student first, however, to avoid possible embarrassment.

5. Be sure the tutor sees any handouts you might have received from Clarke School.
6. Try to arrange for the tutor to visit Clarke School or, if the student has been in your school for a year or more, talk with the teachers who worked with him last year to learn about techniques that proved helpful.

7. If the student is using an FM hearing aid system, be sure the tutor understands how it works. If you need help with this, feel free to contact us.

8. Send the name of the tutor and we will add it to our mailing list for The Mainstream News.

David Manning, Mainstream Coordinator

GUIDANCE

We would like to suggest a few things to keep in mind when you are considering teachers for the hearing impaired student next year. We realize it will not always be possible to choose the teachers you might like, but we want to emphasize the importance of hand selection rather than letting a computer do it.

1. Those who communicate expressively will be easier for the student to follow in class. Lively and varied facial expressions can provide a lipreader with additional clues about what is being said. People who do not change their facial expression when they talk can be boring and more difficult for someone to lipread.

2. The learning needs of students with a hearing loss sometimes dictate that the teacher modify the teaching approach. This calls for someone who is sensitive to the student’s learning behavior and is willing to make adjustments in teaching style, workload, and expectations to fit the student’s learning needs.

3. From talking with students in a variety of schools we have learned that it is easiest for them to follow when the teaching activity is limited to one part of the room, when the lesson is structured rather than free-wheeling, when frequent visual aids are used, and when the classwork follows the material in the textbook.

4. Teachers should be given the opportunity to volunteer for this work or should be approached individually with a request. They should be informed that the student will probably need some degree of extra help along with minor modifications in classroom teaching procedure. If they feel they cannot accept these conditions, they should not be forced to take the student.

5. Before the first day of school, an orientation meeting should be held for the teachers you have chosen. This meeting should cover basic issues related to communication with the student, outline the support system in your school (including identification of the tutor, the person in charge, and how often they should report to that person on the student’s progress), and inform them of the other resources available to them from outside the school. We are available to assist you with the orientation of your teachers. D.N.

DEAFNESS

Most hearing parents expect to raise a hearing child. They are “programmed” to provide their baby with a linguistic environment which is necessary for language development. Initially, only minimal encouragement (e.g., eye contact, a smile, a head turn, etc.) is needed to reinforce the parents. By age 12 to 18 months, however, parents begin to expect at least rudimentary dialogue or turn-taking behavior from their baby.

A hearing impaired baby who fails to respond may cause the parents to stop talking to it. Once deafness is confirmed, parents may feel themselves unprepared and unqualified to provide their child with the appropriate environment. This may keep them from providing the emotional support the child needs to develop a healthy self-image. Unfortunately it is possible that these negative reactions may be reinforced by society at large.

With professional help, parents can gain the knowledge, guidance, and emotional support they need to provide their hearing impaired child with a rich environment. One purpose of mainstreaming is to reduce negative societal reactions to hearing impaired people. This goal is promoted when hearing impaired children develop adequate speech, language, academic, and social skills to interact with their hearing peers. However, hearing students and their teachers will need help in interacting with hearing impaired people. A well-prepared and supported hearing impaired child who enters a well-prepared and supported environment has an excellent chance for success in a mainstream setting.

Jan Gatty, Coord. Preschool Services

HEARING

Minor hearing aid problems can occur during the summer. These can easily be detected and fixed. It will be helpful for you to keep some of these supplies on hand:

- batteries
- hearing aid listening stethoscope
- battery tester
- tone hooks
- dry aid pack (to absorb moisture and perspiration)

These supplies can be purchased from your local hearing aid dealer or dispensing audiologist.

During the summer, all classroom hearing equipment should be sent to the manufacturer for testing and maintenance. Usually this maintenance is covered by a warranty or service contract.

If new earmolds will be needed when school begins, they should be ordered — both for the personal hearing aid and for classroom equipment — during August.

Meg Allen, Audiologist
TEACHERS
As the year quickly draws to a close, we want to remind you once again to leave some kind of written record about your experiences with this hearing impaired student for the benefit of the teachers who will come after you. What strengths or weaknesses did this student demonstrate in things such as completing assignments, writing papers, taking objective and essay tests, and participating in class? What suggestions can you give the new teachers to help them get the year started? Can you make yourself formally available as a resource to the new teachers next year?

If you have finished writing this information, it should be given to the student’s Case Coordinator in your school (most often the guidance counselor) so that it can be passed on to the new teachers once they have been chosen. We know your colleagues will appreciate your thoughtful assistance, and so will the student.

We hope you found this newsletter helpful as you worked your way through this school year. We have tried to publish articles that would be helpful to you in your everyday work with this student. If you have suggestions for future articles, we would be glad to hear from you.

Have an enjoyable summer! D.M.

TUTORS
When planning for tutoring next year, the question is often asked, “What is the best time of the school day for tutoring to occur?”

Throughout this year, you have been tutoring your student at a certain time(s) and have made that time functional for the student’s and your purposes. Some tutors work with our alumni the first period in the morning, others the last period of the day, and still others have a rotating schedule for tutoring. There are advantages unique to each:

A. Some students who have tutoring the first period of the day feel that this promotes their independent learning. They receive their assignments during the school day, go home and try to work as independently as possible to complete them. If they have any questions, they note them and ask the tutor for help the first thing in the morning. This schedule encourages the student to be well organized for tutoring sessions, coming in with questions about last night’s homework; it also encourages the student to use foresight regarding help needed for longer range assignments such as chapter outlines, research papers, oral reports, and extensive reading assignments.

B. Those students who have tutoring the last period of the day often use that time in two ways: 1) to clarify any concepts the student encountered in class that day which were confusing or misunderstood, and 2) to get organized for the night’s assignments. The tutor guides the student as he prioritizes his assignments; sets time limits for the homework, especially if he has multiple assignments; and decides the most efficient way to attack an assignment. From then on, the student is on his own to complete the work.

If you are in a position to choose the time of day for tutoring your student next year, we suggest that you talk this issue over with the student, review what the time schedule was this year, what the nature of your tutoring was, how the fatigue factor entered into your student’s functioning in school, what continued or new needs you foresee the student will have in his new courses next year, what the parents noticed at home regarding the student’s need for extra help in the evenings. This information will guide you in planning for the most appropriate tutoring time for next year.

Carol Grabowski, Mainstream Teacher

SPEECH
In 1970, Miss Marjorie E. Magner developed and published A Speech Intelligibility Test for Deaf Children with the following purposes in mind:

1. To measure how well a student is understood
2. To monitor a student’s speech development
3. To study or to illustrate the specific speech problems that are unique to deaf speakers.

The test consists of six sentences containing 10 syllables each which are read aloud, audio-taped, and then audited by six listeners. The listeners are unfamiliar with deaf speech during the October testing period, but have become experienced by the April testing period. The number of syllables in words is scored, converted to a percentage, and the taped sample is spliced onto the child’s cumulative audio recording reel. This procedure is carried out semi-annually. An average score of the October and April test results is reported to the parents in June of each year.

A few comments about the test are in order. A student with more hearing will generally have more intelligible speech. Thus a speech intelligibility score of 60% for a student with a profound-to-total loss and a score of 90% for a student with a severe loss are not uncommon.

The issue is often not the score as such, but the presence or absence of changes from year to year. In general, the younger the child, the more dramatic the changes will be from one year to the next. For example, an 8-year-old might score 42% and two years later score 75%. Adolescents often plateau even though they are in fact making improvement and refinements in certain areas of their speech that are not being measured on this test. A student’s conversational skills and use of oral language might undergo dramatic improvement and yet demonstrate no significant change in speech intelligibility as measured by this test. Also this is not an "easy" test since the listeners make
judgments solely on what they hear without benefit of any visual clues from the speaker.

Unlike other speech tests, including those assessing intelligibility, sentences are used to provide vital information about voice quality, speech rhythm, and specific transitions. Unless the student's reading level is below the second grade level or there are related learning disabilities, ability to read the sentences is usually not an issue of concern.

The tapes have been used extensively in the teacher-education program to illustrate specific speech deficits and various methods to correct such problems. They have also been an invaluable source of study to speech researchers at M.I.T., Harvard, and Tufts. The test is used in several other programs for the hearing impaired both at home and abroad.

Arrangements for testing mainstreamed students can be made by contacting the Speech Office at Clarke School. The fee is $25. A provision for such testing may have been included in your student's I.E.P.

As the end of the year approaches, it is a good idea to summarize the work you have done with the student and the progress he has made. You might also include in your records data you have collected such as evaluations, test scores, articulation test results, etc. This should assure greater continuity of speech instruction in September.

Pat Archanbault, Speech Coordinator

START NOW

We all look forward to our summer vacations. We encourage you to relax and have lots of fun! We would also like to suggest that you get a head start on next year now. Once you know what the courses will be for next September, we think it would be wise to get the textbooks and start looking through them. Students and tutors, alike, can do this.

An advanced look at the first few chapters of the textbooks for courses involving a lot of new vocabulary (i.e., history, science, psychology, geometry, personal finance, computer programming, foreign languages, etc.) can save valuable time in the fall. Vocabulary notebooks can be started for these courses. Parents can also help with this by pointing out those words that will need defining beyond what a regular dictionary can provide.

English is an area of special focus because it is possible that several novels, plays, and short stories will be required reading next year. Why not get a head start on these during your free time in July and August? Ask the guidance counselor to help you gather these textbooks sometime before summer vacation. C.F.C.

PARENTS

Summer is quickly approaching, a time when the family will be together more. I look forward to this all year long because of the sunny days, the informality of daily living, and the opportunities to be together. But at the same time, I must admit that I enjoy the way our household runs during the year. When our children arrive home, the stereo blast, the kitchen never closes, the friends are in and out, the laundry pile never has an end, and on and on. Over the years I have learned how to lay down a few rules to keep all of that work from falling on me!

First of all, I put up a list for dish duty. That way everyone has to help, children and adults. Sometimes the children are asked to help with dinner, other times they volunteer. Everyone takes his turn on the yard - over an acre! There are days when we listen to MY music on the deck. If the older ones want to use my car, they are to return it relatively clean and with enough gas in it to make it to the station!

It also helps if everyone has some planned activities, whether it's the swim team for the youngest, trips planned to visit relatives in other parts of the country, or summer jobs for the older ones. This includes me, too. I need some time just for me whether it's an exercise program, a course at a local college, or just a daily set time to bike or take a walk.

When you are beginning to get that "crowded" feeling, talking openly and honestly with members of the family can help keep the summer relatively sane and enjoyable for each family member. This should be a time for ALL members of the family, you included, to enjoy themselves.

Get ready, and have a happy summer!

Barb Manning, Independent Educational Consultant

CompuServe FEEDBACK

In the short time "The Mainstream News" has been a regular feature on the CompuServe Information Service, we have received more than 50 messages from readers in 20 states. These messages can be entered in the FEEDBACK section of our area where they are then sent back through the CompuServe computer network to Clarke School. We thought you would be interested in knowing who these people were and what they wanted to know.

Some of them were educators of the deaf who wanted to know more about Clarke School and its educational programs. A couple of them were also interested in learning about DEAFNET, a computer service dedicated to news and electronic communication for deaf people.

Others were educators of learning disabled children. One lady told us that she found the ideas we suggested in our newsletter to have some application to the work she is doing with a student with a different disability. We are glad to know that she finds the letters useful.
Still others were educators in general education who were interested in knowing more about deafness and the techniques that are used to help such children learn. One person was interested in learning more about the cooperative teacher training program Clarke School runs in conjunction with Smith College.

A couple of messages came from people who have written magazine articles about deaf people, about computers for the deaf, or about Clarke School.

We also heard from several computer enthusiasts around the country who wanted to know if Clarke School has gotten involved in computer assisted instruction. Two other people wanted information on ways to include deaf people in computer classes they are running. All of these people were enthusiastic about the possibilities computers and telecommunications offer for hearing impaired people.

We heard from several people who just have a general interest in learning more about deafness. One nearby person asked if we could provide a speaker for his local Bar Association meeting.

We also heard from relatives of deaf people who wanted to know such things as how to connect a TDD with a computer; the names of schools for the deaf in certain parts of the country; or who were interested in the Clarke School Summer Computer Camp.

And we heard from hearing impaired people themselves. Some of them wanted to know more about Clarke School, while others wanted to know if we could put them in touch with other hearing impaired people. A few wanted the names of organizations interested in the hearing impaired. One young lady in New York asked about the experiences of our graduates because she said she is a junior in high school and is "interested in moving ahead!" And one message came from a graduate of Clarke School who decided to join CompuServe to see what it was like.

We enjoyed hearing from all of these people and look forward to meeting more people through this electronic hookup. D.H.

TEL-AIDE

Applied Microsystems, Inc., recently announced the release of a new telephone communications system for deaf and hearing impaired people. The system, called TEL-AIDE, enables owners of Apple II Plus microcomputers to use their computers to communicate over the telephone with other computers or with TDDs.

An added feature of this new program enables the hearing impaired person to communicate with a hearing person who has a Touch Tone telephone. The hearing person spells out his message for the hearing impaired person by tapping on the Touch Tone buttons. The message is spelled out on the hearing impaired person’s computer screen. The hearing impaired person answers simply by talking.

We have not seen this equipment demonstrated. We learned of it recently through a brochure we received. Those readers who are interested in obtaining further information should contact Applied Microsystems, Inc., P.O. Box 832, Roswell, GA 30077. Telephone: 404-475-0832. D.H.

STUDENTS

Yipee! Hurrah! Congratulations! You have made it through the 1982-83 academic year! All of your efforts have paid off! Looking back over the year, there have probably been a lot of different memories; some of your experiences this year were satisfying, happy, sprinkled with moments of pride. At other times you may have been frustrated and disappointed in yourself and in other people. Undoubtedly, these experiences have helped you learn more about the real world, and grow up in some important ways. The time has sped by, and suddenly we are in June!

Some alumni have reported to us that June is "Thank You Month!" They have found that it is important to thank the people who have helped them during the school year: guidance counselor, tutor, speech therapist, classroom teachers, coach(es), and student notetaker(s). We're sure you know that there are several different ways to show your appreciation to people:

* by talking with them in person: thanking them for all their time, valuable efforts, generous patience and kindness;
* by sending them: a personal thank you note; or a poem or article you think they would enjoy; or a wallet size picture of yourself with a note of thanks on the back;
* by giving them a very small gift as a token of your appreciation: an expensive gift will probably make them feel uncomfortable, but a very small, inexpensive gift might bring them a lot of pleasure: a gift certificate from MacDonalds, a small bouquet of spring flowers, any craft item that you made in art class or at home, a desk calendar for the next school year, a new coffee mug! Use your own imagination when thinking of the best way to thank these important people!

Whichever way you decide to thank people, try to express your appreciation at a private time when there are no other students or faculty around. You are not interested in showing off or raising other people's curiosity; you are only interested in showing those special people that you are grateful for all they have done this year.

SPECIAL NOTE: Often we forget to thank the people who are most closely involved in our lives: our parents. Our parents have a deep interest and investment in our lives! They worry and suffer with us; they care very much about our success. You
LOOKING FOR A NEW SCHOOL?
This is the time of year when we encourage parents of next year's Clarke School seniors to get started on the search for their son's or daughter's new school. 80% of our graduates go on to attend regular public high schools, while the remaining 20% enroll in private schools. We always try to encourage parents to give some thought to the possibility of both types of school.

We cannot say that one school is better or worse than another because it depends on the particular student under consideration. Private schools offer some students unique possibilities that cannot be found in the public sector while, on the other hand, public schools can offer things - particularly in the way of supportive services - that private schools often cannot match.

The way to start thinking about all of this is to talk it over with your son or daughter. What does he or she need in order to learn? What size of class? How much help will be needed from the teacher? What type of teaching will be needed? Are you looking for a competitive academic program? Are you looking for a formal or informal school? Are you interested in a single sex or a coed school? In which part of the country?

Remember, there are no "right answers" to these questions. What is good for one student may not be for another. Think about these questions only in relation to your own child.

Those of you whose son or daughter will be high school next year should begin thinking about post secondary opportunities. For those going on to further education, it is important to get started as soon as you can. Write for school catalogs, visit as many schools as you can, and talk with people about the support services your son or daughter will need. All of this involves a lot of searching and questioning, but there is no other way to do it. The important thing is to get started now.

A BIG THANK YOU
It is a simple fact that we could not produce The Mainstream News each month if it weren't for the generous assistance of the following people:
1. Writers. Pat Archambault, Jan Gatty, Meg Allen, Barb Manning, Carol Gabranski, Claire Troiano, Claudette Marvell, Gail Canon, and Dennis Moulton, Peter Jones, and others.
2. Editors and Proofreaders. Irene Johnston and Peter Jones.
All of these people have given us their help in addition to their regular duties. We thank them.

FINAL EDITION
This is the final edition of The Mainstream News for this school year. We hope you have found it helpful reading from September to June.

Our newsletter is continuing to grow in both its printed and electronic forms. The printed version goes to readers in 27 states and three foreign countries, while the electronic version goes by way of The CompuServe Information Service to every state in the United States. There are also indications that professionals in related areas of education (e.g., learning disabilities) are finding it helpful.

We are beginning to plan next year's articles and are open to any suggestions or requests you might have. The newsletter's purpose is to provide people "on the front lines" with practical information to help them with their mainstreaming efforts.

We hope each of you has an enjoyable and restful summer. We'll see you in the fall.

David Manning
Carol Gabranski
Claire Troiano

A WORD ABOUT SUBSCRIPTIONS
Once hearing impaired students graduate from high school, we normally remove their names from our mailing list. We also remove the names of their teachers and parents. If any of you whose names will be removed would like to continue receiving this newsletter, please drop us a line to let us know. Just write to David Manning at Clarke School for the Deaf, Northampton, Massachusetts 01060. We will be glad to keep your name on the list if you let us know. If we don't hear anything, it will be dropped.

Those who signed up for the newsletter through the CompuServe Information Service will be kept on the mailing list for a complete school year. In other words, if you began receiving it in April 1983, you will continue to receive it through June of 1984.

Have a healthy and restful summer!