

PERCEPTIONS OF THE HEARING IMPAIRED  
PROGRAM AT OKLAHOMA STATE  
UNIVERSITY TECHNICAL  
INSTITUTE

By

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## CHAPTER I

### INTRODUCTION

This study was undertaken to provide an assessment of the past performance of the Hearing Impaired Program at Oklahoma State University Technical Institute and to gather the opinions of the program as perceived by professional and students of the program. The Hearing Impaired Program at Oklahoma State University Technical Institute (OSU-TI) began in 1976 and has not been formally studied or reviewed since its inception. No formalized historical or descriptive information has been compiled, with the exception of quarterly or yearly reports as required by the Department of Human Services, State of Oklahoma.

According to the yearly reports, the Hearing Impaired Program at OSU-TI has shown an apparent growth in number of students. Administrators of the program feel it is time to evaluate the strengths and weaknesses of the program so that the needs of the hearing impaired students in an integrated situation can be more adequately met. An overall study of the program would provide a clearer picture of the past performance of the program, enabling OSU-TI to assess the needs of the program for future growth. A collection of historical information was made by reviewing all reports submitted to the Department of Human Services and by studying information made available through the admissions office at OSU-TI.

The study gathered opinions of the program as viewed by participating students, past and present administrators of the program, and faculty who have had hearing impaired students in the classroom. It was felt by the researcher that the opinions of these individuals helped to determine the effectiveness of the program, and establish new goals for the program. The information that resulted from the study helped toward the future development of the Hearing Impaired Program at OSU-TI.

#### Statement of the Problem

Since the inception of the Hearing Impaired Program in 1976 at Oklahoma State University Technical Institute (OSU-TI), there has been no collection of data or information in regard to the program. Information is needed to aid in the assessment and improvement of the program.

#### Purpose of the Study

The purpose of the study was to assess the past performance of the Hearing Impaired Program and to gather information in regard to the program as perceived by professionals and students related to the program.

#### Questions of the Study

The research questions sought to answer were:

1. What has been the number of students served and the attrition rate at OSU-TI in the Hearing Impaired Program since 1976?
2. How do administrators and interpreters view the program?
3. How do graduates and seniors of the Hearing Impaired Program

view the program?

### Limitations of the Study

The study was limited to:

1. Senior hearing impaired students at OSU-TI.
2. Graduates who received support services from the Hearing Impaired Program.
3. Administrators of the Hearing Impaired Program, both past and present.
4. Faculty members who had hearing impaired students in the classroom Spring semester, 1983.

### Definition of Terms

The following definitions of terms are provided to give, as nearly as possible, a clear meaning of terms used in this study:

Administrator: Persons who have been employed by Oklahoma State University Technical Institute to coordinate, direct, or instruct, the basic functions of the Hearing Impaired Program.

Deaf: Refers to the inability to hear spoken language due to a severe loss of hearing.

Faculty: Those individuals employed by the Institute to instruct or teach (both full and part-time).

Hearing Impaired: Any person that cannot function without the support services in the classroom setting due to a hearing loss. This would include all hearing impairments ranging from hard of hearing to profoundly deaf.

Hearing Impaired Program: A support service provided by Oklahoma

State University Technical Institute that was designed to facilitate the hearing impaired student in the classroom setting.

Interpreter: Persons specifically employed to transliterate the lectured classroom material to manual communication and is responsible to reverse from manual communication to spoken English.

Interpreter-Tutor: Those interpreters whose job description is to interpret and to assist the student outside of the classroom in language and vocabulary as related to the class they are responsible for interpreting.

Oklahoma State University Technical Institute (OSU-TI): A post-secondary program that offers a two-year associate degree and a one-year certificate program in the technical areas.

Post-secondary: Any program that offers training opportunities or college credits to those individuals who have completed a (1) secondary high school education, (2) passed the General Educational Examination, and (3) are 21 years of age or older.

#### Organization of the Study

Chapter I introduces the study, presents the problem, purpose, questions, limitations, and definition of terms. Chapter II includes a review of literature. The review of literature is divided into four main categories: history and education of the deaf, trends in elementary and secondary education of the deaf, post-secondary and technical institutions that offer training programs for the deaf, and the Hearing Impaired Program at Oklahoma State University Technical Institute. Chapter III describes the methodology used for the research in this study by explaining the population, reviewing the instruments used to

collect the data, and an explanation of the analysis of data. Chapter IV explains the findings of the study. Chapter V concludes the study with a summary, conclusions, and recommendations.

## CHAPTER II

### REVIEW OF LITERATURE

The review of literature was undertaken to determine what information was available to the researcher that related, either directly or indirectly, to the training of the deaf in a post-secondary technical program. In order to provide the reader and the researcher with a clear understanding of the problems encountered in the educating of the deaf, the review of literature was divided into four areas which included: (1) the history and education of the deaf; (2) trends in elementary and secondary education of the deaf, (3) post-secondary and technical institutes that offer training programs for the deaf, and (4) a description of the Hearing Impaired Program at Oklahoma State University Technical Institute.

#### History and Education of the Deaf

According to Fusfeld (1967) the education of the deaf dates back many years. During the day of the Greeks and Romans, it was indicated that some thought was given to the possibility of educating the deaf, but Aristotle's philosophy was that the ear was the organ of education. Fusfeld (1967, p. 7) states this theory was accepted as a truth by Lucretius, as indicated by this writing, "to instruct the deaf no art could ever reach, no care improve them and no wisdom teach."

Fusfeld (1967) further states that the earliest recording of the educating of the deaf was that of a deaf person taught to speak or read lips by Bishop John of York in the year 691. He was also said to have some kind of manual alphabet. Fusfeld also reports that in about 1570, in Spain, Pedro Ponce de Leon, trained two deaf brothers and a sister to read and write. According to Fusfeld in 1760, schools for the deaf were opened by the Abbe' de l'Epee in France. Fusfeld also adds that Abbe' de l'Epee reported teaching some sort of a manual communication: while, Heinicke and Braidwood used an oral method to teach the deaf. The education of the deaf did not begin in the United States until the 1800's and both the manual and oral methods that were brought to the United States were inspired by these men (Fusfeld, 1967).

Thomas Hopkins Gallaudet, an American, was sent to London on July 5, 1815 to study the education of the deaf. He later wrote home that when he returned, he planned to incorporate the best of both methods, oral and manual communication (Gollady, 1976). Gallaudet opened the first school for the deaf on April 15, 1817 in Hartford, Connecticut. Within the next 20 years, five other schools for the deaf were opened in the United States. Many of the deaf educators of these new schools were proteges of Gallaudet. Some chose to employ the use of manual communication in their schools, while others used the oral method of communication. Thus began the conflict of methods to teach the deaf in the United States (Brill, 1974).

A table of comparison of school programs for deaf children, 1900-1973, in the United States is included in Table I to illustrate the growth of deaf education in the United States (Brill, 1974). The trend has moved from public residential schools to public day classes

TABLE I  
 COMPARISON OF SCHOOL PROGRAMS BY THE NUMBER OF DEAF  
 CHILDREN AND STAFF, 1900-AND 1973

	1900			1973		
	Programs N	Children N	Staff N	Programs N	Children N	Staff N
Public Residential Schools	57	10,760	699	62	19,217	4,353
Public Day School	40	740	102	66	7,221	1,752
Denominational and Private Schools	15	442	50			
Private Residential Schools				12	1,353	309
Private Day Schools				26	1,198	395
Public Day Classes				493	17,751	4,327
Private Day Classes				66	1,199	347
Multi-Handicapped Only				52	886	442
Specified Handicap Facilities				30	871	322
Totals	<u>112</u>	<u>11,942</u>	<u>851</u>	<u>807</u>	<u>49,696</u>	<u>12,247</u>



according to Brill.

Trends in Elementary and Secondary  
Education of the Deaf

Brill (1974) states that the education of the deaf child is one of the most interesting and challenging areas of special education. He further states that even though deafness is classified as a physical handicap, the real handicap occurs in the area of communication and is not "physical" in the usual sense of the word. Brill adds that the most obvious handicapping condition of the deaf is either highly defective speech or no speech at all. The real problem is not the lack of speech, but the lack of language. Language is not only a symbol system for transmitting thought, but for thought itself in any abstract sense (Brill, 1974). It must be noted that when referring to a child as deaf, one could be describing either the child who is congenitally or adventitious deaf. The congenitally deaf child is born without hearing and has acquired no language; the adventitious deaf child is born with hearing and has lost hearing later in life but has acquired some language prior to the loss of hearing. Also, varying degrees of deafness must be considered (Stewart, 1972).

Unlike parents of hearing children, the parents of deaf children will probably not be able to send their child to the local neighborhood school. The question then arises "where should the child go to school?" The parents will then seek the help of professionals and depending on the "school of thought" of the professional, the child will be directed to either an oral or total communication program. Moffatt (1972) recognized new methods of communication in addition to the oral and manual

approach, such as: Cued speech, the Rochester method, Signing Exact English, and the Acoupedic Method, thus complicating the decision of placement for the child (Moffatt, 1972).

Table I depicts the trend of educating the deaf child in a public residential school for the deaf to a public day class (Fusfeld, 1967). This change has been a result of the Education for all Handicapped Children Act (PL 94-142) which was passed by Congress in 1975 (The Deaf Student in College, 1979). The public schools are providing more and more classes for the deaf, with the integration of the deaf child into the regular classroom in mind. These programs have still failed to answer all the questions for the education of the deaf. According to Fusfeld (1967) some of the problems encountered in the public schools are:

1. Small numbers of deaf students in the program.
2. Socialization for the deaf child.
3. Adequate classroom materials for the deaf child.
4. Lack of communication with peers and other professionals in the program.
5. Untrained teachers in the education of the deaf (p. 62).

As the child moves on to a secondary program many of the same problems follow. Secondary programs for the deaf are offered in public schools, residential schools for the deaf, and private residential schools for the deaf. Secondary is usually thought of as grades seven to 12 or nine to 12, but the average academic level of those deaf students graduating from high school is approximately eighth grade level (Brill, 1974). Brill records three different studies that have found similar findings in regard to the educational level of deaf students at the time they leave school. Brill reports the three studies as follows:

The report of the Advisory Committee on Education of the Deaf, commonly known as the Babbidge Report, disclosed that 920 students left public residential schools during or at the end of the 1963-1964 school year. The median age for the whole group was just below the seventh grade level as measured by the Stanford Achievement Test. Of those 920 students, 365 received Academic diplomas. The median for this group fell in the eighth grade level.

Another study by Hester (1963) reported the achievement test scores for 501 graduates and 603 non-graduates, ages 16 and up, from 55 residential and nine day schools and classes in the United States during the school year 1961-62. The median score for non-graduates was 4.7 with a range from less than first grade to the tenth grade. The median grade score for the graduates was 8.1 and the educational levels ranged from the third through the twelfth grades.

A third study, reported by Boatner and conducted by a committee of the Conference of Executives, dealt with the June, 1963, graduates and non-graduates of 88 schools representing 93 percent of the enrollment in all the special programs for the deaf in the United States. Of the 1,277 students studied, 1,145 were from residential schools, and of these 449 had received academic diplomas with a Stanford Achievement average of 8.2. Another 339 had received vocational certificates with a Stanford Average of 5.3. There were 150 who were granted attendance certificates, and 208 who received no certificates. Of the total number surveyed, only 70 students had reached the tenth grade or better on a standardized test (pp. 194-195).

The question then arises, "was the student ready for a secondary education," as it is known, or is "secondary education for the deaf the same as for the hearing students?" According to the Babbidge Report (cited in Brill, 1974), the next consideration to be made would be the readiness of a deaf student upon completion of a high school program for a post-secondary education.

#### Other Post-Secondary and Technical

##### Institutes for the Deaf

According to "The Deaf Student in College" (1979), the first post-secondary program for the deaf was established in 1864 when

Congress and Lincoln signed legislation for the opening of Gallaudet College. Gallaudet College was the world's only post-secondary program for the deaf for almost a century. Until the 1960's the deaf were able to study only traditional and liberal arts or stereotyped high school level vocational subjects. In 1930, the Alexander Graham Bell Association began surveying deaf students in hearing colleges. A 1968 study found 653 deaf individuals who had attended 326 post-secondary institutions in 45 states between 1910 and 1965. But until 1968 only one deaf high school graduate in ten received any higher education.

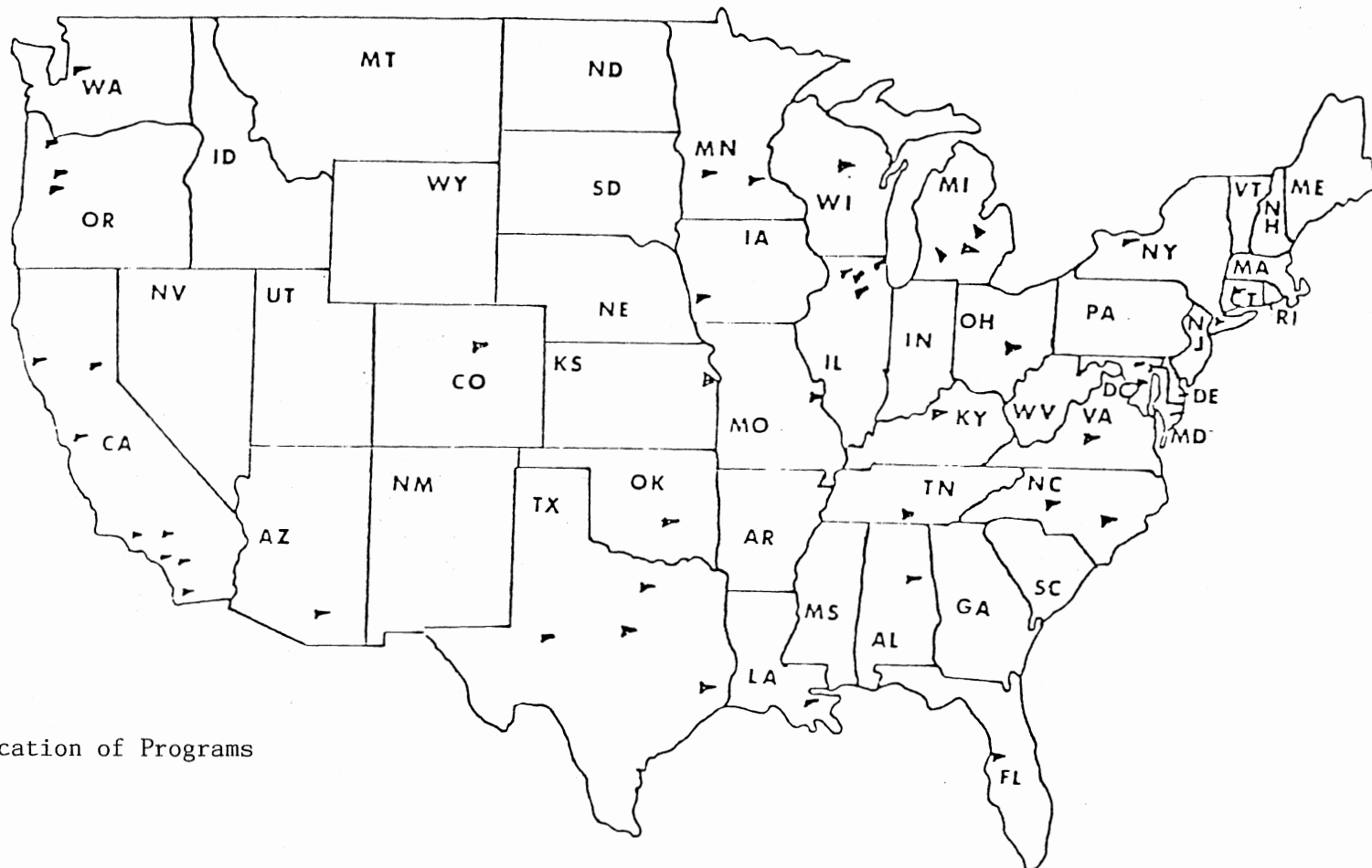
As stated by Schun, Dell, Lipman, Bower, and Freebairn (1967), there were 1,767,000 deaf Americans in the United States. While one in ten Americans participate in adult education of some kind, the number of deaf adults who participate in adult education is unknown. It can be surmised that many of the deaf adults in the United States would be candidates for some kind of adult education program. Thus establishing a need for post-secondary education for the deaf. Schun, Dell, Lipman, Bower, and Freebairn (1976) write that the major barriers of continuing education programs, as perceived by State Directors of Adult Education in 1975 were:

1. Lack of funds.
2. Lack of awareness by deaf adults of existing educational opportunities.
3. Lack of interest of deaf adults.
4. Lack of qualified teachers.
5. Lack of interpreters.
6. Inadequate communication skills.
7. Poor academic background of deaf adults.
8. Lack of materials.
9. Deaf adults not in central areas.
10. Lack of understanding of bureaucracy.
11. Lack of interest of deaf educators.
12. Desire for deaf to separate themselves from the hearing world (p. 49).

Section 504 of the Rehabilitation Act of 1973 provided an equal educational opportunity for the handicapped. The extent to which the state educational institutions must provide services to the handicapped has not yet been determined ("Deaf, The Law and Higher Education," 1982). As stated by Brill (1974, p. 217), "programs should select and serve deaf students on the basis of student needs and never on the basis of program needs." Brill further concedes that support services needed for the deaf in a post-secondary program are: tutoring, interpreters, notemakers, vocational counseling, personal and social services, manual communication for deaf students, manual communication training for instructors and supervised housing. It must be noted that not all deaf students require all of these services.

As reported in the American Annals of the Deaf (1982) there are 71 post-secondary programs for deaf students with a total enrollment of 5,073 individuals. There are in excess of 3,000 post-secondary programs in the United States. These programs would include technical-vocational programs, junior colleges, community colleges, four-year colleges, universities, and private schools. Only two percent of these programs publicly state that they serve the deaf (Laurentson, 1982). Figure I will provide a geographic distribution of United States post-secondary programs for deaf students (Rawlings, Trybus, and Biser, 1982).

Gallaudet College serves 9,000 people annually ("The Deaf Student in College," 1979). Rawlings, Trybus and Biser reported that in 1980 Gallaudet had an enrollment of 1,344 deaf students. In 1979, Gallaudet awarded 3,493 Baccalaureate degrees, 130 Master's degrees, and one doctoral degree. Gallaudet offers more than 27 major areas of study to participating deaf students. In 1979-1980, 148 Baccalaureate degrees



Legend:

▲ Location of Programs

Source: Rawlings, Brenda, Raymond J. Trybus and James Biser. A Guide to College/Career Programs for Deaf Students. Washington, DC: Gallaudet Press, 1981.

Figure 1. Geographic Distribution of U.S. Post-Secondary Programs for Deaf Students

were offered and 14 Master's degrees.

According to Rawlings, Trybus and Biser (1981) the National Technical Institute for the Deaf, was established in 1968. The National Technical Institute for the Deaf has a total student population of 3,490 with a deaf student population of 939. Through 1979, the National Technical Institute for the Deaf awarded the following to deaf students: 382 Certificate/Diplomas, 551 Associate degrees, 159 Baccalaureate degrees, seven Master's degrees, and four Specials. The study by Rawlings, Trybus, and Biser (1981) states the National Technical Institute for the Deaf has three fundamental charges: (1) to provide technical education and training for deaf citizens, to prepare them for successful employment, (2) to prepare professional manpower to serve the nations deaf population, and (3) to conduct applied research into the social, educational, and economic accommodations of deaf people.

Welsh and Wilson (1976) presented three reports exploring student attrition rate at the National Technical Institute for the Deaf. The study reported information for the spring and summer quarters during 1976. The total number of students registered during those quarters were 858. The total of withdrawals during those quarters were 199. The attrition rate for that period of time was 23 percent. Another study by Saur (1981) conducted at the National Technical Institute for the Deaf on the "Naturalistic Research on Mainstreaming at NTID," reported that: (1) the instructors are chiefly responsible for the active participation of hearing impaired students' involvement in the classroom, and (2) reciprocity with co-operating instructors is both feasible and desirable in classroom research. Saur (1981) states,

Many instructors chafe at the isolation which they feel in the standard classroom and welcome a chance to obtain feedback and to speak of their concerns for their students to someone who is genuinely interested (p. 49).

In 1964, the California State University at Northridge (CSUN) established a program for the deaf ("The Deaf Students in College," 1979). The CSUN provides a National Leadership Training Program for professionals who work with deaf and deaf-blind students. The university also opens its regular graduate and undergraduate programs to qualified deaf students. Murphy and Jacobs (1977) reported from their study, "A Profile of CSUN Deaf Students, Fall Semester 1976," that 171 deaf students registered for fall semester. The age range was 16-81 years. The mean for undergraduate students was 23 years; the mean for graduate students was 31 years. The population was described as profoundly deaf. Sixteen of the students reported other handicapping conditions. Seventy-two percent of those students reported prelingual or deafness. The students were from 36 different states, the District of Columbia, and three foreign countries. One-third of the students graduated from residential schools for the deaf while two thirds graduated from day schools, day classes, or "regular" high schools. Most students had a previous post-secondary experience before coming to California State University at Northridge. The deaf undergraduates has Scholastic Aptitude Test means of: Verbal-337, Quantitative-385 (versus national norms of 434 and 472 respectively). A Graduate Record Exam of: Verbal-336, and Quantitative-407 (versus national norms of 494 and 510 respectively). The mean number of semester units carried was 12, with a range of 3-23. Deaf students enrolled in 468 classes. Interpreters or notetaker/interpreters served 282 classes.



The majors of deaf students compared with the majors of hearing students.

Craig, Newman and Burrows (1972) conducted a detailed study of students attending three federally supported community college programs: St. Paul Technical Vocational Institute, Seattle Central Community College, and Delgado Community College. Most of the 213 students came from specialized programs for the deaf. All students had severe hearing losses and only 21 had become deaf after the age of three. The average I.Q. was 109 and the achievement level was about eighth grade as measured by the California Achievement Test at the time of entrance of the program. A total of 91 students left the college programs before completion. The programs at these three colleges have demonstrated that with proper support programs many deaf students who would not benefit from a four-year liberal arts or technical program will benefit from an appropriate two-year post-secondary program.

The Hearing Impaired Program at Oklahoma  
State University Technical Institute

The Hearing Impaired Program began June, 1976 as a Engineering Research proposal with the Department of Institutions, Social, and Rehabilitative Services (Reisenberg, 1976). The proposal was entitled, "Training of Deaf and/or Hearing Impaired Computer Programmers." The objective of the program was to prepare individuals with technical skills for immediate employment. Since this was to be accomplished within a two-year period, methods of presenting the technical information were critical and included spiral or repetitive teaching, individually prescribed instruction, tutorials, and computer-assisted instruction (CAI) with application and orientation. The program began with a one-fourth

time coordinator and equivalent to a full-time instructor.

The second year of the project, June, 1977-78, started the implementation of the original proposal. The proposal requested a part-time vocational rehabilitation counselor who recruited six deaf students for the beginning of the program. A full-time interpreter was hired (30 hours per week) for interpretation in the classroom and laboratories. Instructors, equivalent to one-half time, were employed to continue development and updating of course support material. Three of the original six deaf students dropped out of the program, but in the spring of 1977 eight deaf students enrolled in the program (Riesenberg, 1977).

The third and final year, June, 1978-79, of Project 91 began with seven students: four from the pilot group and three new students. An interpreter/deaf educator was added to the staff and also a part-time notetaker. Two new students were added to the program, making a total of nine students (Long, 1979).

A new grant was obtained for June 1, 1979 to May 31, 1980 from the Department of Institutions, Social, and Rehabilitative Services. The new grant was called "Training of Hearing Impaired and Mobile Handicapped Technicians," Project 93. The program continued with the same personnel, but opened other major areas of study for the deaf students. In addition to the deaf students, the Program offered services to the mobility impaired student. In 1980, the program had a total of three interpreters and the job description was changed from interpreter to interpreter/tutor (DeWelt, 1980).

The second year of the new project there were 12 severely handicapped persons enrolled in the program. The statistics through 1980 included a total of 18 handicapped students who were served. Two

students graduated with degrees in drafting; three terminated training, and five of those individuals through the help of OSU-TI were able to secure part-time employment in their major areas; 12 remained in training. The project for the third year, June 1, 1981-May 31, 1982 was discontinued by the Department of Human Services due to a lack of funding (Spence, 1981).

The program was changed in 1981 to the Hearing Impaired Program at Oklahoma State University Technical Institute. A cooperative agreement between the Department of Human Services and Oklahoma State University Technical Institute for the continuation of the program was made. Fall enrollment, 1981, began with 16 hearing impaired students and a total of 193 interpreting and notetaking hours. The spring semester, 1982, began with 11 hearing impaired students; during the summer 1982, four students participated. The same agreement was made with the Department of Human Services for the year 1982-83. The fall semester, 1982, began with 11 students (with a total of 109 hours interpreted per week) (Spence, 1982).

The Hearing Impaired Program currently offers interpreters, tutors, notetakers, counseling, computer-assisted instruction, language development, and speech therapy for the deaf students. The students have begun their own club for the deaf and hearing students. A number of related activities are offered at Oklahoma State University Technical Institute in relation to the needs and development of the Hearing Impaired Program to benefit the deaf student.

#### Summary

The review of literature began with the history of deaf education

during the day of the Greeks and Romans to the present trends of deaf education. A review was made of other post-secondary and technical programs for the deaf, but the researcher felt this area to be inadequate due to the limited amount of information available on similar small programs. A brief history was also included of the Hearing Impaired Program at Oklahoma State University Technical Institute since its inception.

## CHAPTER III

### METHODOLOGY

The purpose of this study was to assess the past performance of the Hearing Impaired Program at OSU-TI and to gather information in regard to the program as perceived by professionals and students of the program. To achieve this purpose: (1) a list of all students, administrators, and faculty (spring semester, 1983) was compiled, (2) questionnaires for gathering opinions of the individuals involved were devised, (3) then the questionnaires were collected and analyzed, and (4) the results were reported.

#### Description and Selection of the Population and Sample

One of the objectives of this study was to determine the number of hearing impaired students enrolled in the program from 1976 to 1983. The sources used to obtain this information were the student files kept by the Coordinator of the Hearing Impaired Program, the files kept by the Vocational Rehabilitation Counselor at Oklahoma State University Technical Institute, and the files available through the Admissions Office at Oklahoma State University Technical Institute. In order to determine the number of administrators and interpreters involved in the Hearing Impaired Program, a review was made of all federal and state reports submitted to the Department of Human Services. Only those

faculty members who had taught hearing impaired students during spring semester 1983 were used.

#### Data Gathering Instrument

Three separate questionnaires were designed, one for each population of the study. The first questionnaire was written to determine the specific attitudes of the students toward: the interpreter-tutor; the integrated classroom setting; the feasibility of a two-year technical program for a hearing impaired individual; and, the readiness of the hearing impaired student for job placement upon completion of the two-year program at Oklahoma State University Technical Institute. See Appendix A for a copy of the student questionnaire.

The second questionnaire was designed to gather the opinions of the faculty toward: the hearing impaired in the regular classroom; the interpreters' responsibility to transliterate the lectured material of the teacher; the importance of a post-secondary education for the hearing impaired; and, the need for the Hearing Impaired Program at OSU-TI. See Appendix B for a copy of the faculty questionnaire.

The third questionnaire was designed to gather the opinions of the past and present administrators and interpreters of the Hearing Impaired Program toward: the feasibility of the integration of the hearing impaired student in the regular classroom; the status of the program as they viewed it; support services offered to the students; and, specific strengths and weaknesses of the program during their involvement in the program. See Appendix C for a copy of the administrator/interpreter questionnaire.

Three questionnaires were designed to answer the questions of the study; thus, using the purpose of the study as a boundary for the questionnaires. The questionnaires or instruments of the study were written and tried on sample groups of the population. These sampling groups made corrections and suggestions for the questionnaire. The final questionnaires were rewritten with corrections from the original questionnaires. See Appendix D for the list of individuals used to field-test the questionnaires.

#### Data Collection

The questionnaires were mailed on March 17, 1983, to the respondents along with a cover letter that stated the purpose of the study. The questionnaires and cover letters were sent with a self-addressed stamped envelope. The questionnaires were sent through the inter-school mail to the faculty and through the United States Postal Service to the other participants of the study. In the event the questionnaires were not received in return mail, a follow-up letter and another questionnaire were mailed on April 4, 1983, to the participant. The researcher personally visited the faculty and collected their questionnaires. See Appendix E for the cover letter and Appendix F for the follow-up letter.

#### Analysis of Data

The questionnaires were calculated and categorized into three different categories: (1) students, (2) Interpreter/Administrator, and (3) faculty. The questionnaires were then tallied according to responses. The Analysis of Variance (ANOVA) was used in Part II of the

questionnaires to find the significant difference of the respondent's answers for each question. The mean for each group was also tabulated. The Newman-Keuls Test was used to determine any significant difference among the groups (Bruning and Kintz, 1977). The responses were then evaluated and reported in Chapter IV of the study and listed in tables.



## CHAPTER IV

### INTRODUCTION

The purpose of this study was to assess the past performance of the Hearing Impaired Program and to gather information in regard to the program as perceived by professionals and students of the program. The instruments used to accomplish the purpose of the study were questionnaires. The questionnaires were designed for administrators/interpreters, faculty, and students. The results of the questionnaires were tabulated and the findings are reported as follows: (1) Response Rate, (2) Attrition Rate, (3) Demographics Characteristics, (4) Administrators/Interpreter Responses, (5) Faculty Responses, (6) Student Responses, and (7) Comparison of Responses.

#### Response Rate

Eighteen faculty questionnaires were sent, ten student questionnaires were sent, and 17 administrative/interpreter questionnaires were sent. Thirty-one percent of the respondents responded from the first mailing. A follow-up letter was mailed two weeks later. A total of 45 questionnaires were mailed and 38 were received in return mail, making a return rate of 84 percent. Detailed data of the response rate are reported in Table II.

TABLE II  
QUESTIONNAIRE RESPONSE RATE BY RESPONDENT GROUP

Respondents	Number Sent	Number Received	Percent
Administrator/ Interpreter	17	13	76
Student	10	9	90
Faculty	<u>18</u>	<u>16</u>	<u>88</u>
Total	45	38	84

Attrition Rate of the Hearing  
Impaired Program

The attrition rate of the Hearing Impaired Program has never been formally evaluated. The information was collected through the Admissions office at Oklahoma State University Technical Institute and through the Vocational Rehabilitation Office at Oklahoma State University Technical Institute. The information sought was the number of students enrolled from 1976 to 1982, how many students graduated, the number of students who dropped before completion of the program, and the number of students who continued in the program. See Figure II for a graph of students participating in the program. The information is reported as follows:

1976 - The school year 1976 began with two hearing impaired students.

1977 - The school year 1977 began with five new students. One of the 1976 students continued in the program, making a total of six students.

1978 - The school year 1978 began with six new students. Five students from the previous year had dropped, two students had graduated and six continued in the program.

1979 - The school year 1979 began with six new students. Of the continuing students, one graduated and three dropped, leaving a total of nine students remaining in the program.

1980 - The school year 1980 began with five new students. During the year one student graduated and two dropped from the program, leaving 11 students in the program.

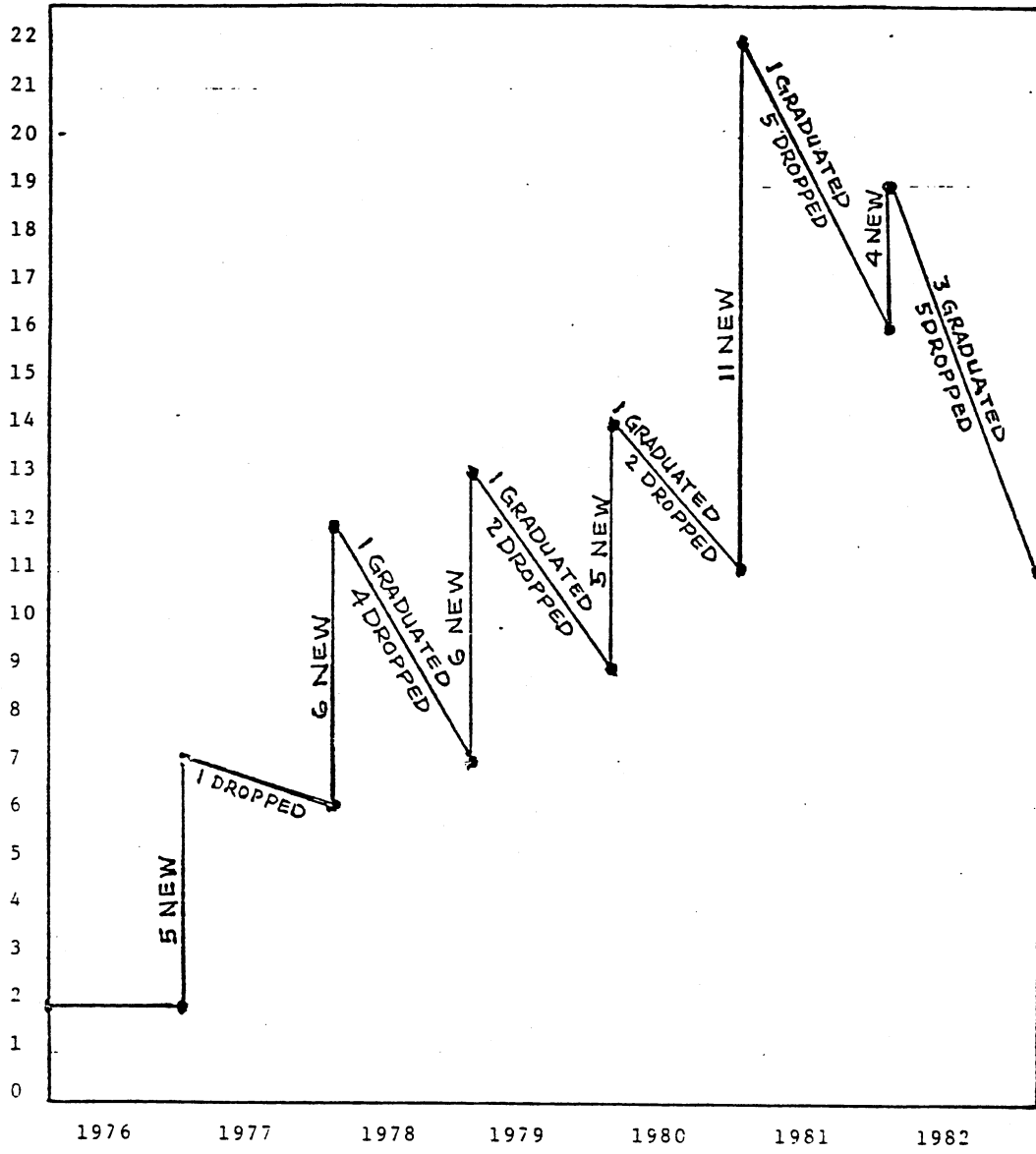


Figure 2. Number of Students Enrolled, Graduated and Dropped

1981 - During the school year 1981, 11 new students entered. One student graduated, five students dropped, leaving 16 students in the program.

1982 - The school year 1982 began with four new students. Of the continuing students, three graduated and five dropped, leaving a total of 11 students continuing in the program for 1983.

The total number of students who entered the program from 1976 to 1982 was 39. Twenty students dropped from the program and seven students graduated. From data collected, the drop-out rate was 51 percent in the past seven years and the number of hearing impaired graduates was 17 percent.

### Demographic Characteristics

#### Administrators/Interpreters

The information from demographic questions for the Administrators/Interpreters is presented in Table III. The majority of employees in the Hearing Impaired Program were interpreters. The percentage of interpreters was 58 percent, while directors and coordinators each were 16 percent. Fifty percent of the employees of the Hearing Impaired Program had been employed one year or less and 25 percent had been employed one to four years, while two respondents had been employed for five to nine years and 16 percent had been employed for ten or more years. Fifty-three percent were currently employed at OSU-TI and 46 percent were no longer employed at OSU-TI. The educational background of the respondents was as follows: four individuals (30 percent) had Master's degrees, three (23 percent) Bachelor degrees, four (30 percent)

TABLE III  
DEMOGRAPHIC CHARACTERISTICS OF ADMINISTRATOR/INTERPRETER

Characteristic	Number	Percent*
Title		
Director	2	16
Coordinator	2	16
Interpreter	7	58
Other	1	8
Years at OSU-TI		
Less than 1	6	50
1 - 4	3	25
5 - 9	2	16
10 or more	2	16
OSU-TI Employment		
Yes	7	53
No	6	46
Educational Background		
High School	4	30
Associate	1	7
Bachelor's	3	23
Master's	4	30
Other	1	7
Employed in the Hearing Impaired Program		
Full-time	5	38
3/4 time	1	7
1/2 time	4	30
Hourly	3	23
Chief Responsibility		
Administrative	4	30
Support to the students	6	46
Other	3	23

\*Numbers may not total 100 due to rounding.

had high school diplomas, one person (7 percent) had an Associate degree, and one person (7 percent) listed "other" for educational experiences. Thirty-eight percent of the respondents stated they were employed full-time by the Hearing Impaired Program, seven percent, three-quarter time, 30 percent one-half time, and 23 percent reported being paid by the hour. Forty-six percent of the respondents reported their chief responsibility to the Hearing Impaired Program as a support to the students in such positions as: interpreters, notetakers, and tutors. Thirty percent of the respondents' chief responsibilities were identified as administrative and 23 percent identified "other."

#### Faculty

The demographic characteristics of faculty members are presented in Table IV. The classification of the faculty respondents was 50 percent full-time, 37 percent adjunct, and 12 percent reported "other." The faculty reported years of employment as: 43 percent had been employed ten or more years, 18 percent five to nine years, 25 percent one to four years, and 12 percent reported working at OSU-TI less than a year.

#### Students

The responses to the demographic questions for the students are presented in Table V. The respondents' classification at OSU-TI according to the questionnaire was 66 percent graduates of the Hearing Impaired Program and 22 percent students. Seventy-seven graduated with an Associate degree, 11 percent with a Certificate, and 11 percent reported "other." Forty-four percent of the hearing impaired students

TABLE IV  
 DEMOGRAPHIC CHARACTERISTICS OF FACULTY

Characteristic	Number	Percent*
Classification		
Full-time faculty	8	50
Adjunct faculty	6	37
Other	2	12
Years Employed at OSU-TI		
Less than 1	2	12
1 - 4	4	25
5 - 9	3	18
10 or more	7	43

\*Numbers may not total 100 due to rounding.



TABLE V  
DEMOGRAPHIC CHARACTERISTICS OF STUDENTS

Characteristic	Number	Percent*
Classification at OSU-TI		
Graduate	6	66
Student	3	33
Graduated With		
Associate degree	7	77
Certificate	1	11
Other	1	11
Year of graduation		
1982	4	44
1981	2	22
1980	1	11
1979	1	11
Other	1	11
Major		
Computer Programming	2	22
Accounting	2	22
Drafting	3	33
Other	2	22
Degree of impairment		
Profound	4	44
Severe	3	33
Moderate	1	11
Mild	1	11
Employment		
Unemployed	3	33
Employed in job related to major	5	55
Employed in job unrelated to major	0	0
Other	1	11

\*Numbers may not total 100 due to rounding.

graduated in 1982, 22 percent graduated in 1981, 11 percent in 1980, 11 percent in 1979, and 11 percent reported "other." Thirty-three percent of the students majored in drafting, 22 percent majored in computer programming, 22 percent majored in accounting, and 22 percent reported "other." Forty-four percent reported a profound hearing loss, 33 percent a severe hearing loss, 11 percent a moderate hearing loss, and 11 percent reported a mild hearing loss. Thirty-three percent of the students were unemployed, 55 percent were employed in jobs related to their majors, and 11 percent answered "other."

#### Administration/Interpreter Responses to Experience with Deaf Students

The responses to questions relating to the previous experience of administrators/interpreters are presented in Table VI. The level of sign language certification of administrator/interpreters who had worked with the hearing impaired program at OSU-TI was reported as 61 percent uncertified at any level, while 23 percent had national certification and 15 percent had state certification. Sixty-one percent of the individuals learned sign language through formal sign classes, seven percent through the church, 23 percent learned through other sources not listed, and seven percent did not know sign language. Sixty-one percent knew about deafness prior to working at OSU-TI through deaf family members or friends, 23 percent had been involved with the deaf at church, and 15 percent had worked with the deaf. Sixty-one percent of the respondents were currently involved with the deaf as interpreters, 15 percent work with the deaf at church, 15 percent held jobs with deaf individuals, and seven percent were involved in organizations

TABLE VI  
 ADMINISTRATOR/INTERPRETER RESPONSES TO  
 EXPERIENCE WITH DEAF STUDENTS

Question	Number	Percent*
Sign language certificate		
State	2	15
National	3	23
No certification	8	61
Sign language was learned		
Sign classes	8	61
Church	1	7
Interpreter training	0	0
Don't know	1	7
Other	3	23
Knew about deafness before		
Church	3	23
Family or friend	8	61
Prior work experience	2	15
Involved with deafness through		
Church	2	15
Interpreter	8	61
Work	2	15
Organization	1	7

\*Numbers may not total 100 due to rounding.

for and with the deaf.

Faculty Responses to Experience  
with Deaf Students

The responses to faculty's experience with deaf students are presented in Table VII. Twenty-five percent of the faculty respondents at OSU-TI had deaf students in class for the first time in spring 1983. Thirty-seven percent had deaf students twice before and 37 percent had deaf students three or more times before.

Eighty-one percent of the faculty said that the deaf students used interpreting as a support service from the Hearing Impaired Program. Six percent did not know what support services were used. Six percent felt the students used notetaking, tutoring, and interpreting, and six percent felt students only used notetaking services.

Fifty-six percent of the faculty's reaction to deaf students in class felt that it would be a valuable learning experience, six percent of the faculty reacted with fear to having deaf students in class, and six percent had a feeling of helplessness. Thirty-one percent listed "other" as a reaction to deaf students in their classes.

Of all the faculty reporting, 43 percent had associated with the deaf and 56 percent had never associated with the deaf. Twenty-five percent had read about deafness, 25 percent had friends or relatives who were deaf, 12 percent had attended professional workshops on deafness, 18 percent had no knowledge of deafness, and 18 percent reported "other" resources as their source of knowledge of deafness.

Fifty percent of the faculty felt that some of the difficulties deaf students had in a post-secondary institution were the English

TABLE VII  
FACULTY RESPONSES TO EXPERIENCE WITH DEAF STUDENTS

Question	Number	Percent*
Number of times deaf students were in your class?		
First time	4	25
Second time	6	37
Three or more	6	37
Which services did deaf students use?		
Notetaking	1	6
Interpreting	13	81
Tutoring	0	0
All of the above	1	6
None of the above	0	0
I don't know	0	0
Other	1	6
Reaction to deaf students in class?		
Fear	1	6
Helplessness	1	6
Upset	0	0
Valuable learning experience	9	56
Other	5	31
Association with deaf before?		
Yes	7	43
No	9	56
Knowledge of deafness is through		
Friend or relative	4	25
What I have read	4	25
Workshops on deafness	2	12
No knowledge	3	18
Other	3	18
Difficulties students have in college		
English language	1	6
Vocabulary	3	18
Low reading level	1	6
Maturity	1	6
All of the above	8	50
Other	2	12

TABLE VII (Continued)

Question	Number	Percent*
Deaf Students best communicate with		
Speechreading (A)	1	6
Sign language (B)	4	25
Vocalization (C)	1	6
A & B	4	25
A & C	1	6
A, B, & C	4	25
B & C	1	6
Responsibility of communicating should be		
Interpreter's	1	6
Instructor's	3	20
Students'	1	6
All of the above	11	68

\*Numbers may not total 100 due to rounding.

language, vocabulary, low reading levels, and maturity. Eighteen percent felt vocabulary to be the problem, six percent felt the English language to be the problem, six percent saw maturity as the problem, six percent perceived low reading levels to be a problem, and 13 percent felt there were "other" problems.

The faculty respondents felt that 25 percent of the deaf best communicated with sign language. Twenty-five percent felt best communication was achieved with speech reading, sign language, and vocalization. Twenty-five percent felt the deaf best communicated with speech reading and sign language. Six percent felt speech reading and vocalization to be best and six percent felt sign language and vocalization to be best and six percent felt sign language and vocalization to be the best communication mode.

Sixty-eight percent of the faculty felt it was the responsibility of the interpreter, student, and instructor to make sure communication was taking place for the deaf student. Eighteen percent felt it was the instructor's responsibility to communicate to the deaf student. Six percent felt it was the job of the interpreter and six percent felt it was the deaf student's responsibility to make sure communication was clear.

#### Student Responses to Support Services in the Hearing Impaired Program

The responses of the deaf students to the support services of the Hearing Impaired Program at OSU-TI are presented in Table VIII. The responses are further explained as follows: 33 percent received interpreting and tutoring, 22 percent received interpreting, tutoring,

TABLE VIII  
STUDENT RESPONSES TO SUPPORT SERVICES

Question	Number	Percent*
Received support services		
Interpreting	1	11
Tutoring	1	11
Notetaking	0	0
Computer-assisted instruction	0	0
Both A & B	3	33
Both B & C	1	11
Both A & C	1	11
A, B, C, & D	2	22
Most helpful support service		
Interpreting	7	77
Tutoring	1	11
Notetaking	1	11
Computer-assisted instruction	0	0
Preferred method of instruction		
Lecture	0	0
Lab	0	0
Audio-visual	0	0
Chalkboard	2	22
A & B	2	22
A & C	0	0
A & D	5	55
Reason for attending OSU-TI		
Two-year program	5	55
One-year certificate	0	0
Provided interpreters and support services	4	44
Heard it was an easy college	0	0
Learned about OSU-TI		
Brochure	0	0
Friend	2	22
Teacher or counselor	5	55
Another students	0	0

\*Numbers may not total 100 due to rounding.



notetaking, and computer-assisted instruction, 11 percent received interpreting, 11 percent received tutoring, 11 percent received tutoring and notetaking, and 11 percent received interpreting and notetaking. The support service that the deaf students felt helped the most was interpreting with a 77 percent scoring on the questionnaire. The methods of instruction most preferred by the deaf student were lecture and chalkboard usage, with five respondents (55 percent). Twenty-two percent of the students preferred the chalkboard and 22 percent preferred lecture and lab as their favorite methods of instruction. Fifty-five percent of the deaf students cited their reason for attending OSU-TI was because it was a two-year program. Forty-four percent attended OSU-TI because interpreter and support services for the deaf were offered.

#### Comparison of Responses of Statements

Questions one-ten of the questionnaires are referred to as demographic data, part I. Questions 11-18 of the questionnaires are referred to as the statements, part II. The comparison of responses to the statements is presented in three Tables. Table IX, Frequency of Responses to Statements by Respondent Groups, reports the number of respondents and how they responded to the statements.

The mean responses to the eight statements by respondent group are presented in Table X. The means are computed using the scale where strongly agree=2, agree=1, disagree=-1, and strongly disagree=-2. The means ranged from a low of -1.3 for statement 16 of the faculty group to a high of 1.5 for statement 14 of the faculty group and 1.5 on

TABLE IX  
 FREQUENCY OF RESPONSES TO STATEMENTS  
 BY RESPONDENT GROUPS

Statement Number	Admin/Interp. N=13					Faculty N=16					Student N=9				
	SA	A	D	SD	NR	SA	A	D	SD	NR	SA	A	D	SD	NR
11	1	8	2	1	1	4	9	1	0	2	0	8	1	0	0
12	2	5	6	0	0	0	8	6	0	2	1	5	3	0	0
13	2	11	0	0	0	0	2	11	0	1	2	6	1	0	0
14	2	11	0	0	0	2	4	11	0	1	4	4	1	0	0
15	0	2	8	2	1	1	4	6	2	2	1	5	2	1	0
16	0	2	6	5	0	0	2	5	9	0	2	4	1	1	0
17	3	2	7	1	0	1	6	9	0	0	4	1	2	1	0
18	6	6	1	0	0	2	12	0	0	1	3	5	0	0	0

TABLE X  
 MEAN RESPONSES TO STATEMENTS BY RESPONDENT GROUP

Statement Number	Admin/Interp. N=13 $\bar{X}$	Faculty N=16 $\bar{X}$	Student N=9 $\bar{X}$
11	.5	.8	.8
12	.2	.1	.3
13	1.2	1.2	1
14	1.2	1.5	1.2
15	-.8	-.3	.3
16	-.5	-1.3	1
17	-.08	-.06	1.5
18	1.3	.8	1.3

statement 17 of the student group.

The results of the ANOVA tests are presented in Table X. Each statement is discussed below.

The first statement asked if the Hearing Impaired Program provided sufficient support services to meet the needs of the deaf in a post-secondary setting. The calculated value of the ANOVA was .26 which was not significant for the three groups.

There were no significant differences in the respondent's responses to the statement of "a two-year technical program is sufficient for job placement of the deaf." The calculated ANOVA value for the second statement was .07.

In the third statement, all three groups felt that the deaf can generally function in the regular classroom with the proper support services. The calculated ANOVA value was .2, which indicated no significant difference in the opinions of the three groups.

For the fourth statement, the ANOVA had a calculated value of 1, which shows that all three groups felt the deaf should be integrated with the hearing students in the post-secondary classroom. The calculated value was not significant according to the ANOVA.

Statement five had a calculated value of 2.46 which was not significant. According to the means of each group, all three groups did not necessarily think that the deaf were ready for a post-secondary program upon completion of a secondary program.

Statement six was significant, with a calculated value of 18.2. The difference was significant at the .05 level. The sixth statement was that the deaf should only be given the same services as any other student. The students responded with a group mean of 1, while the

TABLE XI  
RESULTS OF ANALYSIS OF VARIANCE FOR STATEMENTS

Source	D.F.	S.S.	M.S.	F
Support Services				
Between Groups	2	.64	.32	.258
Within Groups	33	41.00	1.24	
Total	35	41.64		
Job Placement				
Between Groups	2	.2	.1	.07
Within Groups	33	9.4	.28	
Total	35	43.2		
Regular Classroom				
Between groups	2	.1	.05	.2
Within Groups	33	9.4	.28	
Total	35	9.5		
Integration				
Between Groups	2	.6	.3	1
Within Groups	32	9.1	.3	
Total	34	9.7		
Readiness				
Between Groups	2	6.4	3.2	2.26
Within Groups	32	59.5	1.3	
Total	34	65.9		
Same Services				
Between Groups	2	36.3	18.15	18.15*
Within Groups	33	70.6	1	
Total	35	106.9		
Interpreter Use				
Between Groups	2	15.5	7.75	5.96*
Within Groups	34	59.3	1.3	
Total	36	74.8		
Overall Attitude				
Between Groups	2	.1	.05	.13
Within Groups	34	13.3	.39	
Total	36	13.4		

\*Significant at the .05 level.

faculty had a group mean of  $-1.3$  and the administrator/interpreters had a group mean of  $-.5$ . The student group apparently agreed with the statement while the other groups did not necessarily have the same opinion as the students.

The seventh statement was the interpreter should be used for classroom lecture and not as a tutor. The mean for the administrator/interpreter group to statement seven was  $-.08$ , the mean for the faculty group was  $-.06$  and the mean for the student group was  $1.5$ . The calculated value was  $5.96$ , which is significant at the  $.05$  level. The student group apparently agreed with the statement while the other two groups did not necessarily have the same opinion as the students.

Statement eight had a calculated value of  $.13$ , which was not significant. All three groups agreed that the overall attitude of the faculty at OSU-TI towards the deaf students was positive.

The results of the Newman-Keuls procedure are presented in Table XII and Table XIII. The Newman-Keuls test was administered on statements six and seven to determine if the calculated values remained significant between the groups. For statement six, the Newman-Keuls found a significant difference between the faculty and student group, and also between the administrator/interpreter group and student group. There was also a significant difference in statement seven between the student group and faculty group and between the administrator/interpreter and student group. It can be surmised from the ANOVA and the Newman-Keuls test results that the difference between the groups for statements six and seven could be used for further studies.

Responses to the comments, part III of the questionnaire are presented in Appendixes G-I. Appendix G lists the comments made by

TABLE XII  
 RESULTS OF APPLICATION OF NEWMAN-KEULS PROCEDURE  
 TO IMPORTANCE VALUES ANOVA

Statement Six	Faculty <sup>a</sup>	Admin/Interp <sup>a</sup>	Students <sup>a</sup>	r <sup>b</sup>	Critical Value
Same Services					
Faculty (-1.3)	---	.8	2.3*	3	.944
Admin/Interp. (-15)		--	1.5*	2	.827
Students (1.0)			---		

a - numbers in table represent differences between pairs of means.

r<sup>b</sup> - number of means spanned by a comparison.

\* - significant at the .05 level.

TABLE XIII  
 RESULTS OF APPLICATION OF NEWMAN-KEULS PROCEDURE  
 TO IMPORTANCE VALUES ANOVA

Statement Seven	Admin/Interp. a	Faculty <sub>a</sub>	Student <sub>a</sub>	r <sup>b</sup>	Critical Value
Interpreter Use Admin/Inter (-.08)	--	.02	1.42*	3	1.176
Faculty (-.06)		---	1.44*	2	.892
Students (1.5)			----		

a - Numbers in table represent differences between pairs of means.

r<sup>b</sup> - number of means spanned by a comparison.

\* - significant at the .05 level.



the administrator/interpreters. The comments varied in nature and the only reoccurring comment was that the program was good. Appendix H lists the comments made by the faculty. The comments from the faculty group varied, although the comment for the need of a remedial program was made more than once. Appendix I lists the comments made by the students. The comments from the student group varied, but more than one student expressed concern in the interpreter services.

## CHAPTER V

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FURTHER STUDY

The purpose of this study was to assess the past performance of the Hearing Impaired Program and to gather information in regard to the program as perceived by professionals and students of the program. The Hearing Impaired Program began in 1976, and has not been formally evaluated. The evaluation of the program should help to assess the past performance, the strengths and weaknesses, and to establish new goals for the program.

A review of literature was undertaken to determine what information was available to the researcher that related, either directly or indirectly, to the training of the deaf in a post-secondary technical program. The researcher also determined what information was available in regard to other post-secondary technical programs.

Information in regard to the Hearing Impaired Program was attained from the Admissions Office of the Vocational Rehabilitation Counselor, and the Office of the Coordinator of the Hearing Impaired Program. A total number of 39 hearing impaired students had entered the program since 1976. The drop-out rate among the hearing impaired students was 51 percent and the percentage of graduates was 17.

Questionnaires were designed to gather the perceptions of professionals and students of the Hearing Impaired Program. The questionnaires

were mailed to the respondents. Two-weeks later a follow-up letter and questionnaire was sent to those who had not responded. The response rate of the questionnaires was 84 percent.

Part I of the questionnaire was reported in narrative and table form in Chapter IV. Part II of the questionnaire was identical for all three respondent groups. The ANOVA was administered on each statement of Part II to determine if the calculated values for each statement were significantly different. Statement six and seven of part II were found to be significantly different. The Newman-Keuls test was administered on statement six and seven to determine if the differences found were significantly different among the three groups. The results of the Newman-Keuls found the results to be significantly different among the student group compared to the interpreter/administrator group and the faculty group on both statements.

### Conclusions

It is perceived according to the study that:

1. The Hearing Impaired Program at OSU-TI is perceived to offer adequate support services to the hearing impaired students.
2. The deaf can generally function in the regular post-secondary classroom at OSU-TI with the proper support services.
3. The deaf student should be integrated at post-secondary level with the hearing students.
4. The faculty's attitude at OSU-TI toward the hearing impaired student in the classroom is positive.
5. A two-year technical institute, such as OSU-TI, is sufficient for job placement of the hearing impaired.

6. The deaf are not necessarily ready for a post-secondary education program upon completion of a secondary program, and some of the areas a student might have difficulties in are: reading, maturity, vocabulary, and the syntax of the English language.

#### Recommendations

Based on the findings of the study it is recommended that:

1. There is a need for remedial classes for the hearing impaired prior to entry of the regular classroom.
2. There is a need for more emphasis on interpreters' qualifications and skills.
3. A more defined orientation program for the faculty should be available with recommendations on how to work with the hearing impaired student and the interpreter in the classroom.
4. Further recruitment efforts should be directed to the high school counselors and teachers of hearing impaired students.

#### Further Study

The researcher has found, after concluding this study, that many other areas of interest have been aroused for further study. Some of these are:

1. Detailed information on the attrition rate at OSU-TI and how it would compare to other post-secondary hearing impaired technical programs should be compiled.
2. How the attrition rate of the hearing impaired student compares to that of the hearing student at OSU-TI.
3. The effectiveness and feasibility of the interpreter/tutor

position in post-secondary education should be studied.

4. Further research of the hearing impaired students' academic readiness to enter a post-secondary program upon completion of a secondary education should be studied.

5. Further research should be done to determine why there was such a significance from the student group to the faculty and administrator/interpreter group toward the interpreter/tutor.

6. Further research should be done to determine why the hearing impaired students felt they should only receive the same services as the hearing students, while the faculty and administrator/interpreter group felt the hearing impaired students needed additional services.

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APPENDIXES



APPENDIX A

ADMINISTRATION/INTERPRETER

QUESTIONNAIRE

I. Circle the answer that best fits your response.

1. What was (is) your job title or position at OSU-TI in the Hearing Impaired Program?
  - A. Director
  - B. Coordinator
  - C. Interpreter
  - D. Other. Please specify. \_\_\_\_\_
  
2. How many years have you been employed at OSU-TI?
  - A. Less than 1 year
  - B. 1-4 years
  - C. 5-9 years
  - D. 10 or more years
  
3. Are you currently employed at OSU-TI?
  - A. Yes
  - B. No
  
4. You were (are) employed in the Hearing Impaired Program
  - A. full-time.
  - B. three-quarter time.
  - C. one-half time.
  - D. hourly.
  
5. Your chief responsibility in the Hearing Impaired Program was (is)
  - A. an administrative function.
  - B. a support service to the students.
  - C. Other. Please specify. \_\_\_\_\_
  
6. What is your educational background?
  - A. High school graduate
  - B. Associate degree
  - C. Bachelor's degree
  - D. Master's degree
  - E. Other. Please specify. \_\_\_\_\_
  
7. What is your level of certification in sign language?
  - A. State
  - B. National
  - C. No Certification
  - D. Other. Please specify. \_\_\_\_\_
  
8. I learned sign language in
  - A. formal sign classes.
  - B. church.
  - C. an interpreter training program.
  - D. I don't know sign language.
  - E. Other. Please specify. \_\_\_\_\_

9. I had knowledge of deafness before working in the Hearing Impaired Program through my
- church.
  - family or friend.
  - prior work experience.
  - Other. Please specify. \_\_\_\_\_
10. I am currently involved with the deaf through
- church.
  - As an interpreter.
  - work.
  - organizations. Please specify. \_\_\_\_\_
- II. Please respond to the statements below by circling the response which is most closely related to your beliefs.
- |                        |   |
|------------------------|---|
| Strongly Agree (SA)    | If you <u>strongly agree</u> with the statement.    |
| Agree (A)              | If you <u>mildly agree</u> with the statement.      |
| Disagree (D)           | If you <u>mildly disagree</u> with the statement.   |
| Strongly Disagree (SD) | If you <u>strongly disagree</u> with the statement. |
11. OSU-TI's Hearing Impaired Program presently provides sufficient support services to meet the needs of the deaf in a post-secondary setting.
- (SA)                    (A)                    (D)                    (SD)
12. A two-year technical training program is sufficient for job placement of the deaf.
- (SA)                    (A)                    (D)                    (SD)
13. The deaf can generally function in the regular classroom with the proper support services.
- (SA)                    (A)                    (D)                    (SD)
14. The deaf should be integrated with the hearing students in the post-secondary classroom.
- (SA)                    (A)                    (D)                    (SD)
15. The deaf are generally ready for a post-secondary program upon completion of a secondary program.
- (SA)                    (A)                    (D)                    (SD)
16. The deaf should only be given the same services as any other student.
- (SA)                    (A)                    (D)                    (SD)
17. The interpreter should only be used for classroom lecture and not as a tutor.
- (SA)                    (A)                    (D)                    (SD)
18. The overall attitude of the faculty at OSU-TI towards the deaf students is positive.
- (SA)                    (A)                    (D)                    (SD)

III. Please answer the following questions to the best of your ability.

- A. Describe three of the major problems you had in association with the Hearing Impaired Program.
- 1.
  - 2.
  - 3.
- B. In your opinion, of all the major support services (tutoring, interpreting, note-taking, etc.,) the Hearing Impaired Program offers, which is the most beneficial to the deaf student? \_\_\_\_\_ . Please explain.
- C. In your opinion, how can interpreters be better utilized to facilitate the classroom setting?
- D. Any additional comments?

THANK YOU FOR YOUR ASSISTANCE IN THIS SURVEY! PLEASE RETURN THIS FORM AS SOON AS POSSIBLE TO:

Sharon Spence  
Coordinator, Hearing Impaired Program  
Oklahoma State University  
Technical Institute  
900 North Portland Avenue  
Oklahoma City, Oklahoma 73107

APPENDIX B

STUDENT QUESTIONNAIRE

I. Circle the answer that most closely applies to you.

1. I am a \_\_\_\_\_ of OSU-TI.
  - A. Graduate
  - B. Student
  - C. Other. Please specify. \_\_\_\_\_
  
2. I graduated with
  - A. An Associate's Degree.
  - B. A Certificate.
  - C. Other. Please specify. \_\_\_\_\_
  
3. I graduated in the calendar year
  - A. 1982.
  - B. 1981.
  - C. 1980.
  - D. 1979.
  - E. Other. Please specify. \_\_\_\_\_
  
4. I majored in
  - A. Computer Programming.
  - B. Accounting.
  - C. Drafting.
  - D. Other. Please specify. \_\_\_\_\_
  
5. I received the following support services:
  - A. Interpreting
  - B. Tutoring
  - C. Note-taking
  - D. Computer-Assisted Instruction (CAI)
  - E. Both A and B
  - F. Both B and C
  - G. Both A and C
  - H. A, B, C, and D
  
6. What support service helped you the most?
  - A. Interpreting
  - B. Tutoring
  - C. Note-taking
  - D. Computer-Assisted Instruction (CAI)

7. What method of instruction did you prefer?

- A. Lecture
- B. Lab
- C. Audio-Visual (overhead, films, etc.)
- D. Chalkboard
- E. A & B
- F. A & C
- G. A & D

8. What was your primary reason for attending OSU-TI?

- A. Two-year program.
- B. One-year certificate.
- C. Provided interpreters and other support for the deaf.
- D. Heard it was an easy college.
- E. Other. Please specify. \_\_\_\_\_

9. How did you learn about OSU-TI?

- A. Brochure or magazine.
- B. From a friend.
- C. Teacher or counselor.
- D. Another student from OSU-TI .
- E. Other. Please specify.

10. What degree of hearing-impairment do you have?

- A. Profound.
- B. Severe.
- C. Moderate.
- D. Mild.

11. I am currently

- A. Unemployed.
- B. Employed in a job related to my major.
- C. Employed in a job unrelated to my major.
- D. Other. Please specify. \_\_\_\_\_

II. Please respond to the statements below by circling the response which most closely supports your beliefs.

- |                        |   |
|------------------------|---|
| Strongly Agree (SA)    | If you <u>strongly agree</u> with the statement.    |
| Agree (A)              | If you <u>mildly agree</u> with the statement.      |
| Disagree (D)           | If you <u>mildly disagree</u> with the statement.   |
| Strongly Disagree (SD) | If you <u>strongly disagree</u> with the statement. |

12. OSU-TI's Hearing Impaired Program presently provides sufficient support services to meet the needs of the deaf in a post-secondary setting.

- (SA)                      (A)                      (D)                      (SD)

13. A two-year technical training program is sufficient for job placement of the deaf.  
(SA) (A) (D) (SD)
14. The deaf can generally function in the regular classroom with the proper support services.  
(SA) (A) (D) (SD)
15. The deaf should be integrated with the hearing students in the post-secondary classroom.  
(SA) (A) (D) (SD)
16. Most deaf students are academically ready for a post-secondary program upon completion of a secondary program.  
(SA) (A) (D) (SD)
17. The deaf should only be given the same services as any other student.  
(SA) (A) (D) (SD)
18. The interpreter should only be used for classroom lecture and not as a tutor.  
(SA) (A) (D) (SD)
19. The overall attitude of the faculty at OSU-TI towards the deaf students is positive.  
(SA) (A) (D) (SD)

III. Please answer the questions below to the best of your ability.

A. What improvements can be made to better serve the deaf?

B. Do you feel you needed more remedial classes prior to entering the classroom?



- C. List any ways you think the Hearing Impaired Program can improve its services to the deaf student population at OSU-TI.

THANK YOU FOR YOUR ASSISTANCE IN THIS SURVEY! PLEASE RETURN THIS FORM AS SOON AS POSSIBLE TO:

Sharon Spence  
Coordinator, Hearing Impaired Program  
Oklahoma State University  
Technical Institute  
900 North Portland Avenue  
Oklahoma City, Oklahoma 73107

APPENDIX C

FACULTY QUESTIONNAIRE

I. Circle the answer that best fits your response. Please be sure to respond to all questions.

1. What is your classification at OSU-TI?

- A. Full-time faculty.
- B. Adjunct faculty.
- C. Other. Please specify. \_\_\_\_\_

2. How many years have you been employed at OSU-TI?

- A. Less than 1 year.
- B. 1-4 years
- C. 5-9 year.
- D. 10 or more years.

3. How many times have you had deaf students in your class?

- A. This is the first time.
- B. This is the second time.
- C. Three or more times.

4. Which of the services from the Hearing Impaired Program did the deaf student use for Spring Semester, 1983?

- A. Note-taking.
- B. Interpreting.
- C. Tutoring.
- D. All of the above.
- E. None of the above.
- F. I don't know.
- G. Other. Please specify. \_\_\_\_\_

5. The first time you saw a deaf student and an interpreter in your class, what was your reaction?

- A. Fear.
- B. Helplessness.
- C. Upset.
- D. A valuable learning experience.
- E. Other. Please specify. \_\_\_\_\_

6. Have you had any association with the deaf before?

- A. Yes.
- B. No

7. My knowledge of deafness is through

- A. A friend or relative
- B. What I have read.
- C. Professional orientations or workshops on deafness.
- D. No knowledge.
- E. Other. Please specify. \_\_\_\_\_

8. Which of the below would best explain some of the difficulties a deaf student might have in a post-secondary institution?
- The structured English language.
  - Vocabulary.
  - Low reading level.
  - Maturity.
  - All of the above.
  - Other. Please specify. \_\_\_\_\_
9. The deaf student can best communicate with
- Speech reading (reading lips).
  - Sign language.
  - Vocalization (oral communication).
  - A & B
  - A & C
  - A, B, & C
  - B & C
10. The primary responsibility of communicating should be the
- Interpreter's
  - The instructor's
  - The student's
  - All of the above.
- II. Please respond to the statements below by circling the response which is most closely related to your beliefs.
- |                        |   |
|------------------------|---|
| Strongly Agree (SA)    | If you <u>strongly agree</u> with the statement.    |
| Agree (A)              | If you <u>mildly agree</u> with the statement.      |
| Disagree (D)           | If you <u>mildly disagree</u> with the statement.   |
| Strongly Disagree (SD) | If you <u>strongly disagree</u> with the statement. |
11. OSU-TI's Hearing Impaired Program presently provides sufficient support services to meet the needs of the deaf in a post-secondary setting.
- (SA)                      (A)                      (D)                      (SD)
12. A two-year technical training program is sufficient for job placement of the deaf.
- (SA)                      (A)                      (D)                      (SD)
13. The deaf can generally function in the regular classroom with the proper support services.
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- (SA)                      (A)                      (D)                      (SD)
15. The deaf generally are ready for a post-secondary program upon completion of a secondary program.
- (SA)                      (A)                      (D)                      (SD)

16. The deaf should only be given the same services as any other student.

(SA) (A) (D) (SD)

17. The interpreter should only be used for classroom lecture and not as a tutor.

(SA) (A) (D) (SD)

18. The overall attitude of the faculty at OSU-TI towards the deaf students is positive.

(SA) (A) (D) (SD)

III. Please answer the questions below to the best of your ability.

A. In your opinion, what is the role of the interpreter? Explain.

B. Do you feel the deaf students impose on your time when additional help is needed? Yes \_\_\_\_\_; No \_\_\_\_\_. Please explain.

C. Should OSU-TI provide additional services to the deaf students? Yes \_\_\_\_\_; No \_\_\_\_\_. Please elaborate on your yes or no answer.

D. Additional comments:

THANK YOU FOR YOUR ASSISTANCE IN THIS SURVEY! PLEASE RETURN THIS FORM AS SOON AS POSSIBLE TO:

Sharon Spence  
 Coordinator, Hearing Impaired Program  
 Oklahoma State University  
 Technical Institute  
 900 North Portland  
 Oklahoma City, Oklahoma 73107

APPENDIX D

INDIVIDUALS USED FOR FIELD  
TESTING THE INSTRUMENT

Jake Uhrich - had hearing impaired students in the classroom before.

Dale Fredrickson - had just completed a questionnaire for his Master's thesis in 1981.

Glen Miller - has worked in the administration of the deaf and deaf programs for many years.

Cary Bartlow - has worked with the deaf and is hearing impaired himself.

Bob Gilkeson - has worked with the deaf in the classroom and individually.

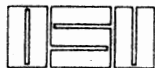
Joanne Forgue - has worked with the deaf in the classroom and tutored the deaf individually.

Larry Somers - has worked with the deaf students both in and outside the classroom and has some knowledge of sign language.

APPENDIX E

COVER LETTER FOR THE  
QUESTIONNAIRES





*Oklahoma State University*

THE TECHNICAL INSTITUTE  
900 North Portland  
Oklahoma City, OK 73107  
947-4421, Area Code 405

March 10, 1983

Dear Administrator:

The Hearing Impaired Program at OSU-TI has never been formally evaluated. It is the intent of the Program to improve the services to the hearing impaired. One of the best ways of accomplishing this is to gather some opinions from people like you who have worked with the hearing impaired students.

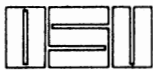
Your input in this questionnaire is vital for the evaluation, improvements, and future projections of the Hearing Impaired Program.

Please answer all questions to the best of your ability and return the questionnaire as soon as possible. Thank you for your time and cooperation in this matter. We are looking forward to a prompt reply.

Sincerely,

Sharon Spence  
Coordinator  
Hearing Impaired Program

SS/jp



*Oklahoma State University*

THE TECHNICAL INSTITUTE  
900 North Portland  
Oklahoma City, OK 73107  
947-4421, Area Code 405

March 10, 1983

Dear Faculty Member:

The Hearing Impaired Program at OSU-TI has never been formally evaluated. It is the intent of the Program to improve the services to the hearing impaired. One of the best ways of accomplishing this is to gather some opinions from people like you who have worked with the hearing impaired students in the classroom.

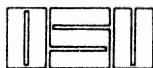
Your input in this questionnaire is vital for the evaluation, improvements, and future projections of the Hearing Impaired Program.

Please answer all questions to the best of your ability and return the questionnaire as soon as possible. Thank you for your time and cooperation in this matter. We are looking forward to a prompt reply.

Sincerely,

Sharon Spence  
Coordinator  
Hearing Impaired Program

SS/jp



*Oklahoma State University*

THE TECHNICAL INSTITUTE  
900 North Portland  
Oklahoma City, OK 73107  
947-4421, Area Code 405

March 10, 1983

Dear Graduate:

The Hearing Impaired Program at OSU-TI has never been formally evaluated. It is the intent of the Program to improve the services to the hearing impaired. One of the best ways of accomplishing this is by asking you and other graduates some questions that will help us to evaluate the Program.

Your comments and input of this questionnaire are vital for the evaluation, improvements, and future projections of the Hearing Impaired Program.

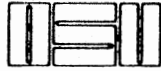
Please answer all questions to the best of your ability and return the questionnaire as soon as possible. Thank you for your time and cooperation in this matter. We are looking forward to a prompt reply.

Sincerely,

Sharon Spence  
Coordinator  
Hearing Impaired Program

SS/jp

APPENDIX F  
FOLLOW-UP LETTER TO THE  
QUESTIONNAIRE



Oklahoma State University

THE TECHNICAL INSTITUTE  
900 North Portland  
Oklahoma City, OK 73107  
947-4421, Area Code 405

March 31, 1983

Dear Administrator, Faculty, or Student:

The Hearing Impaired Program at Oklahoma State University Technical Institute on March 10, 1983, sent you a letter and questionnaire. We have not received a reply from you.

Your input in the evaluation process of the Hearing Impaired Program is imperative in making the study a legitimate one. We cannot conclude our study without your input. We are sure that this was a simple oversight on your part, and that upon receipt of this letter you will promptly sit down, fill out the questionnaire, and return it by return mail. Please find the enclosed self-addressed, stamped envelope for your convenience.

We appreciate your prompt attention, enthusiasm, and cooperation in this project. We are awaiting your reply.

Sincerely,

Sharon Spence  
Coordinator  
Hearing Impaired Program

SS/jp

APPENDIX G

ADMINISTRATION/INTERPRETER COMMENTS TO THE  
HEARING IMPAIRED PROGRAM AT OKLAHOMA  
STATE UNIVERSITY TECHNICAL  
INSTITUTE

"Notetaking can be the most beneficial support service to the students if the language level is reduced in the notes."

"One of the major problems the hearing impaired students have is student preparation and background."

"Interpreting is the most beneficial support system to the hearing impaired student because the interpreter is a complete voice and ears for the student."

"I think OSUTI has a good program."

"I strongly feel that more careful screening and testing should be administered to potential new students. Those who fall far below the Standard should be encouraged to seek other educational opportunities and those who qualify should be introduced to preparatory courses, before actual classroom settings."

"Students need one on one tutoring because of the language barrier. This is needed to reinforce class lectures."

"Training sessions required for all interpreters before being used in the program. Ethics taught. Responsibilities delegated to interpreters and responsibilities delegated to the deaf, outlined in print and given to each."

"Good program -- good attitudes among staff -- very important to success."

"The interpreters can be better utilized to facilitate the classroom setting by having a good rapport with the instructors, know the content of the course, and follow-up with the students after class."

"The personal concern that is shown by the program personnel makes the program far more effective. The affective domain of learning for the deaf is of a great deal of importance."

"I feel there should be more video support material to complement the classroom lectures and labs. These may be available commercially or be developed by our staff. More availability of tutors with signing skills would be helpful."

"I have been pleased to see the instructors respond to the hearing impaired students in the same way as other students. The instructors seemed to be prepared for the interpreters which is nice."

APPENDIX H

FACULTY COMMENTS TO THE HEARING IMPAIRED

PROGRAM AT OKLAHOMA STATE

UNIVERSITY TECHNICAL

INSTITUTE



"The role of the interpreter should be to help make clear the meanings of the teacher's words and to help them get a clearer picture of the subject under discussion."

"The services now present in the Hearing Impaired Program seem to be fulfilling the needs of most students."

"A year of indoctrinization, remedial, and developmental work would certainly help."

"Faculty (and staff) should learn sign language in order to facilitate communication and rapport with the deaf."

"To interpret, the interpreter needs a fundamental knowledge of the subject."

"Classes should be smaller with deaf students mainstreamed."

"I feel the hearing impaired students are deficient in college entry skills, which makes it extremely difficult for them to keep up."

"The role of the interpreter is to facilitate communication."

"If education is going to be open to all persons on the post-secondary level, then colleges need to provide developmental programs to bring deaf students and all other students up to a level of skill that will allow the student some degree of success in college."

APPENDIX I

STUDENT COMMENTS TO THE HEARING IMPAIRED

PROGRAM AT OKLAHOMA STATE

UNIVERSITY TECHNICAL

INSTITUTE

"Needs more computer assisted instruction in all courses."

"Set up a deaf student club with hearing students."

"Needs more interpreters, more audio visual, and teachers oriented to association with the hearing handicapped."

"Interpreter services need to be improved."

"Workshops for students on how they can better work within guidelines and limits of professional interpreters, their ethics, role and general student behavior conducted by affiliates of the National Registry of Interpreters for the Deaf."

"Students need more help with vocabulary."

"Needs more follow-up to help students find fulltime employment."

"Remedial classes are needed in reading and language."

VITA

Sharon Lynne Spence

Candidate for the Degree of

Master of Science

Thesis: PERCEPTIONS OF THE HEARING IMPAIRED PROGRAM AT OKLAHOMA STATE UNIVERSITY TECHNICAL INSTITUTE

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Shattuck, Oklahoma, November 23, 1953, the daughter of Peggy M. and Ernest E. Hubbard.

Education: Graduated from Classen High School, Oklahoma City, Oklahoma, in May, 1971; received a Bachelor of Science degree from the University of Science and Arts of Oklahoma in Deaf Education in December, 1976; completed requirements for the Master of Science degree with a major in Occupational and Adult Education at Oklahoma State University in July, 1983.

Professional Experience: Deaf educator, Kelley Elementary, Moore, Oklahoma, 1976-1980; Coordinator of the Hearing Impaired Program, Oklahoma State University Technical Institute Oklahoma City, Oklahoma.

Professional Organizations: Member of Higher Education Alumni Council, Central Oklahoma Association for the Deaf and Hearing Impaired, Oklahoma Council for the Hearing Impaired, International Association of Parents of the Deaf, Alexander Graham Bell Association, Special Committee on Vocational-Technical Education Needs of the Deaf.