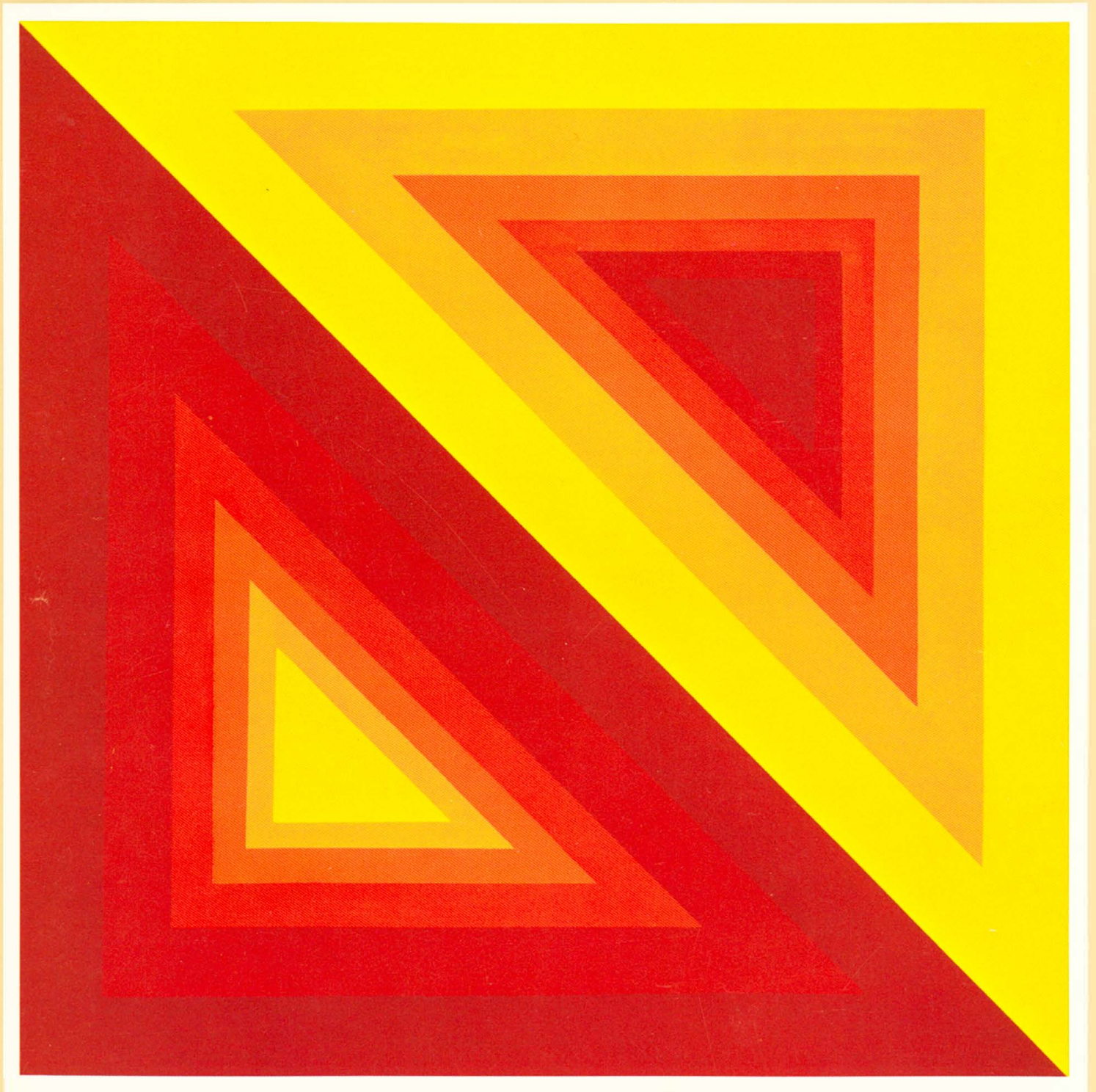


# ntid focus

Publication of the National Technical Institute for the Deaf



**Student Graphics Enhance New Facilities, pg. 4**

# NTID is Confident That Graduates Can Contribute To Social and Business World.

BY DR. ROBERT FRISINA

*Director of NTID*

Examine the direction of business, industry, government and education today, and you become increasingly aware that technology has become integral to all facets of the nation's economy. With the increase in technology has come the need for more education—and of even more significance—more specialized training.

In general terms, there has been a dramatic shift from unskilled labor to skilled technical and professional employees. The rapid pace implies increasing amounts of knowledge and skill and requires new levels of education.

Research indicates that most jobs can be carried out by persons with deafness. The deaf themselves have demonstrated they are as productive and reliable as non-deaf people. On the other hand, it is evident that the deaf population has been in semi-skilled and unskilled categories of employment. This employment trend related not to intellectual shortcomings, but rather, limited opportunities for appropriate education.

If this country has learned anything concerning employment of the handicapped, it is that an individual must be technically and personally prepared for a particular job. Business and industry need and demand productive employees.

The National Technical Institute for the Deaf was established in 1965 to broaden the career opportunities for

deaf people in partnership with secondary programs and Gallaudet College. Now NTID and Gallaudet, as the two national colleges, enroll approximately 60 percent of all deaf students attending postsecondary institutions.

NTID enrolls students whose general education level at the completion of high school is 8th grade and above. In order to compensate for this, great care has been taken in developing success in technical preparation, general education, personal, social and cultural development, and communication improvement.

Since technical education in general is not completely understood, it is not surprising that misconceptions develop when someone speaks of NTID. At NTID we think of technical education from two main perspectives: (1) The technical or professional skills a deaf student acquires through his or her educational experience through NTID programs or through the other colleges of Rochester Institute of Technology, NTID's sponsoring institution. (2) The broad general knowledge and life skills necessary for a deaf person to succeed both on the job and as a participant in any community.

NTID feels it has a good grasp on the technical education skills needed by students when they graduate. Professionals from business and industry assist NTID on curriculum advisory committees that keep all NTID programs in harmony with the skills that are required in the world of work.

Our cooperative education program continues to be important in helping

deaf students test skills in business and industry while still in college.

NTID feels the success of its graduates indicates the value of this program to deaf persons nationwide. Ninety-six percent of NTID's graduates seeking employment have found jobs, and ninety-four percent in areas commensurate with their level of education. NTID also has reversed a major trend in areas of employment. In the past, government and education provided most employment opportunities for the deaf. Eighty-six percent of NTID's graduates are employed in business and industry, ten percent in government, and four percent in education.

Research with NTID graduates indicates that general education life skills will continue to be a key to successful employment and community involvement. NTID continues to become more sophisticated in developing the personal and social competence of its graduates.

We are confident that technical education graduates from NTID will have the professional and life skills necessary to cope in today's society and will possess flexibility for employment in a variety of jobs connected with a particular discipline. The NTID graduate will have the skills to execute a variety of tasks in many firms nationwide.

Technically skilled deaf workers who have the general knowledge to compete in a technological society give NTID every confidence that it can match business and industry's needs.

# The NTID Story

The National Technical Institute for the Deaf (NTID) was created because of the need for educational opportunities for the deaf in technical fields. Many persons felt that the deaf could succeed in semi-professional and professional employment in science, technology and the applied arts if given a specialized education.

NTID is the only national postsecondary technical program for the deaf. It is also the first effort to educate large numbers of deaf students within a college campus planned primarily for hearing students.

NTID is located on the 1,300-acre campus of Rochester Institute of Technology (RIT) in Rochester, N.Y. RIT was chosen as NTID's sponsoring institution in 1966 because of its long history of success in technical education.

The first group of 70 students enrolled at NTID in 1968. The present enrollment of more than 550 students represents almost every state in the United States.

NTID was established through Public Law 89-36 in 1965 by an Act of Congress.

## The Basic Mission

NTID's basic mission is to provide, for postsecondary deaf students, the opportunity to prepare for and to pursue semi-professional and professional level educational programs in science, technology and applied arts that lead to successful employment in business, education, government and industry.

Funded by Congress through the U.S. Department of Health, Education and Welfare, NTID operates as a training center to assist in the preparation of qualified professionals to instruct and serve the deaf nationwide. It also functions as a forum for research and development to push forward the frontiers of knowledge of the education and communication skills of deaf people.

NTID's new facilities were dedicated on Saturday, October 5, 1974. The new \$27.5 million three-building complex, consisting of an academic building, residence hall and dining commons, is designed to meet the distinct learning needs of deaf students and to supplement existing facilities on the RIT campus and will provide postsecondary technical education for 750 deaf students each year.

## Table of Contents

Editorial: NTID is Confident . . . . .	2
The NTID Story . . . . .	3
Sounds of Silence . . . . .	4
What Are Characteristics of Entering Students? . . . . .	6
A Tribute To An 'American Scholar' . . . . .	9
Learning Centers . . . . .	10
"Once You Stop Learning — You're Dead!" . . . . .	12
NTID Buildings Win Top Honors . . . . .	12
Future Research Will Impact On Deaf Education . . . . .	13
HOPE's Loss is NTID's Gain . . . . .	14
Professional Staff: Independent and Creative . . . . .	16
Graduate Feature: Ken Sorokin Maps Out His Future . . . . .	17

## Cover Credit

The striking design on the cover was created by deaf student Farid Bozorgi of St. Claire Shores, Mich. Bozorgi, a fourth year art and design major in the College of Fine and Applied Arts, created the design as one of a series of five paintings that hang in the main reception area of the NTID Communication Center.

## ntid focus

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# Sounds of Silence

In the world of deafness, sounds can only be created through the sense of sight. The deaf create moods through colors, shapes and textures which many times serve as only an added dimension for the hearing world.

These "sounds of silence" can be seen at the National Technical Institute for the Deaf's new three-building complex in Rochester, N. Y. Shapes and colors fill the interior walls to provide a visually appealing experience for the deaf. The facility, which highlights the sense of sight, is unique because it was designed primarily as a living-learning experience for postsecondary deaf students.

Beth Bystrycki (Franklin Lakes, N.J.), a graduate of NTID, explains, "A hearing person can create moods from different sounds, but a deaf person must create the sound as well as the mood it expresses through his sense of sight."

Two initial design projects for the new facility were created by Beth and two other NTID graduates, Ted Austin (Rocky River, Ohio), and Mary Christopher (Bradford, Maine).

The three students used their artistic skills, nurtured in NTID's Visual Communications applied art program, to express "sounds."

A two-month class project for these students was a group of decorative banners which will hang under the skylights that cover the inner 'street' of the new academic building. A festival of colors, the banners will make the street area of the academic building conducive to socializing, as well as a visual relief from the concentrations of the windowless classrooms.

In order to get to the new dormitory or dining commons from the academic building, a tunnel system was established. Here the passageway bears no likeness to dreary subway walls or tenement halls. The supergraphics designed by these deaf students resemble a modern hieroglyphic scroll. Over 1,000 feet of tunnel will be brightened with nine different colors in the shapes of directional arrows, stripes, and symbols to make the walk attractive as well as to serve as a guide to different areas of the complex.

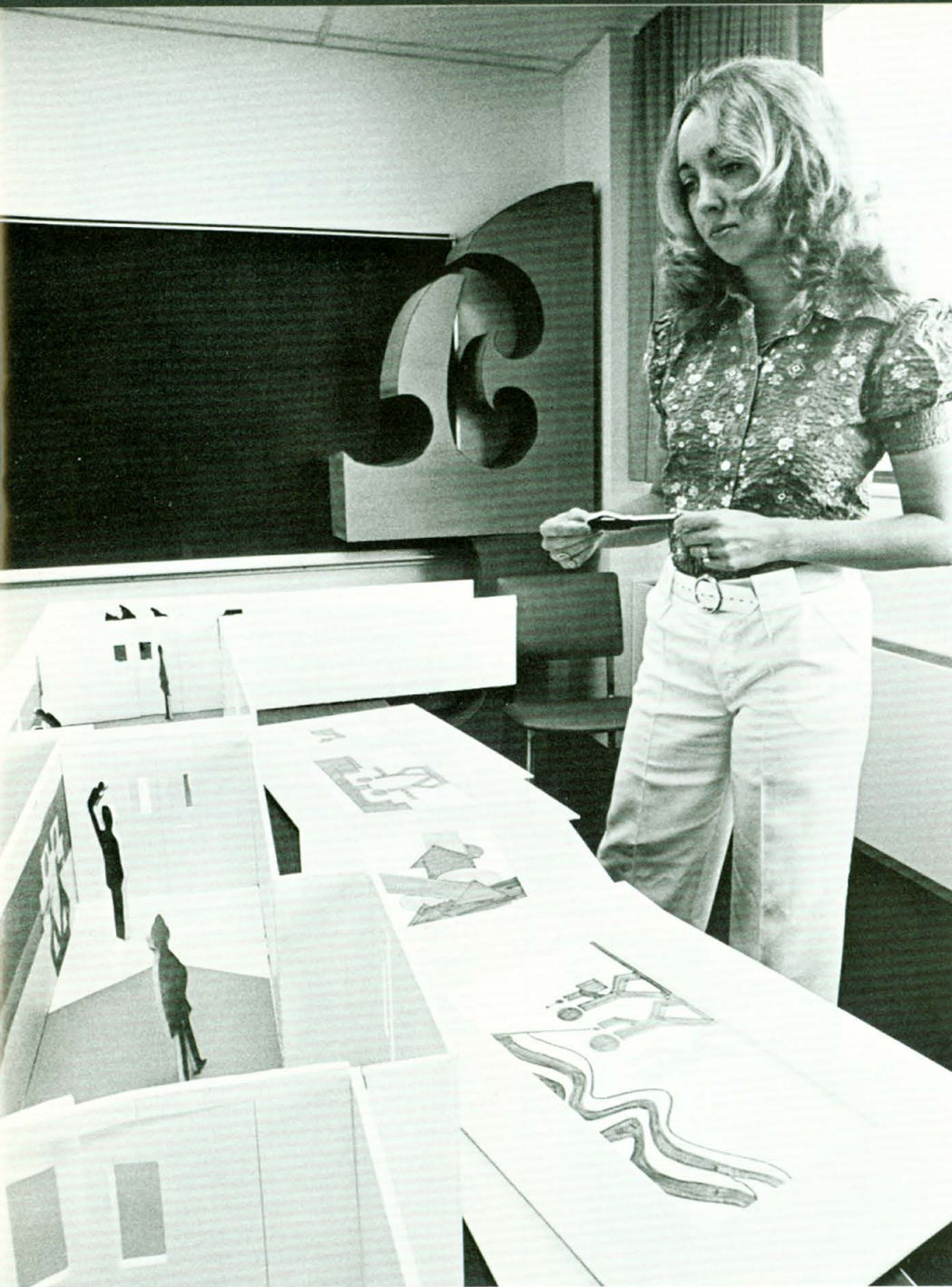
A direct result of the success of

the tunnel graphics is a group of projects currently being done within the building. Richard Burdo (Glens Falls, N.Y.), Thomas Nedved (Willow Springs, Ill.), John Baer (Shaver Lake, Conn.), and Janice Kowalski (Weyerhauser, Wisc.), are all working on graphic designs for different departments within NTID.

"The individual projects were assigned with a two-fold objective in mind," states Tim Ferguson, the students' art instructor. "The first is to strengthen their design ability by creating a useful project which must be approved by a client. And the second is to improve social and professional skills by having each student deal with the client on a one-to-one basis." The students will actually install all of the final work as opposed to contracting it out to another source.

Farid Bozorgi, an NTID student in the College of Fine and Applied Arts, has been commissioned to do a variation in color design in the Communication Center as well as having a number of his works loaned out to enhance office decor within the academic building.





**STUDENT GRAPHICS**—Students contributed the ideas for the graphic designs used throughout the new NTID complex. Beth Bystrycki (top left photo), an NTID alumnus, decides where graphics are to be used in the buildings. Farid Bozorgi (top right photo), James Baer, Janice Kowalski and Tom Nedved (left photo) also worked on designs.



# What Are Characteristics Of Entering Students?

A visitor to NTID recently asked for the description of the typical incoming deaf student. The answer, of course, was that the 263 students entering NTID in the fall of 1974 were as varied as the 41 states they represented.

Secondary school officials, on the other hand, are anxious to understand the characteristics of entering students because it's an indicator of a student's preparation in such areas as English, mathematics and science. It also helps secondary school educators assist deaf students to make more informed career choices.

NTID Career Opportunities Specialists have been presenting career programs to secondary schools and programs nationwide. The purpose has been to help both teachers and students understand the meaning of technical education, technical careers, and how NTID prepares deaf students with the professional and life skills to fit comfortably into a variety of jobs in the hearing world of work.

Of the 263 students who entered NTID in the fall of 1974, the following general facts are known:

- Number of females — 97 (36.9 percent)
- Number of males — 166 (63.1 percent)
- Average age at entry — 19.19
- Number married — 8
- Number with two deaf parents — 23
- Number with one deaf parent — 7
- Number from residential schools — 144 (54.8 percent)
- Number from day school programs — 119 (45.2 percent)
- Transfer students with previous postsecondary experience — 33
- Average hearing loss in left ear — 93.7 dB
- Average hearing loss in right ear — 94.1 dB

As part of the educational experience, all entering students participate in a Summer Vestibule Program. The program serves as an orientation to college life, self governance, and academic programs.

Of 158 entering students who made career choices prior to entering NTID,

69 percent kept the same choice following both general and intensive sampling of NTID programs. It is not surprising, however, to find students changing careers within a particular discipline. A student interested in drafting in engineering could switch to electromechanical technology in engineering. Until this year that has not been considered a career change.

The majority of changes in career direction comes after students have experienced intensive sampling in one or more programs. NTID feels it is important for a student to verify his or her career selection in order to avoid major changes when the fall term gets underway.

The Career Opportunities staff, with its contacts in schools, is helping students understand the meaning of a particular career in terms of required academic work, future job environment and the variety of jobs that will result from study in any NTID program.

NTID also stresses communication improvement in deaf students, particularly as it relates to employment. The summer program enables the Institute to conduct major testing in speech, hearing, language, speech-reading and manual communication in order to develop individualized programs for students.

When students first enter NTID, a battery of performance tests is administered to assess their general receptive and expressive communication skill levels. The test battery is referred to as the Communication Profile and consists of nine instruments for evaluating the following communication skills:

1. **Speech (Hearing) Discrimination** — How well can the student listen to and understand the speech of others?
2. **Speechreading Without Sound** — How well can the student receive information through observation of facial and lip gestures?
3. **Speechreading With Sound** — How well can the student receive information when he listens and reads lips and facial gestures simultaneously?
4. **Manual Reception** — How well can the student receive information through signs and fingerspelling?
5. **Simultaneous Reception** — How well can the student receive informa-

tion through the combination of signs and fingerspelling, lipreading and listening simultaneously?

6. **Reading Comprehension** — How well can the student read and understand the printed message?

7. **Speech Intelligibility** — How well can the student's speech be understood by the general public?

8. **Writing Intelligibility** — How well can the student's written message be understood by the general public?

9. **Emotive Intelligibility** — How well can the student make himself understood through facial and body gestures only?

A five-point rating scale is used to rank each student for the nine communication parameters contained within the Communication Profile. In each case a rating of 5 is the best score obtainable and a rating of 1 is the poorest. The student's skill levels can be functionally described in the following manner:

- 5 — Under optimum conditions, the complete content of the message is received or expressed with no difficulty.
- 4 — Under optimum conditions, most, but not all, of the content of the message is received or expressed with little difficulty.
- 3 — Under optimum conditions, with great difficulty, only about half of the message is received or expressed appropriately.
- 2 — Under optimum conditions only an occasional word or phrase is understood or expressed appropriately. Essentially no communication occurs.
- 1 — Under optimum conditions the content of the message is neither received or understood. No communication takes place.

The Communication Profile has been utilized at NTID over the past three years and has been found to be helpful not only for studying individual student skill levels, but for demonstrating population trends. The figures which are illustrated on the following page were derived from students entering NTID during Summer Session, 1974, and serve to point out the communication strengths and weaknesses of this population. The data contained in these figures have remained essentially stable since 1971.

The Summer Vestibule Program is scheduled this summer from July 7 - August 15.



## Am I Eligible?

High school students interested in a technical career that will lead to employment are urged to apply for admission now if they wish to enter NTID in the fall of 1975.

Admission criteria can be found in the NTID catalog or by writing to the Coordinator for Career Opportunities,

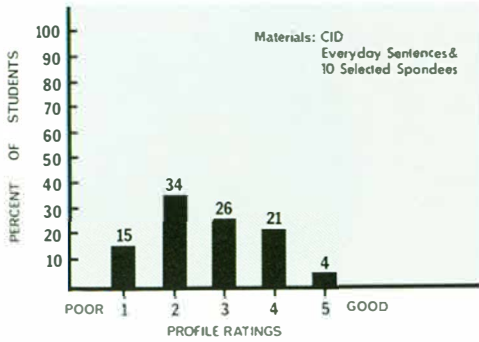
National Technical Institute for the Deaf, Rochester Institute of Technology, One Lomb Memorial Drive, Rochester, N.Y. 14623.

All questions regarding a student's eligibility for admission can be answered by this department.



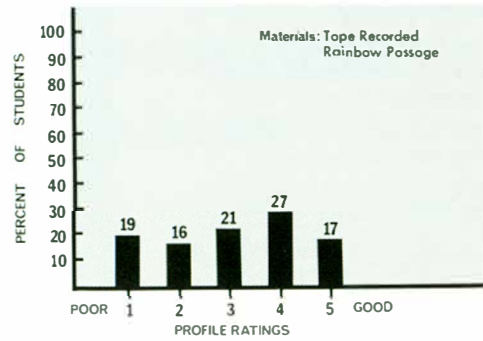
**DEAN'S LIST**—Nine students received perfect 4.0 grade point averages for the Fall quarter and earned top honors on the Dean's List. Pictured from left to right: Laura Ellen Hahn of Dix Hills, N.Y.; James Farmer of Silver Springs, Md.; Dean William E. Castle; Heather Lawlor of Mt. Prospect, Ill.; and Sara Butterworth of Salt Lake City, Utah. Other 4.0 students include Sheryl Bieniak of Kenmore, N.Y.; Michael Gilbert of Tucson, Ariz.; Thomas Ricetti of Brooklyn, N.Y.; Toni Smith of Waterford, N.Y.; and Kevin Spencer of Fulton, Mo.

### HEARING DISCRIMINATION



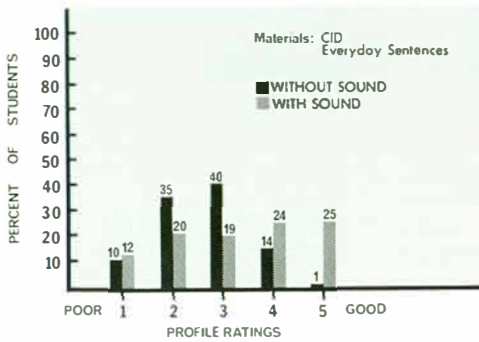
Summary of results on tests of Hearing Discrimination for NTID students entering Summer, 1974 (N = 248)

### SPEECH INTELLIGIBILITY



Summary of results on a test of Speech Intelligibility for NTID students entering Summer, 1974 (N = 257)

### SPEECHREADING



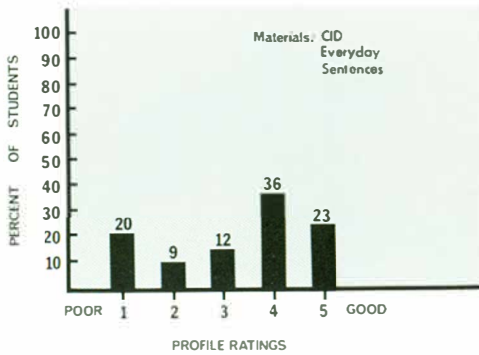
Summary of results of tests of Speechreading Ability (administered with and without sound) for NTID students entering Summer, 1974 (N = 254)

### WRITING INTELLIGIBILITY



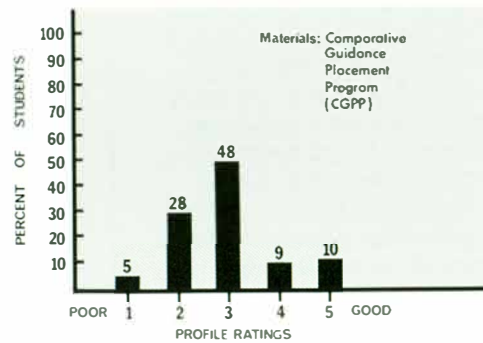
Summary of results of a test of Writing Intelligibility for NTID students entering Summer, 1974 (N = 257)

### MANUAL RECEPTION



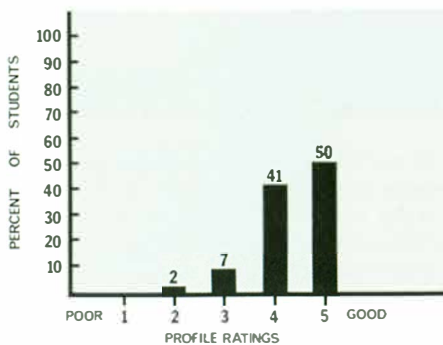
Summary of results on a test of Manual Receptive Ability for NTID students entering Summer, 1974 (N = 252)

### READING COMPREHENSION



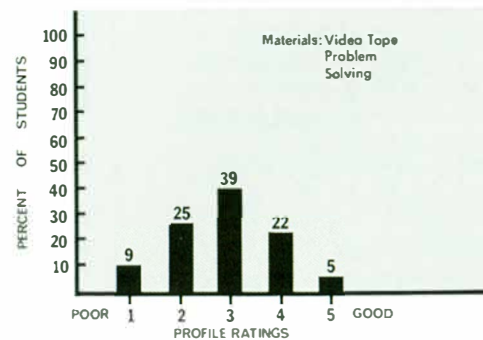
Summary of results of a test of Reading Comprehension for NTID students entering Summer, 1974 (N = 250)

### SIMULTANEOUS RECEPTION



Summary of results on a test of Simultaneous Receptive Ability for NTID students entering Summer, 1974 (N = 252)

### EMOTIVE INTELLIGIBILITY



Summary of results on a test of Emotive Intelligibility for NTID students entering Summer, 1974 (N = 218)





## A Tribute To An 'American Scholar'

Do you remember a little girl named Helen Keller and the strife she encountered because of her inability to communicate? Perhaps you can recall John Singer, a character in Carson McCullers' *The Heart Is a Lonely Hunter*. John was a deaf-mute whose only outlet for self-expression was communicating with a mentally retarded deaf-mute.

The story of these individuals reflects man's need for companionship and communication. These two characters share a kinship because they were both alienated from society because of their handicap.

Professor Robert Panara, a deaf professor of English and drama at NTID's Experimental Educational Theatre (EET), has completed ten years of research in the field of deaf characters in literature. The culmination of that quest has resulted in the development of a course titled "Deaf Studies".

"It is time that the deaf are studied as the human beings that they are as a living representation of the experience of Everyman in his journey through life," claims Panara.

He is delighted to have more hearing students (9) than deaf students (6) in his class. "Deaf Studies" is an upper level course offered at RIT to juniors and seniors as a general studies elective, which helps to increase the good relationship already established by the hearing and deaf interaction on campus.

"Both the deaf and hearing students in the class wanted to learn more about deafness from a cultural point of view," says Panara.

Short stories, plays, novels, and poems are brought to life through the use of sign language, mime, and speech. Through these modes of com-

munication, Panara attempts to parallel the lives of deaf characters in literature with that of living deaf people. He is especially effective in this instance because he is also deaf.

Panara feels that not only does the course explore the universal person, but "it serves as a mirror for the non-deaf reader to view his own complexities and reflect upon the coincidences."

Others have recognized Professor Panara's talents and as a tribute to this outstanding educator, he has been named to the *Directory of American Scholars*. Published by Jaques Cattell Press, the *Directory of American Scholars* profiles outstanding scholars in history; English, speech and drama; foreign languages, linguistics and philology; and philosophy, religion and law.

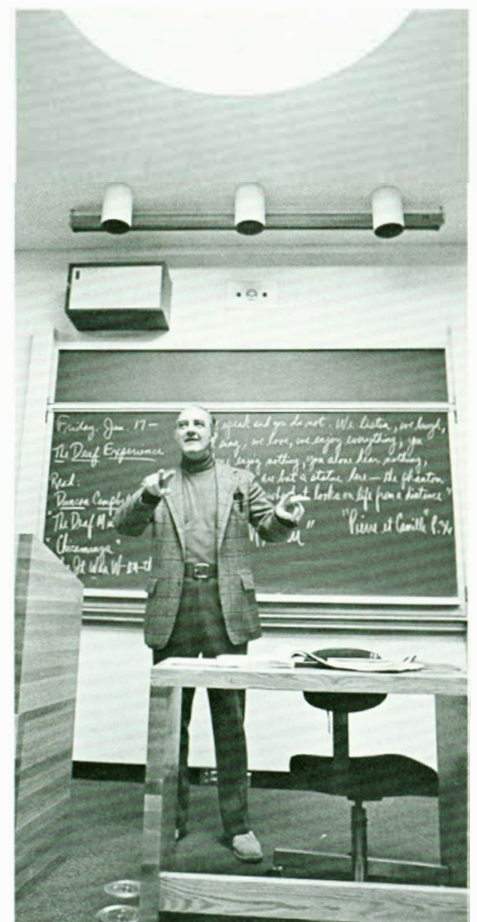
The first deaf person to join the professional staff of NTID and an educator of wide experience, Panara attended Gallaudet College (B.A.); New York University (M.A.); and the Catholic University of America (doctoral studies in English and drama).

Panara has published numerous articles on methods of teaching literature and drama to the deaf. Since its inception in 1967, he has lectured on "History of the Theater" at the summer school program of the National Theater of the Deaf, sponsored by the Eugene O'Neill Theater Center. He has also written special sign language translations of several of the plays taken on tour by the deaf professional troupe.

Professor Panara's interest in NTID was an outgrowth of his service as a member of the Secretary of HEW's National Advisory Board for the establishment of NTID during 1965-66.

In addition to helping prepare the

climate for the enrollment of deaf students at RIT in 1968, he also established the NTID Drama Club, the most popular extra-curricular activity for deaf students on campus. He also was recently selected to serve on the Board of Trustees at St. Mary's School for the Deaf in Buffalo, N.Y.





# Learning Centers

Something had to be done. The situation in mathematics was frustrating for students who had difficulty grasping math concepts. The reading level of the textbooks was too difficult. And when it came time for the homework to be done after the classroom lecture was over, it was impossible to recall the instructor's explanations. The mind was as blank as the blackboard which had been erased hours before.

A solution to this problem was developed in June, 1971, when the Math Learning Center (MLC) officially opened its doors to deaf students at NTID. The center provided a different environment. The classroom with teacher and lecture was replaced by individual study areas. Individualized instruction packages replaced the standard textbook.

If you ask Loy Golladay, an NTID instructor who has been a teacher of the deaf for 38 years and who is deaf himself, the learning center concept is producing surprising results in many students.

"The learning center is especially effective in many technically related areas," Golladay remarks. "There is still much to be said for the lively, diversified and cooperative learning in the classroom, but learning centers should play an important future role in education of deaf students."

Golladay specifically points to the challenge the classroom instructor faces in knowing whether to pace teaching techniques to the needs of the better student, the slow learner, or perhaps the average student. He feels the learning center helps provide diversification.

The Math Learning Center offers no scheduled lecture courses. Instead, students work with an instructor to establish a program from 19 courses offered. The students schedule themselves and can progress according to ability and interest. A student is expected to use the Center at least three to five times weekly. An instructor is available to check work and provide assistance.

Many other deaf students have benefited through specialized programs in NTID's physics, language, and biology learning centers.

The early success of the Math Learning Center has served as a prototype for other centers. Although specifically developed for deaf students, the learning center concept already has spread to other colleges of Rochester Institute of Technology (RIT), NTID's sponsoring institution. Modifications are made to answer the needs of hearing students.

The College of Business Learning Center, for example, uses a modifica-

tion of one of NTID's math programs. And the College of Science Learning Center will use materials developed jointly with NTID.

Why has the concept taken hold in college education so strongly in the last few years?

"It's due to improved technology and media use," said Dr. Kathleen Crandall of NTID's English Learning Center.

The learning center, she said, uses technology like audio-visual media and carefully planned modules of study to free the instructor for work with individual students.

The MLC concept is also being shared by NTID with the American School for the Deaf in West Hartford, Conn.; California School for the Deaf at Riverside; Monroe County Program for the Deaf, Ida, Mich.; and Milwaukee Public Schools, Wisc.; all use instructional material geared to the secondary school student. The effectiveness of these projects is still being evaluated.

Nevertheless, the instructors involved in learning centers agree that the centers allow students the freedom to develop a more individualized program, the chance to get more individual attention, and the opportunity for students to think seriously about their own progress and goals.



**ATHLETIC VISITORS**—Students taking part in the Eastern Schools for the Deaf Athletic Association's basketball tournament visited NTID in February. Schools represented included: Rhode Island School, Providence, R.I.; Governor Baxter School, Falmouth, Maine; New York State School, Rome, N.Y.; Lexington School, Jackson Heights, N.Y.; Mystic Oral School, Mystic, Conn.; Austine School, Brattleboro, Vt.; Mill Neck Manor Lutheran School, Mill Neck, N.Y.; and Rochester School, Rochester, N.Y.

# "Once You Stop Learning — You're Dead!"

Dr. Robert G. Sanderson listens with his head and hears with his heart, according to a long-time admirer.

As the educational coordinator, Division of Rehabilitation Services, Utah State Board of Education, Dr. Sanderson does a lot of listening to the problems of his deaf clients. Deaf himself, Dr. Sanderson can empathize with their problems but admits, "I've been deaf a long time, and I'm still learning about deafness and its effects."

Sanderson was at NTID for the February meeting of the National Advisory Group (NAG) of which he is the chairperson and has been a member since July, 1971. NAG members toured various learning stations throughout the new academic building and went on record as being "very impressed" with the progress being made in NTID programs.

Dr. Sanderson is very positive about the role NTID is playing in opening up educational and career opportunities for deaf people.

"This institution is providing for the future of deaf people. Technology is today and the future. The deaf must be prepared to play a part in the new technological world. At the same time, though, deaf people must learn how to cope with their handicap and grow socially and culturally."

Deaf people will be able to grow and expand their potential for full lives only through the process of education,



according to Dr. Sanderson, and this educational process must begin with the parents.

"Too many parents are not given enough information about the psychology of deafness or methods of communication training available to make an informed choice for their children. If only these parents are given enough information, I believe they will make good choices."

Dr. Sanderson became deaf after developing meningitis at age 11. He attended the Utah School for the Deaf and went on to Gallaudet College where he received a bachelor's degree. After college he entered the business world.

"I bounded around in several jobs until I wound up as a draftsman in Auburn, Utah. I stayed in that job for 17 years."

During that time many deaf people with personal or social problems came to him for advice until he was putting almost as many hours into counseling as drafting.

"I decided I had to go back to school to learn about rehabilitation and social work. It was a very difficult thing to do at age 45. I had to move my family and quit my job."

He doesn't necessarily recommend the same choice for others but is happy he took the opportunity to get more education. He received his M.A. from California State University and his Ed.D. degree from Brigham Young University, Utah.

Dr. Sanderson spent time talking with Barbara Wood (Scotch Plains, N.J.), a deaf student who is majoring in social work at NTID.

"I really look up to Dr. Sanderson. He made it the hard way, and we students respect his advice. I think deaf students need more leaders to look up to and be inspired by," Ms. Wood said.

Eight deaf students have graduated in the social work program offered through the College of General Studies. Many of them have expressed an interest in working with the deaf.

"Deaf people have to be educated to use the services available to them. There are only about half a dozen deaf social workers in the entire country. I encourage students such as Barbara to get all the education she can. There is a great need for people like her," Dr. Sanderson said.

"I hope we can all help persuade the young deaf people not to stop learning. Continue in school, get as much education as you can, and when you leave school, don't stop learning and growing as a person. Once you stop learning — you're dead!"



## NTID Buildings Win Top Honors

NTID's new three-building complex on the RIT campus has been awarded Top Honors by American School & University magazine's 1975 Architectural Competition.

Hugh Stubbins and Associates, Inc., of Cambridge, Mass., was the architectural firm that designed the building complex.

The Architectural Competition is held annually to recognize outstanding campus buildings completed during the

previous year. The panel of eight judges included noted professionals in the fields of architecture, education, building planning, and energy management.

Hugh Stubbins and Associates, Inc., was cited for the academic, dining and residence hall complex which was designed to "express the dignity of the deaf students, their pride in themselves, and their confidence in the future."

# Future Research Will Impact On Deaf Education



One of the ways in which NTID hopes to impact on the lives of thousands of deaf people across the nation is through the area of research.

While NTID has continually conducted research into various problems concerning the deaf, its new facilities (equipped with the most modern technology) make it possible for even more to be accomplished.

"Conceptually, every teaching area within the new building complex is an area for searching for answers to questions about the teaching/learning process of deaf individuals. There is added interest that the findings may well be generalized to other populations of learners," Dr. William E. Castle, NTID dean, says.

Through applied research, NTID is seeking to improve the educational achievement of deaf students at NTID, and other institutions as well; to generate greater economic mobility among deaf people; to improve the communication, personal and social skills of the deaf; and to investigate more effective teaching techniques used with deaf people.

As the number of NTID graduates grows, the Department of Occupational Liaison and Research will continue to collect data through its Employment Feedback System first implemented in April, 1974. The system enables NTID to find out about graduates' success on the job, salary levels and upward mobility, communication skills, socialization and job satisfaction. NTID will use this data to revise and improve

technical education programs to meet the needs of graduates and their employers more effectively.

Currently 96 percent of all graduates seeking employment have gained employment. Ninety-four percent of those have been placed in jobs at an equal level with their education and training.

Indications from students who have responded are that they feel they are competently trained. A large number suggested a need for an even greater emphasis of such things as technical vocabulary training, cooperative work-study programs, laboratory work and simulated on-the-job training.

Approximately 77 percent of supervisors responding have never supervised deaf employees before. This seems to indicate that placement efforts are having impact on companies which have not hired the deaf previously.

Educationally, NTID is influencing achievement of deaf students in a number of ways.

More faculty members are being trained in using computer assisted instruction (CAI), which has demonstrated its value in reducing the time needed for students to learn specific concepts.

The new facilities will make possible more research into the impact of media on deaf education. Television, CAI, and other audio-visual media will be compared with traditional teaching methods.

In the area of communication, a

great amount of research has been done with a variety of electronic devices. These devices give visual feedback to students. The Visual Speech Training Aid (VSTA), vowel indicator, pitch period indicator and intensity meter indicate that the visual feedback is helping students gain more control over pitch, intensity of voice and the accuracy of vowel production.

Analysis of a new individualized program to improve voice pitch quality indicated that 80 percent of students involved improved pitch register, and all students improved relative to pitch control.

The communication profile developed at NTID gives an analysis of abilities of NTID students to produce understandable speech; to use their residual hearing; to understand others' speech, to send and receive sign language and fingerspelling; to lipread, and to read and write English. The profile has proved valuable in developing individual training programs for students. In the near future the profile will be shared with selected elementary and secondary school programs for the deaf on a research basis to test its usefulness with younger children.

The Speech Services Department has studied the effect of training in pronunciation, using a program of diacritical markings, on the speech intelligibility of NTID students. The results clearly indicate that speech intelligibility is enhanced.

The Communication Aids classroom  
(Continued on Page 16)

# HOPE's Loss Is NTID's Gain

As the hospital ship HOPE made its way back to the United States from a tour of North Africa, South America and the Caribbean, Hank Maher, co-director of HOPE's medical laboratory services, once again realized that he was not the same person who had boarded the ship three years earlier.

That Hank Maher had been a college biology professor who had become disenchanted with academic developments in which he saw college students abusing what they called 'academic freedom'.

"I found myself trying to teach college students who dictated their own academic styles and policies. I am not a two-hour a day teacher. I believe that as a teacher you must continuously be accessible and available to teach, as well as advise and counsel," Maher, now an assistant professor in NTID's Technical Science department, said.

The search for new teaching experiences led Maher to HOPE. HOPE's mission was to teach medical personnel in other countries the rationale and practicality of new techniques in all phases of medicine. While on tour, he taught immunological procedures and anatomy and physiology on the ship, in local hospitals and in educational institutions such as the University of West Indies.

A native of Athol, Mass., he worked his way through college and graduate school through employment in medical laboratories. "When I joined HOPE, I had six years of college teaching experience in biology and nine years experience in medical technology."

His experience with Project HOPE helped shape his views on life styles and personal priorities.

"One thing became very apparent to me as we traveled through primitive villages and major cities of other countries; the people were all family-centered, neighbor and community conscious. A whole different value system existed. I began to consider the value of people and human relationships in a new light."

If you ask him more about HOPE, or other countries, Maher will show you his office which is jammed with memorabilia from his travels. The walls are covered with photographs he has taken of people and countries he visited. Exotic shells, marine specimens, coral and bubbling aquariums line the shelves.

"After HOPE I knew I wanted to give more of myself in a meaningful way to people. I enjoyed teaching but was not willing to return to the academic tradition I had been a part of previously."

Maher moved to Rochester with his

wife MaryAnn, who served on HOPE as a surgical nurse and intensive care teaching specialist. While taking specialized photography courses at RIT, he interviewed for a teaching position with NTID and was accepted.

"I consider my experience on HOPE and now with NTID my two best work experiences of my life. I have the highest respect for the administration and my colleagues at NTID because of their dedication, commitment and expertise. It is very challenging and satisfying to work in this environment."

Maher approached teaching deaf students as a distinct challenge.

"I feel it is the responsibility of the instructor to provide the stimulus and atmosphere in which the students can learn. I try to provide NTID students with a biology program that is equivalent to that of any hearing institution. For the most part, NTID students do achieve as well as, and in some cases, better than their hearing counterparts; however, this requires more effort on my part."

Maher has taken traditional biology courses and developed them to satisfy program requirements for students interested in medical laboratory technology, medical record technology, optical finishing technology, and for those students who want to earn a B.S. degree. He uses visuals and photog-





raphy to augment almost every facet of his teaching. Colored slides of anatomical specimens, diagrams of metabolic pathways, filmloops, overhead transparencies, laboratory experiments and dissection are all used to explain concepts in biology, zoology, anatomy, physiology and medical technology.

"Teaching deaf students has allowed me to be more creative. I try to show the relationship between concepts and avoid presenting concepts as isolated entities."

Maher's energy and creative approach to teaching are reaffirmed by Fred Hamil, chairman of the Technical Science department.

"Hank has the knack of getting a quantity and depth of material across to the students. He's tough, but unlike some instructors who can have a rigorous course that no one passes, Hank inspires the students to learn more."

The students seem to feel the same way. Becky Montijo of Sherman Oaks, Calif., admits Maher reprimands her a bit, "but that's because I talk too much in class! He shows us a lot of examples and pictures. It helps me to learn. He's strict and expects a lot from us, but he's always patient and always has time to answer our questions."

"Part of the reason I like biology class is the room," Gretchen Kerr of Birmingham, Mich., explains. "It's bright and colorful. The plants and

gerbils make it a comfortable place."

"Students are in this class for different reasons," Maher says. "I try to tailor the course to accommodate them depending on their major area of interest. These students seldom fail to impress me. They really want to learn and put a lot of effort into learning."

Maher gives his students a variety of learning options from which to choose. They can opt for the Independent Study program, lectures and laboratory sessions, or tutoring. This variety keeps the program and pace flexible. Students are less likely to become bored or feel pressured, Maher explains.

When Maher isn't teaching, his life is filled with a myriad of interests — tennis, swimming, deep-sea fishing, and photography. At home he refinishes old furniture, makes picture frames, collects stamps and autographs. He has his own workshop and darkroom for photography. He and his wife are involved in the community and church activities. He is regional director for Human Development in South West Monroe County, chairman of his parish for runaway children and belongs to a deaf movie club in which they are the only hearing members.

"Before I went with HOPE I nurtured a materialistic set of values. Now I have a more refined set of values, different priorities, and am a much richer person because of my experiences."



**HOPE'S CHILDREN**—Hank Maher became fascinated with the children he saw on his travels with the Project HOPE hospital ship. These are a few of the children who were treated on the ship.



# Professional Staff: Independent and Creative

The only typical thing you can say about the NTID professional staff is that it's not typical at all.

Staff members come to NTID with backgrounds and experiences as varied as the jobs they accomplish once they are here.

Many come directly from business and industry, armed with a wealth of knowledge in technical skills. Others are attracted by the opportunity to try new and innovative approaches to teaching which will impact on the learning process. Still others come with an understanding of deafness.

"The professional staff is dedicated to the fact that they are here to make a direct contribution to the students' growth and to support NTID programs that accomplish this," says Ms. Elizabeth Fitter, NTID personnel coordinator.

When asked to describe the kinds of qualities looked for when hiring new personnel, Ms. Fitter states, "We want people who are creative, can work in-

dependently, and have a sense of professionalism, in addition to possessing the educational background or technical experience needed to get the job done."

Many staff members have never had contact with deaf people before, so NTID has an intensive new staff training program which includes in-depth exposure to communication skills and an orientation to deafness.

In the coming year NTID will be looking for individuals with experience in four major areas:

—Technical skills. Broadly educated individuals with technical skills in areas such as engineering, business, science, and visual communications form the backbone of technical education at NTID. As the technical education areas expand, new personnel will also be in demand to teach skills and support students in service areas such as counseling, tutoring and social and cultural development.

—Education and deafness. There will be openings for trained individuals who

have had experience working with deaf people in areas such as speech and audiology, for example.

—Research. There will be a strong emphasis on hiring individuals with backgrounds in many areas of applied research who can direct these skills to studies impacting on the deaf.

—Media. The importance of different forms of media on learning is an untapped resource at NTID. Those with experience with various forms of media and interested in the utilization of media to impact on learning and curriculum development will be in demand.

NTID has an open-door policy for all qualified individuals seeking a job, "and we are particularly interested in hiring qualified deaf people," Ms. Fitter adds.

"By hiring all kinds of people, we enable students to interact with a broader spectrum of society. I feel students are especially gratified when they see deaf individuals working in professional jobs," she concluded.

## Research (continued from page 13)

is being used to study ways that deaf students can learn to use the telephone or substitute telecommunication devices that require vision or touch.

The new residence hall is a major testing ground for research into programs designed to enhance the personal and social skills of students. The residence hall is designed as a living-learning center where various mixes of students will be studied. In the dorm are recreational outlets as well as centers for student government, clubs, religious activities and tutoring. Stu-

dents are provided lectures, programs and courses designed to expand their general knowledge and improve their life skills. Courses deal with money management, decision-making, human relations and career decisions.

The newly created Language Learning Lab will explore the individualized approach to teaching English language skills. Through the use of television, and CAI, the Lab will test new methods to see if they are more effective than traditional language teaching techniques.

In the area of interpreting, selected studies include the development of methods of transmitting information to deaf students; the possible effect of manual communication on speech-reading skills; the prediction of manual skill potential of candidates for interpreting training programs.

"With the addition of new staff and the technology available in the new facilities we will be able to generate a greater number of research projects. Through research we hope to find the way to better the lives of deaf individuals nationwide", Dr. Castle concluded.



**COMPARING NOTES**—Dr. Diane Castle, research audiologist with the NTID Communication Center, talks with Dr. Edward Hardick, associate professor in Wayne State University's Department of Audiology. Dr. Castle, as outgoing president of the Academy of Rehabilitative Audiology, is comparing notes with the new 1975-76 President Dr. Hardick. They and other speech therapists and audiologists from all over the country attended the American Speech and Hearing Association convention last November in Las Vegas, Nevada, where NTID maintained an institutional exhibit.





# Ken Sorkin Maps Out His Future

This day in late August was quite different from any Jim Valentini had ever experienced. He had never even met a deaf person before, and today he was supposed to help train a deaf man in the photo printing techniques used at the U.S. Geological Survey in Menlo Park, Calif.

It was awkward at first. Kenneth Sorkin had no hearing and limited speech and speechreading ability.

But today Valentini and Sorkin communicate as well as any two co-workers ever have. Valentini has learned to use sign language. He says it was simply easier and quicker than writing things out.

As for Ken Sorkin, a graduate of the National Technical Institute for the Deaf, he is now considered one of the U.S. Geological Survey's most valued employees. He works in film printing and photo reproduction, including color composition of multiple colored maps. Ken's work is similar to what he would experience in a commercial photo company, but with special equipment designed for geological survey needs.

"Ken came here with the background in photographic printing techniques which were of immediate value, and that's unusual," adds Bill Kirsher, chief of the Photographic Services Unit.

"When we point to our graduates and say they have employable skills, we think of young men like Ken Sorkin of Monterey Park, Calif.," says Dr. Jack R. Clarcq, assistant dean for

technical education at NTID.

"We're proud of our record of training deaf young people with the technical and personal ability to be successful in a hearing world," Clarcq continues. "As the only national technical college for the deaf, the federal government has made a major investment in this program. The proof of our success can be seen in the lives of young people like Ken as they become contributors to society."

NTID accepts students nationwide. Ken Sorkin came to NTID from California because of NTID's program in applied photography. NTID has the added advantage of being part of Rochester (N.Y.) Institute of Technology, a college that has an international reputation in the graphic arts field.



"As parents, we felt NTID offered more than any other program anywhere in the country," states Ken's mother, Mrs. Dorothy Sorkin, 641 W. Fernfield Drive, Monterey Park. "We knew Ken had the ability, but it had to be developed. Through NTID he changed from a boy to a man."

Ken, who graduated from the California School for the Deaf at Riverside in 1973, says he even enjoyed the two years of winter snows in Upstate N.Y. He knew that when he graduated he would have the skills to work anywhere in the country he wanted. Jan Hoffman, a rehabilitation counselor from California, played a key role in helping him land the position with the U.S. Geological Survey. Ken graduated from NTID last June with a diploma in applied printing.

Ken, who has his own apartment, enjoys fishing and camping and is active in the San Francisco Club for the Deaf.

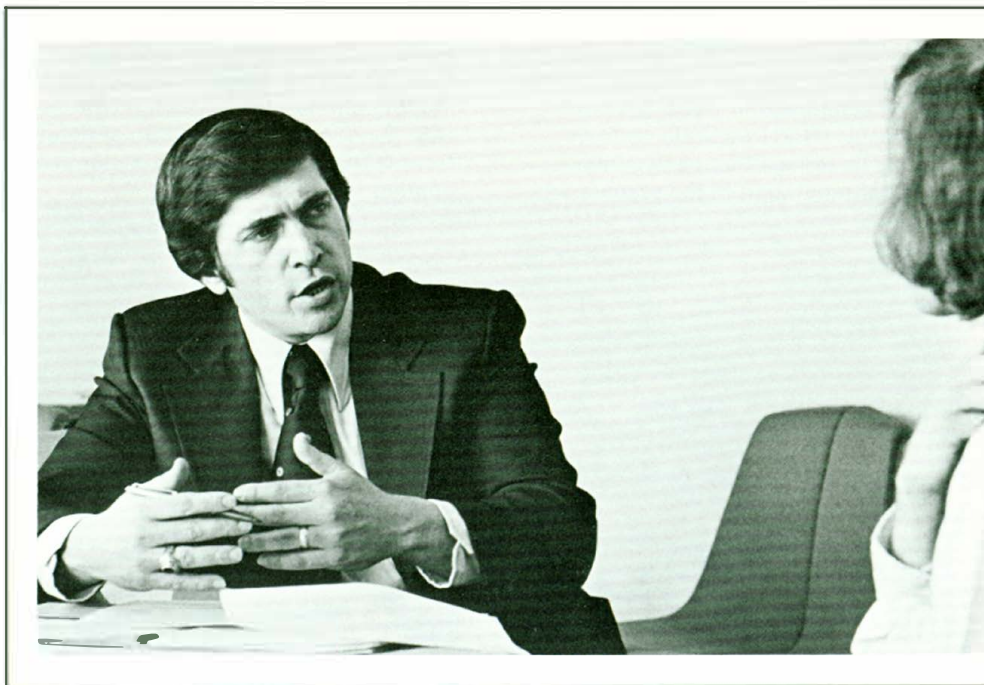
His employer says he is self-sufficient, considerate, responsive and ready to learn.

"I like the people who work here—the pay is good and so are the benefits," Ken remarks.

The U.S. Geological Survey sees a good future and financial growth for Ken Sorkin. Ken himself feels that now he has both ability and desire to be of value to his employer. NTID points to Ken Sorkin as one of more than 300 similar success stories.



**TEAM EFFORT**—NTID student Joseph Grigely of Long Meadow, Mass., shakes hands with Senator Edward Kennedy of Mass., following a benefit hockey game between the U.S. Deaf Olympic Hockey team and the Washington Chiefs. Sen. Kennedy arranged for the Deaf Olympic team to play prior to an NHL game in Washington, D.C. The team will receive a percentage of the ticket sales. NTID students Grigely; Len Williams of Lake Placid, N.Y.; Deane Sigler of Ann Arbor, Mich.; and Tom Nedved of Willow Springs, Ill., took part in the game as members of the Olympic team.



**JOB INTERVIEW**—Ernest Helms, superintendent of Personnel Services for U.S. Steel Corporation, was on campus recently to interview deaf students for possible job placement. His visit marked the first time a representative from a major company had come to NTID expressly to interview deaf students.



**HOCKEY STARS**—Deaf students play an important role in the RIT Varsity Hockey team. Speed, aggressiveness and agility make Len Williams and Deane Sigler tops in their field. Williams finished the season as RIT's second top scorer with 43 total points and Sigler was rated a top defenseman for the team.



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