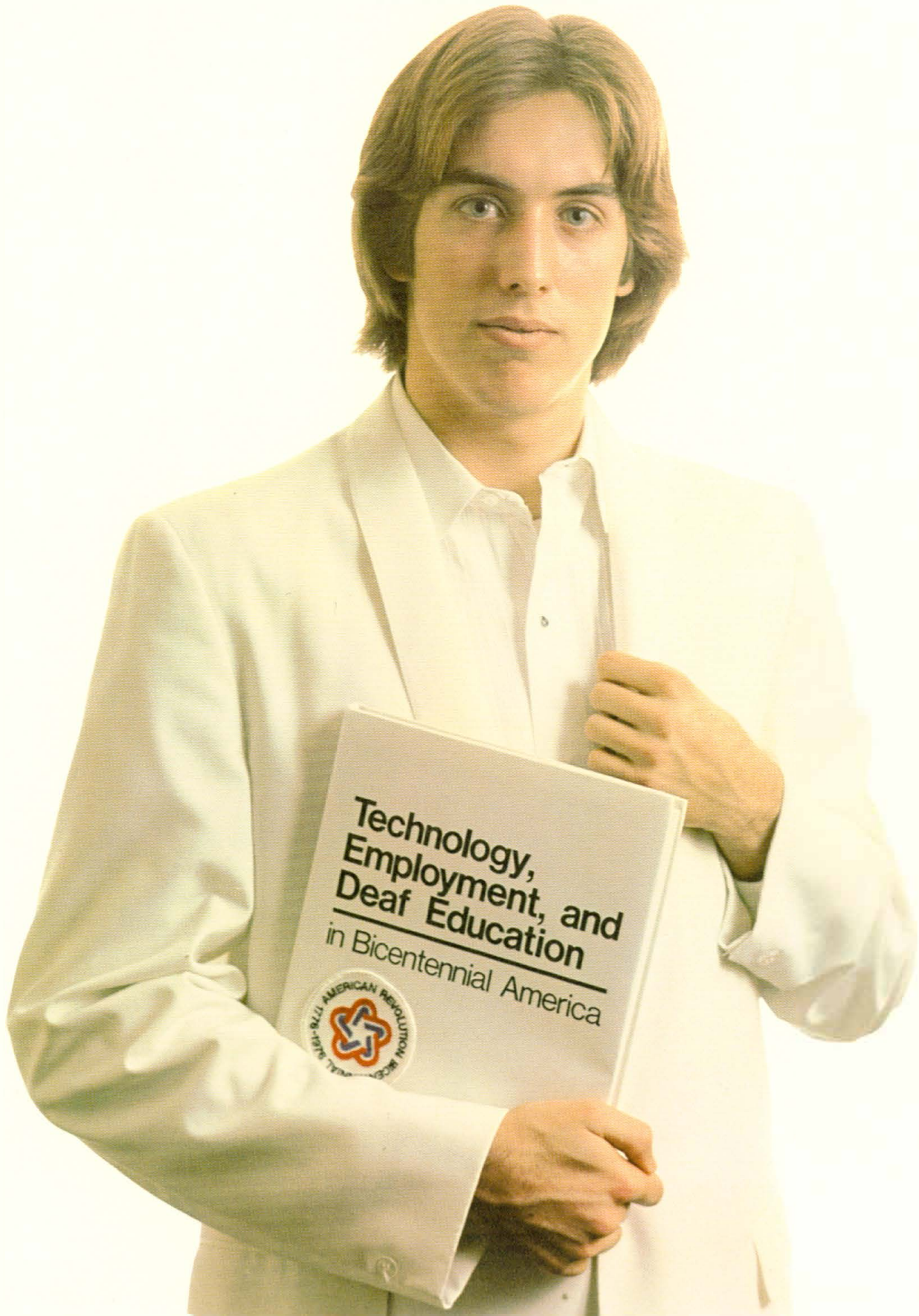
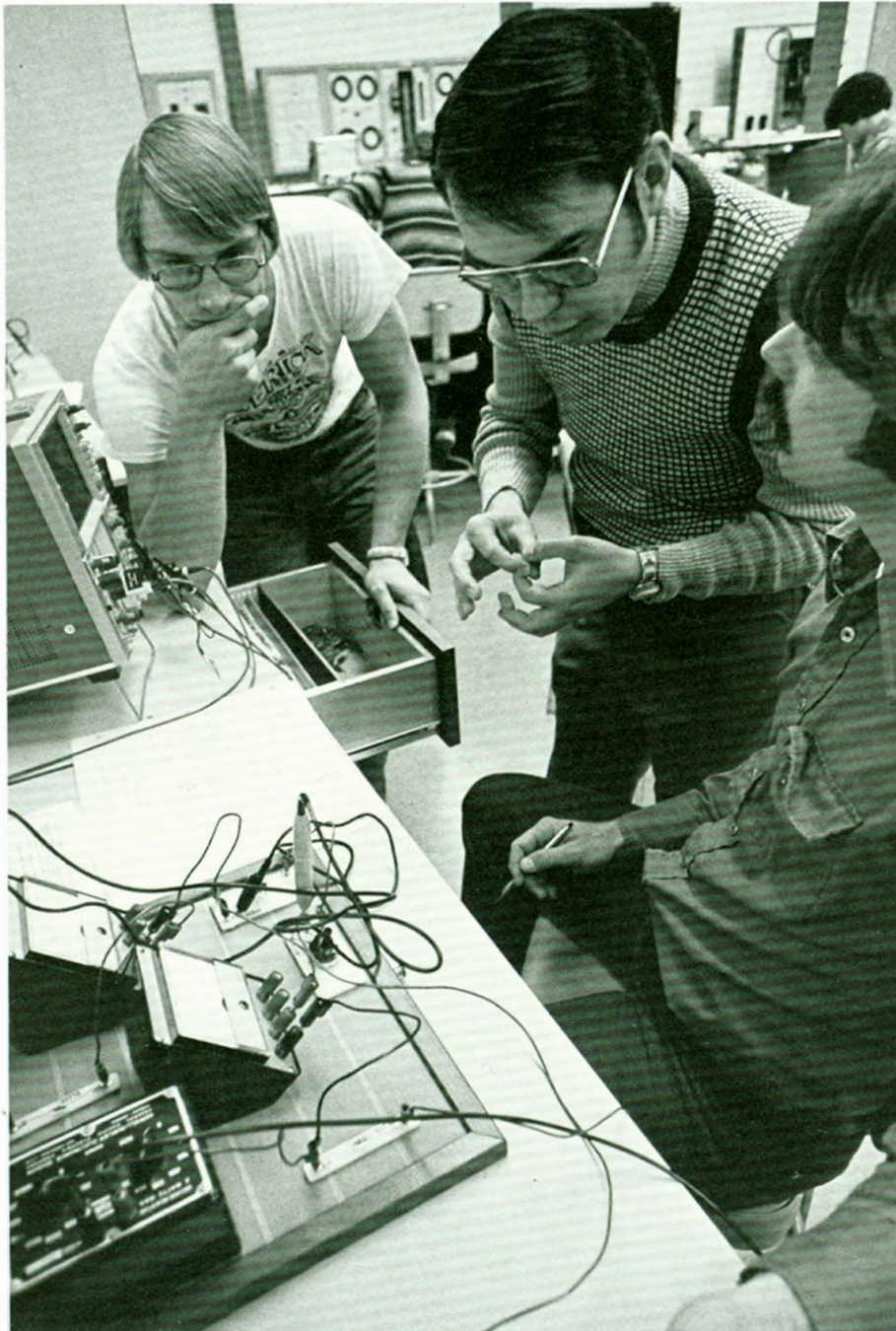


ntid focus

Publication of the National Technical Institute for the Deaf • Nov./Dec. 1976

U.S. DEPARTMENT OF
EDUCATION





Education for the deaf in technological areas leads to successful employment.

National Technical Institute for the Deaf

NTID is the only national technical college for the deaf.

It is **national** in the sense that it was created by the federal government and was designed to provide educational opportunities for qualified students from every state in the nation.

It is **technical** because it trains students for careers in technological areas.

It is a **college** because it provides educational opportunities in a post-secondary environment.

It is **for the deaf** in that it serves people with substantial hearing impairments. Also, in order to teach this special clientele, curriculum and classes have to be designed and/or adapted with the special needs of the deaf in mind.

NTID was created because the deaf population has been underemployed or unemployed historically. It was clear that educational opportunities for the deaf were needed in technical fields; and many people felt that, if given specialized training, the deaf could succeed in many technical careers.

NTID is:

a public law—89-36 to be exact. It was established by an Act of Congress and is funded through the U.S. Department of Health, Education and Welfare.

located in Rochester, New York, on the 1,300-acre campus of Rochester Institute of Technology.

part of RIT. It is one of the nine colleges of RIT, just like the College of Business or the College of Engineering.

unique. Having NTID as part of RIT is the first effort to educate large numbers of deaf students within a college campus planned primarily for hearing students. It is the only one of its kind nationally or internationally.

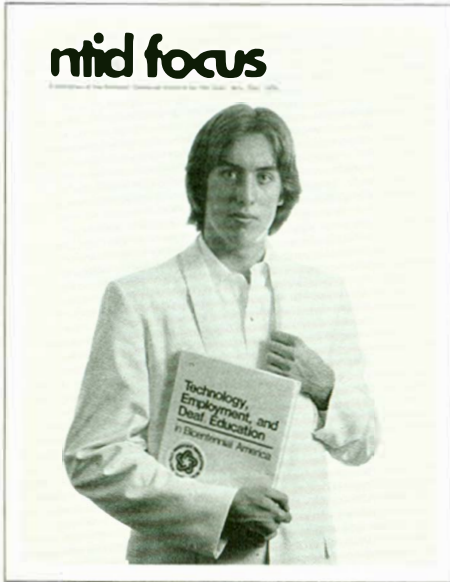
young. It was established in 1965, and after several years of planning, programs began in 1968.

growing. The first group of 71 students enrolled at NTID in the academic year 1968-69. The 1976-77 average full time enrollment of 740 students will represent almost every state in the nation.

exciting. NTID is reversing major trends for the employment of the deaf. To date, 95 percent of NTID's graduates seeking employment have found jobs. Ninety-four percent have been hired in jobs at a level equal to their training; and 84 percent have been hired in business and industry.

searching, creative and changing. Nothing keeps a place more alive and dynamic than the energy and spirit of faculty, staff and students who are able to be creative and imaginative.

ntid focus



Mark King, who posed for our bicentennial cover shot, is a first-year data processing student from Citrus Heights, Calif.

This is a publication of the National Technical Institute for the Deaf at Rochester Institute of Technology, Rochester, New York.

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A Place and Time of Opportunity

by Dr. Robert Frisina

By any standards, bicentennial America has reached new peaks as a highly industrialized nation. It is also a country and a time that offers unprecedented opportunities for young deaf adults to acquire knowledge and skills to participate and contribute economically and socially with their fellow citizens.

The nation's people, its natural resources, factories, equipment and other capital resources, its organization and its technology—the application of science to production of goods and services through the continuous development of new materials, methods and advanced processes—rank the United States among the most industrialized nations. Because of this, the U.S. is the world's leader in food production, health, and technology.

Industrialization and technology have transformed the composition of the nation's work force. Whereas the founding fathers saw agriculture as a primary source of employment, farming

employs only four to five percent of the entire current U.S. work force of some 93 million people.

On the other hand, technical, managerial and professional occupational groups are among the fastest growing. These and certain other career areas constitute new opportunities for deaf people as well as hearing people.

The National Technical Institute for the Deaf and related secondary and post-secondary educational programs are beginning to bring these new opportunities within the grasp of a significant proportion of the deaf adult community, and in ways unprecedented in the annals of deafness.

The personal and social lives of deaf people have been enriched with advances in technology. Early discovery of deafness has been made possible with new diagnostic instruments; micro-miniaturization has facilitated the development of readily portable, wearable hearing aids:

reversing hearing impairment in cases of middle ear deafness has become a reality through the use of the operating microscope along with advances in plastics and exotic metals.

On the centennial of Bell's invention of the telephone in 1876 we are witness to telecommunication devices that enlarge the personal and social lives of deaf persons. The TTY (telephone-linked typewriter keyboards), open and closed television captioning, and emerging video telephones; all are beginning to contribute to greater personal independence and to broader social participation by deaf youth and adults.

Modern technology has been grasped by educators of the deaf and has been used to great advantage. Electronic audiometers have brought about the early education and training of deaf infants and their parents. Motion pictures, still-photography and animated visuals, overhead projectors, and audio and video tape recorders



Classroom scenes (above and facing page) at different times and different places in America.

have become commonplace in programs for deaf children. Such efforts have been greatly enhanced through the Captioned Films Program for the Deaf under the auspices of the federal government.

The recognition that education and employment in our world of technology go hand-in-hand has not been overlooked in the education of deaf persons. The creation of NTID and the establishment of related efforts in community colleges, vocational schools, technical institutes, and four-year colleges and universities have rather suddenly brought to the deaf community opportunities for full participation in the mainstream of our economic and political systems. The need and the opportunity for education beyond high school have become obvious and available to deaf people.

The relationship of technology to employment, to enlargement of the personal and social lives of deaf persons and to its influence on

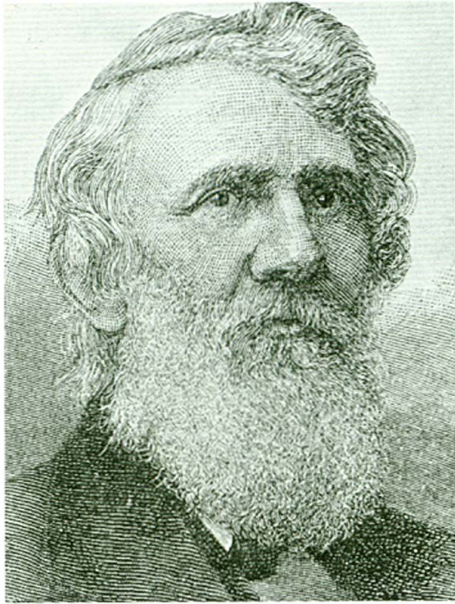
educational opportunities have together contributed in another subtle way. Efforts to place deaf graduates in jobs, educational programs that have prepared them for employment, and graduates' own initiative and persistence in dealing with the hearing population have contributed significantly to broadening the awareness of deafness on the part of the general population. All of this is to the common good, and it is right in a country that, since its inception, has valued, so highly, the welfare of the individual.



Dr. Robert Frisina has been director of the National Technical Institute for the Deaf and vice president of Rochester Institute of Technology since 1967.

Dr. Frisina earned his undergraduate degree from Westminster College (Fulton, Mo.); his master's degree in deaf education from Gallaudet College, Washington, D.C.; and his Ph.D. at Northwestern University where he studied audiology under Helmer Myklebust. He then returned to Gallaudet College, where he was professor of audiology; director, Hearing and Speech Center; dean, Graduate School. In February 1967, Dr. Frisina was named to his present position at NTID.

Dr. Frisina serves on the board of directors of the Alexander Graham Bell Association for the Deaf and the Conference of Executives of American Schools for the Deaf. In addition to positions in numerous other professional organizations, Dr. Frisina has been a frequent contributor to many professional journals in the fields of deaf education and audiology.



John Carlin, an outstanding deaf painter and poet of the early 1800's.



Laura C. Redden, a famed deaf writer of the late 1800's.

The Deaf in America: Two Hundred Years of Progress

by Robert F. Panara

In 1943, Dr. Harry Best published *Deafness and the Deaf in the United States*, a definitive study of the handicap of deafness and the achievements of the deaf in America. In this comprehensive work, the noted sociologist concluded with a genuine tribute "to the most misunderstood among the sons of men and the gamest of them all."

There was an historical basis for such an evaluation inasmuch as, more than 2,500 years earlier, Aristotle wrote that "the ear is the organ of education" and that the deaf lacked the ability to reason, much less to learn to read and write. It proved to be a damaging assessment which was echoed by many later writers, among them Lucretius of Rome whose classic couplet summed up the judgement of antiquity:

"To instruct the deaf no art could ever reach.

No care improve them and no wisdom teach."

These attitudes even influenced the popular belief throughout the succeeding ages of Christianity and the Renaissance, despite occasional evidences of "a success story"—of a deaf-mute, usually from the wealthy aristocracy, who was educated by intensive private tutoring and eventually "restored to society."

However, people generally greeted achievements by deaf individuals with skepticism or else regarded the phenomena as the work of charlatans.



Education

The first record in America of an attempt to teach the deaf was in Rowley, Mass., in 1699 when a man named Philip Nelson tried to teach the art of speech to a "deaf and dumb boy," Isaac Kilbourn. Quite naturally, Nelson's work "seemed such an extraordinary thing that the ministers of the community . . . made an investigation, fearing that witches might be involved in the affair."

Undoubtedly, human judgement was still influenced by Aristotle, and America's deaf might have continued to dwell in the dungeons of despair had there not occurred in 1776 a revolution of wholesome dissent which strove to bring about a new understanding of the dignity of man.

A young clergyman possessed such faith in the human spirit. **Thomas Hopkins Gallaudet** of Hartford, Conn., founded the first free school for the deaf in America in 1817 in Hartford. In this, his life's work, he was assisted by a deaf teacher named **Laurent Clerc**.

Gallaudet had gone to Paris to learn the most advanced method of instructing the deaf at the Royal Institute for Deaf-Mutes, founded in 1769 by the Abbé de l'Épée. While there, Gallaudet met the brilliant deaf teacher, Laurent Clerc, who taught him sign language and methods of teaching the deaf. Gallaudet realized that Clerc had the expertise and "the deaf experience" to help him fulfill his mission of teaching the deaf in America, and he offered Clerc the opportunity to become his assistant.

The story of how Laurent Clerc journeyed to the land of promises where he became the first deaf teacher of the deaf still serves as a model for countless others who have followed the American dream of fulfillment through opportunity. Their struggle to overcome the realities of deafness and contribute to the development of America is an affirmation of the faith of our forefathers in the American promise of "life, liberty and the pursuit of happiness."

In many diverse areas of life, the deaf American has left an imprint in the arts and sciences, in education and industry, in law and government, in sports and entertainment. Quite often, too, these success stories follow the same pattern as that of their normal hearing counterparts.

A brief sampling of some notable achievements may illustrate the diversity of achievements by deaf Americans.

Painting and Sculpture

Deaf from birth in 1813, **John Carlin** graduated from the Mt. Airy School for the Deaf (Philadelphia) at the age of 12. Beginning as a sign and house painter, he studied every night at home, mastering art history, English and five foreign languages. After saving enough money, he went to Europe to study art. Eventually he became an outstanding painter of portraits of such celebrities as William Seward, Horace Greeley, Hamilton Fish, and Jefferson Davis. The first known deaf person to

compose excellent poetry, his work was praised by William Cullen Bryant. Mr. Carlin was also a prolific writer whose articles on architecture, geology



and ecology were published in leading newspapers. He was the first deaf person in America to be awarded with an honorary degree from Gallaudet College (1865), and, quite appropriately, he painted the first portrait of Laurent Clerc, one of his teachers.

Douglas Tilden was born in 1860 and became deaf at the age of five. Upon graduating from the California School for the Deaf (Berkeley), he taught art and sculpture at the school. Awarded a grant by the Board of Directors, he studied sculpture in Paris and soon attracted the attention of his peers. His famed *Bear Hunt*, now on the campus of the Berkeley School, was exhibited at the Chicago World's Fair (1893), after which he set up his own studio in San Francisco. His sculptures attracted the attention of Senator James D. Phelan, who became Mr. Tilden's patron. Among his famous pieces are three sculptures standing in San Francisco's Golden Gate Park



today, the famed *Football Players* on the campus of the University of California and the celebrated group figures, *The Mechanics*, in Market Street Plaza, San Francisco. Tilden also served as professor of sculpture at the University of California and at St. Mary's College, Oakland.

Cadwallader Washburn was born in 1866 and became totally deaf at age five, later attending the Minnesota School for the Deaf. He graduated from Gallaudet College and then studied architecture at M.I.T., after which he began a career of art under William H. Chase, New York City, and studied with Sorolla in Madrid and Besnard in Paris. An outstanding oil painter, he eventually became known as one of the world's best dry-point etchers. His etchings have been compared to the works of Rembrandt and Whistler. Critics claim his portraits illumine the eyes as "windows of the soul," such as characterized by his *Buddhist Priest*, Mexican and Indian portraits, and the Mallorca subjects such as *Introspection*, *The Smuggler*, and *The Matriarch*. *Who's Who* (1955) listed museums all over the world where Mr. Washburn's etchings are permanently exhibited, and when he died at the age of 99, the obituaries recognized him as "the dean of American etchers."



Hillis Arnold, born in 1910, became totally deaf at age 6, attended Minneapolis public schools and graduated from Minneapolis Central High School. He graduated from the University of Minnesota, "cum laude," attended the Minneapolis School of Art and the Cranbrook Academy of Art, where he studied under the famed Swedish sculptor, Carl Milles, whom he assisted with the renowned fountain display, *The Wedding of the Rivers*, located opposite Union Station, the St. Louis (Mo.) railroad terminal. Mr. Arnold has painted the 250-foot murals in the great hall of engineering, University of Minnesota; his World War II memorial is an impressive limestone shaft, 32 feet high, rising from the Aloe Plaza in downtown St. Louis; his *Manifest Destiny* is a giant wooden eagle, with a five-foot wing spread, in the museum of Westward Expansion under the St. Louis Gateway Arch. Arnold has also pioneered the use of plastic aluminum techniques in some of his sculptures. The United States Information Agency selected one of his angels made from

polyester resin for the exhibit "Plastics, USA" in Leningrad. Recognized as one of America's finest sculptors today, Arnold recently retired after teaching sculpture at Monticello College (Ill.) for more than 30 years.



Literature and Journalism

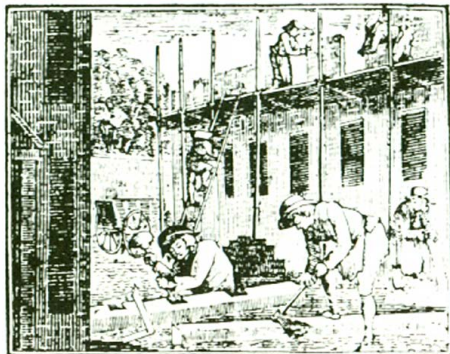
Laura C. Redden, born in 1840, became totally deaf at the age of eleven, after which she attended and graduated from the Missouri School for the Deaf. A self-made journalist, this first deaf "libber" received her opportunity to break into print from the *St. Louis Republican*. She served as a correspondent for that newspaper during the Civil War.

Writing under the pen name of "Howard Glyndon," she wrote in an easy, informal style about people, places, politics, and books. Her article, "Notable Men of the House of Representatives," was widely discussed, and some of her patrons for her first book of poems, *Idylls of Battle* (1865), included President Lincoln, Gen. Grant, and Gen. Garfield. After the Civil War, Ms. Redden toured Europe while still serving as a correspondent for the *Republican* and *N.Y. Times*—doing most of her reporting via pad and pencil communication.



Many of her articles appeared in leading magazines such as *Harper's* and *Galaxy*. In 1873, her second book of poems *Sounds From Secret Chambers* appeared, followed by an autobiographical novel, *Echoes of Other Days* (1878).

William W. Beadell, who attended the New Jersey School for the Deaf and graduated from Gallaudet College (1885), was also a successful journalist and publisher. He became editor and owner of *The Arlington (N.J.) Observer* which for many years was "a kingmaker of the state politics." Mr. Beadell was the first to develop the "Want Ad Page," which made many editors and publishers beat a pathway to his door to learn his techniques.



Architecture and Engineering

Thomas S. Marr, a graduate of the Tennessee School for the Deaf and Gallaudet College (1889), studied architecture at various schools but was mostly self-educated. He designed the largest hotel of his day in Nashville, as well as several other public buildings and numerous other edifices in the South. His "considerable works of excellence are now published in architectural handbooks that are required study in Southern colleges."

Robert Carr Wall graduated in 1885 from the Western Pennsylvania School for the Deaf where he was considered "a mechanical genius." He developed "the first safe bicycle Philadelphia had ever seen." These bicycles featured two standard sized wheels instead of the "high wheelers" then in vogue, which were considered hazardous. In 1904, officials of the Packard Auto Co. asked Mr. Wall to build a rattle-proof windshield which proved so satisfactory that he later built all the windshields for Packard.

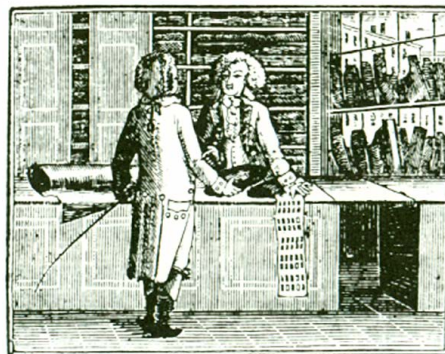
Kenneth L. Cobb graduated from the Malone School for the Deaf (N.Y.) and from Gallaudet College (1943). A self-made draftsman, he was employed as a machinist specialist in the giant IBM plant at Binghamton, N.Y., where he became an expert "trouble shooter," and he later advanced to supervisor.

A highly regarded consultant, his assignments carried him to Tokyo where he headed a task force in "locating suitable business sites and assembling complicated equipment," later doing the same in Australia and other Asian centers.

Business and Industry

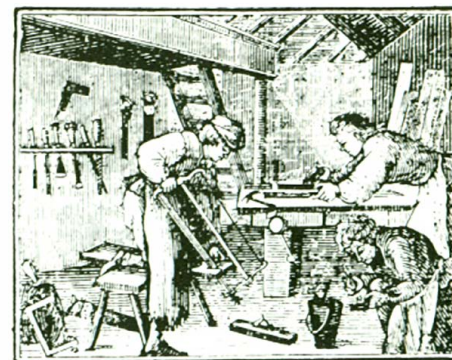
Jean Wolverton graduated from Gallaudet College (1919) and eventually entered the business world as a marketing analyst. She became a highly valued expert in this field with Hearst Publications, and her "rare business judgement was instrumental in the expanding newspaper empire of William Randolph Hearst."

Samuel A. Block graduated from P.S. 47 and DeWitt Clinton High School in New York City and won a scholarship to City College of New York where he graduated in 1932 with a bachelor's degree in business administration. Mr. Block had a long and distinguished career in public service as a statistician and became chief of the retirement and analysis section of the Railroad Retirement Board, Office of Research, Chicago.



Anson R. Spear graduated from the Minnesota School for the Deaf (1878) and spent a year at Gallaudet College, leaving for financial reasons to become a post office clerk. He advanced to head clerk in Minneapolis and then left to go into business for himself through his invention and patenting of the "Spear Safety Envelope." His business, the Spear Safety Envelope Co., prospered for many years in Minneapolis and employed many deaf workers.

Bruce Clary attended the Rochester (N.Y.) School for the Deaf in the 1930's where he learned the machinist's trade. He took the long route through the "college of hard knocks" to become a master machinist. He founded the P & C Screw Machine Products in Los Angeles less than five years ago, starting in a garage with two machines.



P & C in 1974 had \$3.5 million in orders and 62 employees, the largest business ever founded, managed and operated by the deaf. Working under a management contract with the Department of Defense, Mr. Clary recently "took over a large production facility with more than 200 metal working machines, where he hopes to employ at least 1,000 people. Nine tenths of them, from janitors to vice presidents, will be deaf. If we can do it, others can."

Emergence

Deaf Americans have come a long way since they first began to learn "the three R's," less than 200 years ago. From the dungeon of darkness, they have emerged. However, like most minority groups, they still have the problem of integrating with the mainstream of society. Indeed, the problem goes even deeper because it involves the barrier of communication which isolates the deaf from the rest of society. This communication "wall" not only prevents the deaf from communicating freely with others, but it also blocks out those channels of popular communicating which characterize the life-blood and life-style of modern man—the telephone, the radio, television and "talking pictures" or movies.

The deaf, nevertheless, continue to be undaunted. They are proud of their American heritage, and they have implicit faith in the American promise of better tomorrows. Even now, on the bicentennial of our country's progress, there are hopeful signs that they may yet succeed in "breaking the sound barrier." This is the outcome of such recent technological breakthroughs as the TTY, the Vistaphone, and captioned TV programs.

Fittingly, it was a deaf physicist, **Dr. Robert H. Weitbrecht**, who made possible direct telephone communication by the deaf through the use of discarded Western Union teletypewriters. Dr. Weitbrecht's invention of the Terminal Unit (TU) in 1964, an acoustic coupler which activated transmission of printed messages or communication via telephone linkage, might be likened to Bell's pioneering invention. The proliferation of TTY's soon followed with the organization of Teletypewriters for the Deaf, Inc. (TDI), spearheaded by two deaf leaders—**Dr. H. Latham Breunig**, its executive director since 1968 and past president of the Oral Deaf Adults Section of the Alexander Graham Bell Association of the Deaf, and **Jess M. Smith**, past president of the National Association of the Deaf and editor of its national magazine. The rapidly developing network of TTY's today includes an *International TTY Directory* and over 5,000 individual member users, plus an estimated 3,000 additional stations.

The Vistaphone (see *NTID Focus*, Sept.-Oct., 1973), offers still better possibilities for mass utilization of



telephone communication by the deaf, because it features spontaneous visual communication via television images. Manufactured by Stromberg-Carlson Co. of Rochester, N.Y., these "picture-telephones" have been used by the National Technical Institute for the Deaf on a trial basis since 1969. With 27 units in continuous operation over the huge campus shared jointly with Rochester Institute of Technology, they have added an entirely new dimension in business and personal communications for deaf persons. Better still, they can express themselves independently and relate more positively to the hearing world.

The implications of mass TV utilization by deaf viewers are tremendous. In Rochester, N.Y., Public Broadcasting Station WXXI (TV-21) initiated "News for the Deaf" in March, 1972, featuring live presentations of the nationally televised "ABC Evening News" via skilled interpreters from NTID. Eventually, this program was superseded by the "Captioned Evening News Program" of Boston's WGBH-TV which now captions and rebroadcasts at 11:00 p.m. the regular 6:00 p.m. program with Harry Reasoner and Barbara Walters.



The WGBH-TV "Captioned Evening News" and other special programs for the deaf are funded by Media Services and Captioned Films, Bureau of Education for the Handicapped, the divisional chief of which is an outstanding deaf man, **Dr. Malcolm J. Norwood**.

In a continuing effort to provide deaf viewers with the same kind of input and pleasure derived by hearing consumers of popular and educational TV programs, Captioned Films has initiated experiments which make it possible for captions to be broadcast but only seen by viewers with TV sets equipped with a special decoder. This device, called the "NBS TV Time System" (National Bureau of Standards invention), may realize a low cost method of televising *all* videotaped programs. It may also prove "the be-all and the end-all" of the deaf American's quest of equal opportunity, of educational and cultural parity with hearing peers.

And, in this time of technological plenty, the promise of better tomorrows looks very bright indeed.



Robert F. Panara, professor of English and drama in NTID's Experimental Educational Theatre, was the first deaf person to join the professional staff of NTID in 1967.

An educator of wide experience, Mr. Panara earned his bachelor's degree from Gallaudet College; his master's at

New York University; and has done doctoral studies at Catholic University in Washington, D.C.

Mr. Panara began his teaching career in 1945 at New York School for the Deaf in White Plains. He later served as associate professor of English at Gallaudet.

The methods of teaching literature and drama to the deaf have been the topics of his numerous published articles.

Materials quoted are from the following references:

- Best, Harry. *The Deaf*. Crowell, N.Y., 1914.
- Best, Harry. *Deafness & the Deaf in the U.S.*, Macmillan, N.Y., 1943.
- Burnes, Byron B. "History of the Education of the Deaf to 1815." *A Handbook of Readings in Education of the Deaf* (Irving Fustfeld, ed.), Thomas Publ., Springfield, Ill., 1967.
- Panara, Robert F. "The Deaf Writer in America," *American Annals of the Deaf*, Sept., 1970.
- Runde, Winfield S. "Douglas Tilden, Sculptor," *Silent Worker*, Dec., 1952.
- Kowalewski, Felix. "The Deaf in Art," *Silent Worker*, Oct., 1954.
- Kowalewski, Felix. "Hillis Arnold: American Deaf Sculptor," *The Deaf American*, Nov., 1972.
- Higgins, Francis. "The Pioneering Spirit of the Deaf," *O.A.D. News* (Ontario Assn. of the Deaf), Jan.-Feb., 1969.
- Atwood, Albert W. *Gallaudet College: Its First One Hundred Years*, Gallaudet Press, Washington, 1964.
- Braddock, Guilbert C. *Notable Deaf Persons* (Florence Crammatte, ed.), Gallaudet Press, Washington, 1975.
- Schiller, Ronald. "The Lonely World of Silence," *Reader's Digest*, Aug., 1974.



A Halloween party at the West Virginia School for the Deaf "quite a few years ago" provides Loy Golladay, author of this story, with many memories.

The Times, They are A 'Changin'...

by Loy E. Golladay

Loy Golladay is deaf and has lived that reality for many years. And although he jokingly claims that he can backtrack considerably into history, his reflections on the occasion of the nation's bicentennial capture his own years of "the deaf experience."

I am sometimes asked how it feels to be deaf. My answer is that most people have to adjust to a handicap of some sort, even if it's only being near-sighted, or freckle-faced, or weak in math, or unable to bowl ten strikes in a row. As a friend of mine once wrote, there are 215 million "handicapped" Americans.

My handicap feels perfectly normal because I've had it so long, and I've had to adjust to it. A reasonable sense of proportion plus the ability to laugh at one's self have been important assets.

Becoming Deaf— The Audio Was Turned Off

When I was eight years old in our Virginia valley, the only deaf persons I knew were quite elderly. "Aunt Lydia" Rinker used an ear trumpet. There was also a distinguished looking, bewhiskered gentleman who appeared to doze through the longer Sunday sermons and, when he talked at all, spoke in a rather throaty voice that we boys loved to imitate when our elders weren't around.

So when I woke up one September afternoon from a siege of spinal meningitis and found the "audio" unaccountably turned off, it was unreal

in more ways than one. When my hearing didn't return, my father took me to a noted specialist. I couldn't hear any of the tuning forks he used for testing, nor did I hear him tell my father that I was permanently deafened. I didn't find out about this verdict until much later, but in the meantime I thought I was the only boy in the world.

Early Education— Hearing the Words in My Mind

I have reason to believe most of the people I knew thought that I shouldn't have survived my illness. Better dead than deaf.



A close-up of Loy in his 'Sunday best' costume.

Some well-meaning soul suggested that I be sent to the state "asylum for the deaf and dumb." My family almost had a riot on their hands. First, I had parents and didn't need an asylum. While I was undeniably deaf, I wasn't dumb. Hadn't I been promoted to the fourth grade after only a little over two years in school?

As for education, hadn't Abraham Lincoln taught himself after only a few months in school? If he could do it, so could I, and with this resolve in mind I plunged into wholesale reading of almost every book I could lay my hands on—my brother's high school history and literature books, a set of classical novels, and the family Bible. In fact, in the finest tradition of Lincoln, I was beginning to cast speculative eyes at my father's shelf of law books.

One evening I attended a basketball game between my brother's junior college and the West Virginia School for the Deaf team. That evening I saw sign language for the first time. When told that the boys were talking on their hands, I asked the usual and utterly stupid question: Could you hear them?

The young deaf coach, A. P. Herdtfelder, told my father about the school program, and I learned it was a school, not an asylum. The following fall I enrolled, lured by the chance to learn the printing trade like my hero, Ben Franklin. But I almost missed the chance for an education because of erroneous and offensive terminology.

Today one expects a variety of scientific testing to place a new student; but in those days a new entrant was presumed ready to learn if he would imitate what the teacher did. Teaching speech had high priority so some speech techniques were tried on me.

I couldn't figure out the objective of all the teachers' blowing on feathers or strips of paper to demonstrate how to

make the sound of "s" or "p". I was mildly embarrassed when a comely lady pressed my hand against her nose or throat while she made a humming sound for "m". I kept inquiring when I could enter fourth grade and what subjects I would take. My lack of cooperation evidently made a bad impression, for I landed in a special class for slow learners!

The difference in supervision and in training requirements for teachers of the deaf then and now may perhaps be illustrated by the fact that I remained in that class for several weeks. Perhaps the confusion of the first weeks of school, plus the fact that the teacher was a last-minute, temporary and untrained replacement, is part of the explanation. But as long as I spoke the few words I was to learn, they left me alone, and I could catch up on my reading.

Without doubt this early acquirement of the reading habit made all the difference in the world in my education, and countless other deaf persons I know report a similar experience. As long as I could "hear" the words in my mind as I read, I was not completely deaf to the world. Later, this salvaging of a feeling for sound was to lead to a most enjoyable interest in poetry, creative writing, and literature in general.

I am tempted to reflect that the lack of extensive co-curricular activities to keep us busy after school, or distractions like television and frequent trips home, were an advantage, for this afforded me more time for reading. Mr. James A. Weaver, the principal, later kept me supplied with worthwhile books. As I look back, I realize that he was giving me the materials for a good, basic education, especially in history and literary classics.

Reading wasn't all I did. I recall organizing fellow 10-year-olds in my dormitory playroom to stage little dramas which were based on my readings and which we gave during those long winter weekend afternoons. With Indian wars we put on outdoors in the spring we risked being sent to the principal's office if anyone were hurt with the wooden scalping knives we whittled. We had to manufacture our own fun, which was a real challenge, much better than sitting for long hours at some mind-deadening and incomprehensible program on the modern "boob tube."

Speechreading and Rebel Yells

Since I had no idea of speechreading, my teacher arranged for a special afternoon tutor. This New England lady felt it necessary to drill me on the letter

"r". For some reason my soft Virginia speech, which lacked stress on that element, seemed to bother her. Next time I saw my father, he said I talked like a Yankee Scotsman!

I had even more trouble in adolescence, which almost caused me to give up trying to talk to anyone but my own family. I had finally become one of the school's "show" pupils for visitors, but, being so severely deaf, I had no way of controlling my speech pitch except by the general "feel." When my voice began to change, I was disconcerted at people's reactions.

I was advised to develop my voice by singing or shouting while out on the playground and at home in summer. I rather suspect some old-timers must have been somewhat startled at the rebel yells that re-echoed across our valley that summer as I exercised my vocal cords.

I believe that was bad advice, for I lost much confidence in my speech at that difficult time. But meeting a lovely hard-of-hearing girl my third year at Gallaudet College reinstated my enthusiasm for regaining the speech I thought I had lost. That girl is now my wife.

It is obvious that I was indeed born too soon when I contemplate all the latest NTID speech training aids, several of which depend on sight instead of actual hearing. These newer aids might have helped me over that difficult period in my life.

In most schools for the deaf when I was a boy, the teacher who had a college degree was the exception, and most exceptions were usually deaf teachers. High school graduates with good grades and recommendations might be accepted to take a course or two in speech and language training and serve an apprenticeship under close supervision to become teachers.

There were several notable teacher training centers at different schools, and my new teacher had gone to one of the best. Training high school graduates to become teachers had its good and bad points, but the really talented and dedicated teachers among them would stand out in any company today.

Amplification Methods— Bulges and Bumps Wired for Sound

My first encounter with a hearing aid was in an advertisement brought in by a neighbor. It was supposed to be the latest scientific development of its kind. The basic part seemed to be a wet-plate battery even bigger than the one in my car today, plus amplifying equipment and wires connected to a set of earphones, the whole weighing

at least 40 pounds. Sizing up both his eight-year-old boy and his pocketbook, my father decided not to buy one.

Even in the 1930's, hearing aids were cumbersome and inconvenient. A typical one consisted of a battery case about the size of today's fairly large pocket calculator, plus a like-sized amplifier and tube unit. The two were wired together and connected to an earpiece. Girls had a problem of concealment—the battery pack was usually strapped to a thigh under the skirt, with the tube and amplifier unit concealed under the dress in front.

The uninitiated admirer might be mystified by the unexpected bulges or bumps on the feminine physique. Most boys didn't bother with concealment, having plenty of pockets, but both sexes were truly wired for sound.

Since only those with considerable hearing would be likely to put up with all the inconvenience of those hearing aids, such persons were automatically labeled hard of hearing. In a way, their lot was unenviable, for both deaf and hearing people considered them "different." Today we see the "deaf" and "hard of hearing" closer together. Many severely deaf persons now wear tiny behind-the-ear aids, not because they can understand words through them, but to help their speechreading through detecting the rhythm and prosody and to help monitor their own speech a little better. Because I once heard normally and retain the memory of speech sounds, such an aid is useful. In the classroom it detects environmental sounds, too. It boosts my confidence in my speech although the loss in my better ear exceeds the measurable 110 decibels that modern audiometers can test. I might say that it lifts me from profoundly deaf to profoundly hard of hearing.

Terminology—I Only Had a "Cold"

I can recall a dispute between two professional groups over definitions of "deaf" and "hard of hearing." One insisted that anyone who lost his hearing after the age of eight was hard of hearing. I lamented that, although deafened after the age of eight, I couldn't be hard of hearing because I couldn't hear a sound, and I asked for cures for the severe "cold" I must have been suffering.

Formerly, a much larger proportion of the deaf population had lost the sense of hearing from diseases such as spinal meningitis or other high fevers that affected the auditory nerve or inner ear. With the advent of penicillin and other powerful antibiotics, such cases became much more rare. We occasionally meet a person deafened by such drugs in a life-or-death situation. More often babies, who otherwise would not have lived, are enabled to survive birth, and these have added to the population of multiply-handicapped deaf persons, with their need for special programs of their own.

World War II and Singing Tests

When we became involved in World War II, I tried to talk my friendly draft board chairman into getting me into one of the armed services. As a competent journeyman printer, I thought I could run the printshop on a big Navy ship. No, the printer had to use earphones and a rangefinding computer during action. Yes, an Army tank was noisy, but the driver had to take over the radio too if anything happened to his partner. Nor were there possibilities in the other services. As I got up to leave, the chairman, with a grin, suggested that I go down to Washington and see if President Roosevelt wouldn't change the rules a bit for me.

A week or so later I happened to meet him on the street. No, I hadn't been to see the President. I was sure he had more important things to do. But, I added, even the Salvation Army turned me down—I couldn't pass their singing test.

Like many other deaf persons, I gave blood for the wounded during the war. Just as I was looking forward to giving my eighth pint and getting a little red ribbon to add to my donor's button, the war ended. So one might say that even the end of the war brought its frustration of a minor sort.

But the war did one thing for me for which I have no regrets. I had been operating my own printshop and county weekly newspaper for almost a year in North Dakota, and I sold it in order to get back into teaching and replace a serviceman "for the duration." I became so hooked on teaching again that printing only interested me thereafter as a means to earn extra money during vacations.

Captioned Films from "Silent Pictures"

Taking 8mm movies was my hobby. When I decided to accept a teaching job at the American School for the Deaf, Conn., I was able to trade some of our furniture for a large supply of colored movie film at wholesale prices. Dr. Edmund B. Boatner, superintendent at that time, became interested in the way I occasionally included gags or conversations in sign language, and we discussed the revival of silent movies. Emerson Romero, a deaf New Yorker, among others had been trying to splice titles into talking movies, which had replaced the old "silents" before 1930. I argued for obtaining federal support patterned after *Talking Books for the Blind*, but the idea did not germinate until a bit later when Dr. Boatner enlisted the help of a debutantes' organization for funding, some board members of American School for the Deaf, and Senator William Purtell to push it in Congress. Pilot films subtitled by two other teachers at the school helped get support from the deaf and teachers of the deaf. Captioned Films today provides a major source of entertainment for thousands of deaf people. Besides this, the media services later added to the project, and financed through the Department of Health, Education and Welfare have made a great improvement in teaching methods for the deaf as well as other disadvantaged groups.

"Chewing the Fat" and Other Idioms

One day while teaching I related the incident when Robinson Crusoe rescued a young native from the cannibals' cookpot, then named him Friday because it happened that day. A round-eyed little ninth-grader exclaimed, "Why, Mr. Golladay! Don't you know people aren't supposed to eat meat on Friday?" Another time she showed me a letter from her hearing sister, telling how the family sat around after dinner "chewing the fat." Her expression of disgust set me to collecting and teaching some more

common idioms. Many others had been interested in the idiom problems of the deaf, and I was delighted when the Boatners obtained a Federal grant to compile an Idioms Dictionary, and I became one of the editors for language and readability of the entries. The book has been a standard reference in most schools for the deaf since its publication in 1966.

Sign Language—A New Art Form

I remember when sign language was looked upon with disfavor in many quarters. Today, hundreds of people with perfect hearing are learning signs. Dr. Ross Stuckless of NTID startled me recently by asserting that probably more hearing people know sign language than deaf people—certainly a highly improbable prospect thirty years ago!

The use of manual language and mime by the National Theater of the Deaf has been termed "a new art form" by competent professional drama critics. New metropolitan drama clubs of the adult deaf are springing up. Several hearing high school clubs have learned dactylology to stage "The Miracle Worker," Helen Keller's story. "Sign Me Alice," a popular new play which is a sort of takeoff on G. B. Shaw's "Pygmalion," and involves a deaf girl confused by different sign systems instead of dialects, was written by a former student of mine, now head of the Gallaudet College Drama Department.

Several universities now accept proficiency in manual language to fulfill the graduate requirement for a second language. In the past ten years, more deaf persons have earned Ph.D.'s and other doctoral degrees than in the entire previous history of education of the deaf! Only 25 years ago, I resisted my graduate school professors' urging to work for one because I felt there were no worthwhile opportunities in education for a deaf Ph.D. Verily, we live and learn.

Other Changes—A New Spirit

The years have brought about many other changes for the deaf.

The work record of the deaf during World War II removed many prejudices. The Department of Health, Education, and Welfare through its agencies has also made a great and positive impact on the deaf and their world in a variety of ways. The deaf have generally become more politically sophisticated.

Through organizations such as the National Association of the Deaf, their needs have become better known and fulfilled. Even deaf "Olympics" have hit the scene.

Many residential schools for the deaf now send their students home for weekends on a more or less regular schedule. Under the mainstreaming concept of accommodating hearing-impaired students in regular public schools, there are now more local day programs. Formerly, schools for the deaf provided vocational training that placed many of the boys at an advantage in the skilled labor market. Today, most such schools call their training "pre-vocational," and send their graduates to NTID or one of the new regional technical-vocational schools.

The deaf have become their own spokesmen in instigating changes for themselves. At the turn of the century, the deaf organized their own fraternal insurance company which, in terms of assets and membership, grew speedily to be one of the foremost of its kind in the world. Entirely managed by deaf executives, the National Fraternal Society of the Deaf is a good example of the philosophy, "if you can't join 'em, start your own company and lick 'em!"

Modern technology has also had a great impact on the lives of the deaf. Even the telephone, Dr. Bell's invention to help the deaf which instead barred them from many types of employment, has lost some of its negative impact. Addition of teletype units makes it possible for two people to communicate by typing instead of sound. Several Rochester companies have obtained teletype units for the use of their deaf employees.

Best of all, a new spirit seems to be springing up among younger deaf persons—the wish to pioneer in fields of work which have been barred to the deaf in the past. NTID has a great challenge and a great opportunity to lead in opening new fields, and its record to date has lived up to this challenge. I am proud to be a part of this effort.



Loy Golladay presently holds the rank of associate professor at NTID as an associate education specialist with the General Education Support Team.

Mr. Golladay earned his bachelor's degree in liberal arts and his master's degree in English from Gallaudet College, Washington,

D.C. In addition, he obtained an M Ed. in reading specialization and language arts at the University of Hartford (Conn.) in 1958.

Prior to joining NTID in 1969, Mr. Golladay served 27 years as a high school teacher at American School for the Deaf in Hartford.

Mr. Golladay published many articles on the deaf while at American School. He was also language consultant for editing and reviewing the 1966 publication of "Dictionary of Idioms for the Deaf," published by the National Association of the Deaf.

Signs of the Times

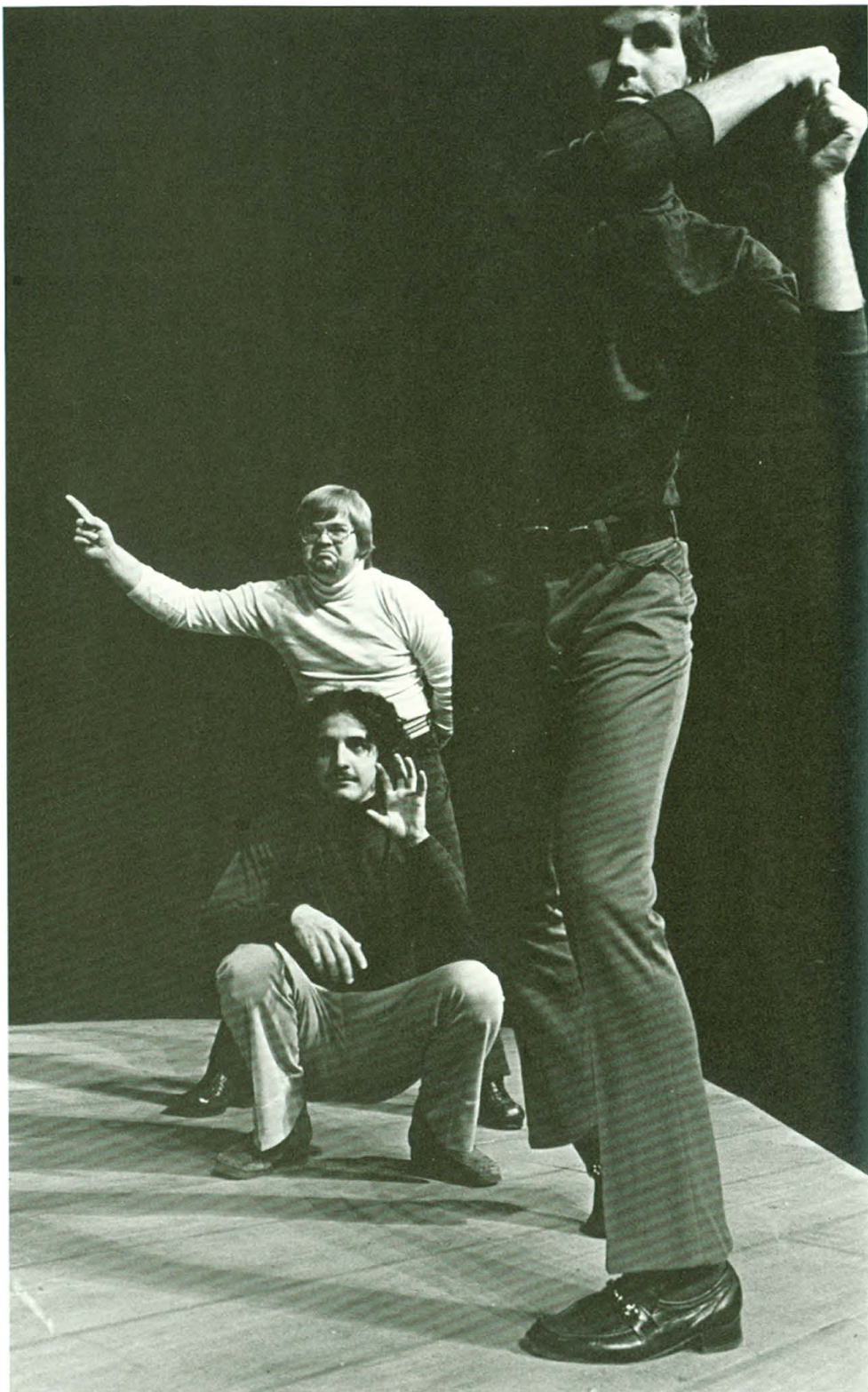
The history of the deaf in America is the subject of an original play. *Signs of the Times*, which was presented recently by the NTID Theatre.

Written by Dr. Gerald Argetsinger, director of NTID's Experimental Educational Theatre program, the play includes two poems by Robert Panara, an NTID professor who is deaf himself.

Signs of the Times, one of NTID's bicentennial observances, highlighted some of the significant events in the history of deaf people in the United States. Some vignettes depict actual historical happenings, such as Alexander Graham Bell's search for an amplification device for his deaf wife which led to his invention of the telephone. Other sketches center on conditions the deaf have faced historically, such as their struggle to win the right to get a driver's license or have the use of an interpreter in a court of law.

The cast, made up of deaf and hearing students from RIT, recreated the achievements and frustrations of the deaf in America through the skillful blending of speech, sign language and mime, giving meaning and movement to the play for both the deaf and hearing in the audience.

Entering RIT freshmen were invited to a special presentation of *Signs* which helped to introduce them to deafness and some of the problems and situations deaf people have faced throughout their history. The play was also an integral part of an event honoring new staff in September.



Highlights from *Signs of the Times*

(Above photo) William Hoy devises the first hand signals in professional baseball, portrayed by students Chuck Smith (umpire), Brookville, Pa.; Howard Hammel (catcher), Augusta, Mt.; and Ray Zeidler (at bat), Patchogue, N.Y.

(Opposite, top left) Thomas Gallaudet teaches deaf girl, Alice Cogswell, with students Raymond Zeidler and Cathy Boboly. Lawrence Harbor, N.J.

(Opposite, top right) Hearing and deaf students live and learn together at NTID with (left to right) hearing student C. Earl Tucker, Rome, N.Y.; Howard Hammel; and Pamela Giles, Rochester, N.Y.

(Opposite, right) Alexander Graham Bell develops visible speech with Mabel Hubbard. Played by Craig Passi, Wright Patterson Air Force Base, Ohio; and Cathy Boboly.



Recruitment Year Begins

by Barbara Brissenden

The Career Opportunities Specialists (COS) from NTID's Department for Career Opportunities have kicked off another year of travel to selected high schools in the country. Talking to deaf students and parent groups nationwide, the three Career Opportunities Specialists, Elizabeth O'Brien, James Biser, and James Stangarone, will discuss the meaning of a career, the importance of developing employable skills, and what technical areas of study are available through NTID and other post-secondary programs. The purpose of this recruitment campaign is to encourage deaf students to think and plan for their future and to make informal career choices.

This year, most of the COS' trips are planned for the months of October, November, and January. A highlight of

the campaign will be a November Career Day in New Jersey which will involve deaf students from five surrounding states.

Each COS covers specific states and manages the admissions case loads and recruitment activities for those states. (For further information about the state assignments, please consult the NTID official bulletin.)

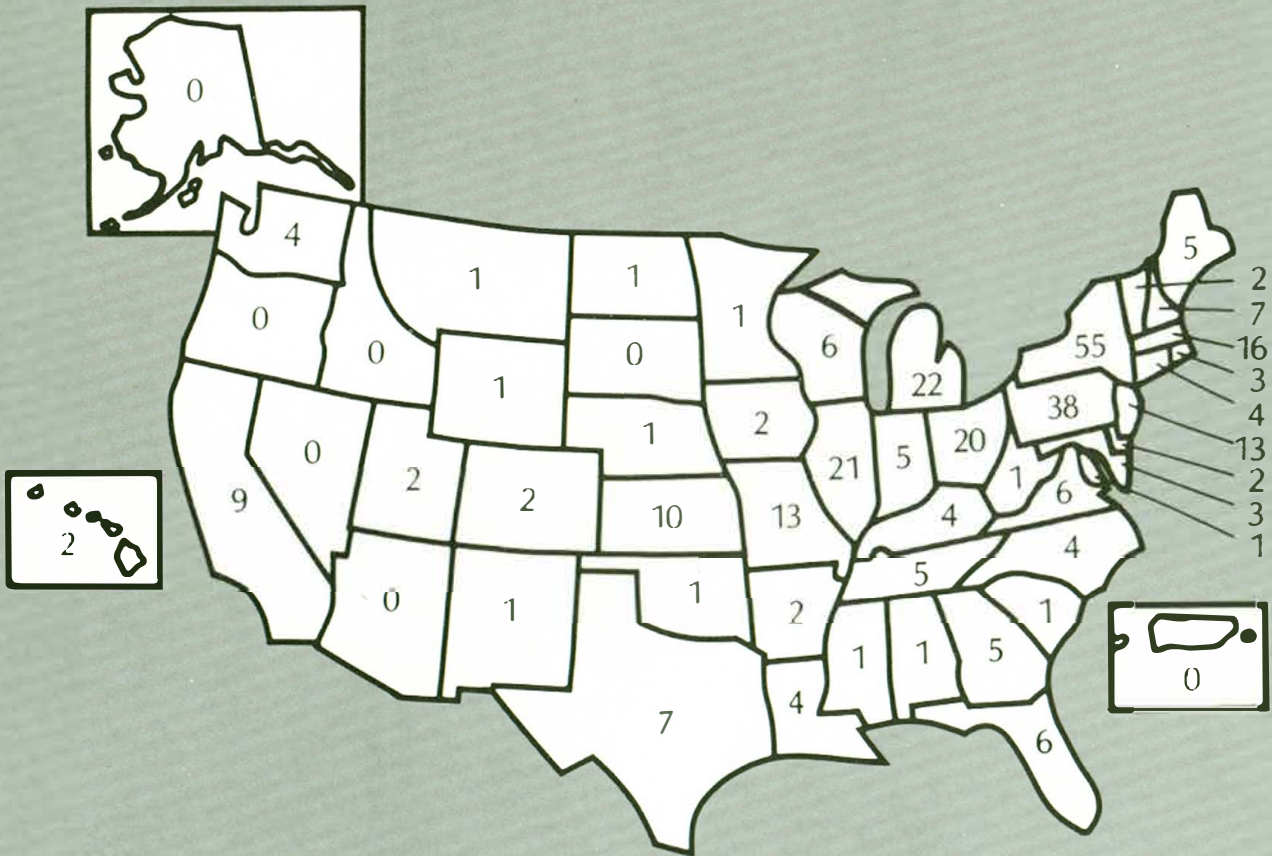
In part, the 319 accepted and enrolled NTID students for the 1977 school year are a direct result of last year's recruitment efforts by the COS.

The following is a profile of these entering students:

Number of females	123	39%
Number of males	196	61%
Average age at entry	19 years	

Number with one deaf parent	11	3%
Number with two deaf parents	22	11%
Both hearing parents	286	90%
Number from schools for the deaf	176	55%
Number from other schools	143	45%
Number with previous college experience	35	11%
Number directly from secondary school experience	227	71%
Number who came directly from jobs	25	8%
Number who were unemployed	22	7%
Average hearing loss in left ear	90 dB	
Average hearing loss in right ear	91 dB	

Accepted/Registered Students by State



Tips for Applying to NTID

As admissions counselors, NTID's Career Opportunities Specialists have asked that the following facts for application and enrollment to NTID be stressed.

1. **When to Apply:** High school students should apply in the fall of their senior year. All other applicants, such as transfer students, should also apply in the fall for July or September enrollment.
2. **Rolling Admissions:** This procedure means that applications are processed and admission decisions made throughout the Admission Year (Oct. 1-June 1). Applicants are accepted on a first-apply, first-admitted basis, provided they are qualified.
3. **The Admission Year:** The admission year runs from October 1 to June 30, but as stated earlier, because of the rolling admissions policy, NTID advises that potential students submit applications in the fall of the year.
4. **Waiting List:** NTID determines on a yearly basis the number of students to be admitted. When the number of qualified applicants exceeds this number, a waiting list is begun. Assignment of admission spaces is determined by the principle of rolling admission (first-apply, first-admitted).
5. **Standardized Testing:** Applicants must make sure that the high school they have attended submits any standardized achievement tests such as the Standard Achievement Test, Advanced Battery. It is *important* that the tests submitted be appropriate for a deaf student. The CEEB (Scholastic Aptitude Test) that is often administered to deaf students in public high schools usually *is not* appropriate in that deafness strongly impedes the language and reading development of the deaf. Therefore, the reading and language level of the CEEB test usually results in depressed scores for deaf students.
6. **Questions About Testing:** The NTID Admissions Committee should be consulted when questions arise regarding the appropriateness of a particular standardized test.

7. **To Transfer From Another School:** If a student has been enrolled in other post-secondary educational programs or colleges, he or she can be considered for admission to NTID for one or more of the following reasons:

- A. The student has decided that he or she needs support services such as interpreting or tutoring to help in college studies, and these services are not available at the school the student is or was enrolled in.
- B. Even though there may be support services at the college the student attends, he or she may have decided to change the career major to one that is not offered at the student's present college, and the career major the student wants is offered by NTID

or another college of Rochester Institute of Technology.

- C. The student has completed a post-secondary program and has decided that he or she wants or needs more training in his or her career major. Through NTID you can get advanced degrees by cross-registering into any of RIT's eight other colleges.

For further information about specific NTID programs and application procedures, contact:

Admissions Committee
Office for Career Opportunities
National Technical Institute for the Deaf
Rochester Institute of Technology
One Lomb Memorial Drive
Rochester, NY 14623



NTID Career Opportunities Specialist James Biser helps high school students make informed career choices by explaining technical education, NTID, and other post-secondary programs.

Career Decision at NTID

Career decision has become an important concept in educational circles. The trend toward more relevant education and the higher cost of education in general have placed a premium on making the right career choice at the beginning of a student's college career.

NTID's approach to career decision is one way of modifying traditional educational theory to serve its unique clientele.

by Joan Cooley

Why are you here?

That is one of the first questions new students must answer when they enter NTID's Summer Vestibule program.

Other questions that follow require students to do some serious thinking about who they are, what they expect in the future and how they can best achieve their expectations.

For most students, dreaming about the future is not new. But a way of evaluating these dreams and turning them into realities is what usually complicates their plans. Many new NTID students, and most students in general, have not thought in depth about the kind of career they want or what is required to be successful in that career.

Career development, career planning, career decision-making are often interchangeable terms which emphasize a person's ability to make choices. In most cases, career awareness begins at an early age when children learn about careers from parents, relatives, friends, television and other media. At the same time, children are learning about and testing their personal interests and abilities.

Career awareness is slowed down for many deaf children. They often have limited access to information and media and, generally, there has been a lack of formal career education in many elementary and secondary programs for the deaf, and schools in general.

Helping NTID students learn how to make choices and decisions involving a career takes place during the intensive five-week Career Planning Seminar during the Summer Vestibule program.

"In the case of most NTID students, we have to compress the usual stages in the development of career awareness and career orientation into five weeks, because the students haven't gone through those stages before, either on a formal or informal basis," explained Sue Doe, coordinator of Career Development Counseling at NTID.

"Hearing students get much more informal information through the mass media and generally have a greater interaction with family and associates who represent different job clusters. In the same way that deafness inhibits access to career information, it usually inhibits the opportunities for career exploration, such as summer jobs or part-time work after school, because deaf students have not been able to compete with hearing students for jobs," she said.

Deaf students have the same career decision-making problems as their hearing peers, but they are usually affected by those problems more intensely. NTID students are often more stereotypical in their career outlook, have had less actual work experience, and come to NTID not knowing anything about certain career areas, according to Ms. Doe.

Last year 58 percent of the students involved in the Summer Vestibule program indicated they had made a career decision before entering the summer program, but only 25 percent of those students stuck by their earlier decision.

"What we try to do during the summer is expose students to concepts they haven't been exposed to before," Ms. Doe said.

One of the first concepts students confront is information collected through the methodology of sampling all the programs offered to them at NTID. Students are literally bombarded with information the minute they arrive on campus, "and it's our priority to help them assimilate all this information first," she explained.

In traditional career decision models, values clarification, which usually begins in early childhood, is considered the first step in the process. At NTID the practical first step is the assimilation of facts so students have a framework with which to collect and analyze data.

In the following weeks of the summer students participate in exercises designed to help them understand their

own value system, their aptitudes and skills, and how to arrive at a career decision. They also get used to working with a decision-making model to help them organize information and solve problems. Steps in the decision-making model include:

1. Define the problem
2. Collect information
3. List alternatives and their possible results
4. Select an alternative
5. Test the decision
6. Evaluate the decision

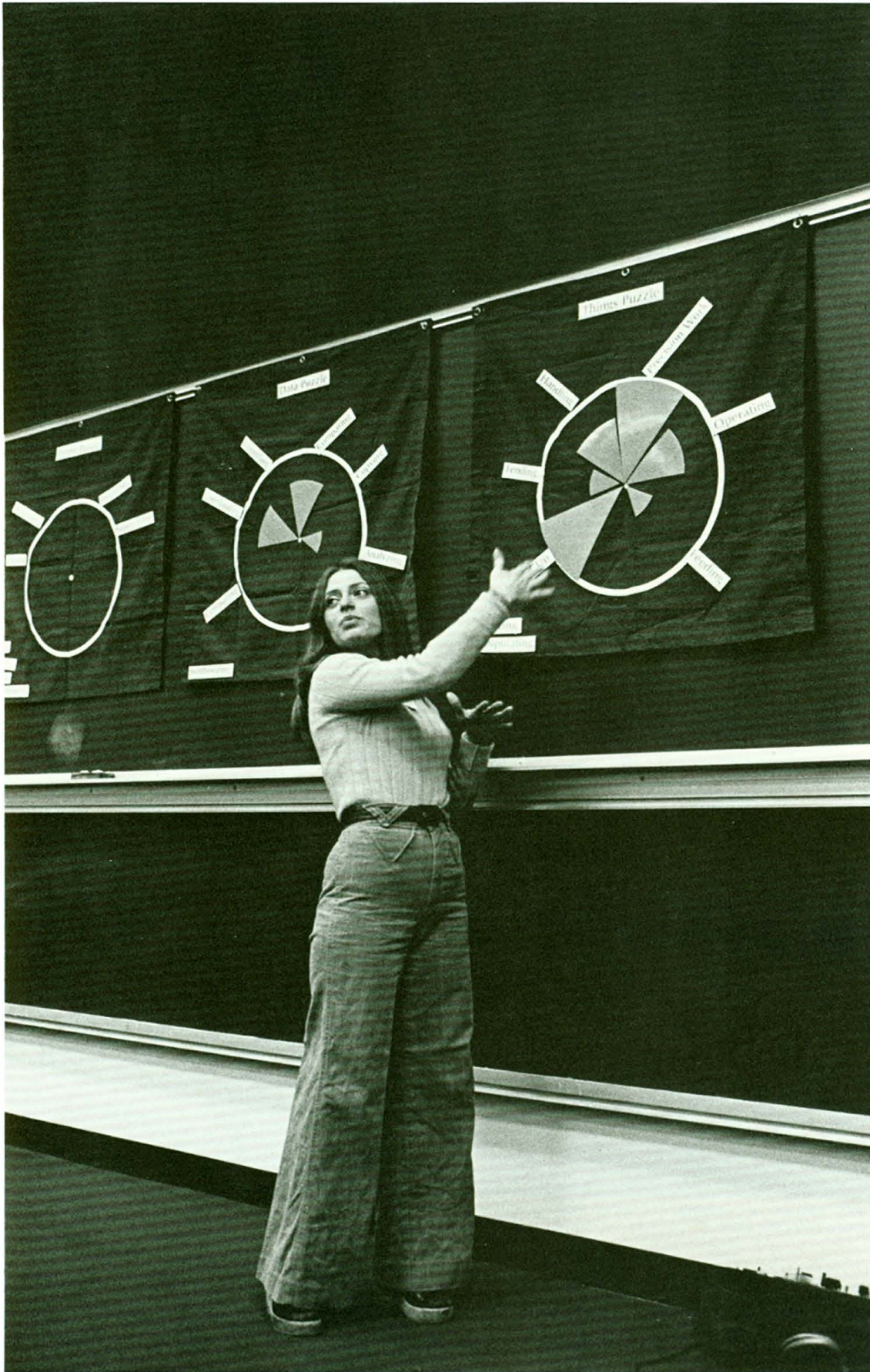
"We realize that students may be following the same decision-making process in an unconscious way. We want to raise this process to a conscious level. Most people don't analyze how they decide between a tuna sandwich or a hamburger for lunch; but if they don't understand the steps involved in making a simple decision, they won't understand a complex problem with long-term implications, such as a career decision," Ms. Doe said.

In the final week of the Career Planning Seminar students must arrive at a career decision and share that decision with others.

"A student is not required to pick a major, but each undecided student must have a career development plan as to how they will arrive at a decision," Jim Kersting, NTID career development specialist, explained. "We try to help students understand that decision making is a constant process and following a decision-making model can be applied to many different situations."

An underlying reason for the importance placed on a well thought-out career decision is the fact that NTID and RIT are technically oriented institutions.

"At NTID and RIT education is specialized, and relevant information toward a specific career usually begins from day one. If a student makes an unwise career choice, it's best to discover it as soon as possible so that the education is not lost," Ms. Doe concluded.



Career Development Specialist Gail Rothman explains a decision-making game to new students.

Warren Keuffel

by Wynene Fenderson

Establishing a new business is no easy task. The risks are great. The hours are long. The growing pains are sometimes hard to cope with. But for some people, like Warren Keuffel, the challenge is worth it.

As an NTID student enrolled in RIT's College of Graphic Arts and Photography, Warren received his bachelor of science degree in printing

in 1973. He began his new business, called Bear Graphics, two years later in Salt Lake City, Utah. The two-room office where Warren worked alone for nine months recently expanded to three rooms—a darkroom, a typesetting and design shop and an office for filing and meeting customers.

"My work revolves around advertising typography," Warren said.

"That includes designing layouts and setting type for printed media such as newspaper and magazine advertisements, letterheads, brochures—any speciality that customers might need for their companies. I am a full-service typographer. I'm interested in designing and setting type for books sometime in the near future."



NTID graduate Warren Keuffel (left) talks with a customer in front of Bear Graphics, his own typography business in Salt Lake City, Utah.

Bear Graphics' phototypesetting composition system produces quality lettering for printed media. To keep up with expanding needs of the customers, Warren has installed a new typesetter, the Comp Set 500. The new equipment lends itself to a broad range of creative capabilities by allowing the operator to mix any of four type faces in 33 sizes at one time. At last count, Bear Graphics offered more than 65 different type faces, and new ones are currently being added to meet customers' requirements.

"Of course there have been problems," Warren explained. "Is there anyone in business who doesn't have them? Probably my main obstacle has been communicating with customers over the phone. It's so important to have a good two-way conversation. As service provider and customer, we have to accurately exchange ideas, price quotes, and all kinds of other specific technical information."

Twenty-eight-year-old Warren has gone to school, worked in the typesetting field and matured into a highly aggressive businessman side by side with hearing people. A leadership personality and varied communication skills have won him the presidency of the local chapter of the Oral Deaf Adult Section of the Alexander Graham Bell Association for the Deaf. By successfully using his residual hearing and lipreading, Warren has closed many communication gaps that might otherwise have hindered his success.

The first few months of operating Bear Graphics presented Warren with new obstacles to overcome. "During the first nine months, I worked alone because the business had to have time to grow before it could support another person. Receiving phone calls was a real problem. Bob Sanderson was a big help to me in finding a solution," Warren said.

Dr. Robert G. Sanderson is Coordinator of Services for the Deaf of the Utah State Board of Education and a member of NTID's National Advisory Group. He provided Warren with two teletypewriters commonly known as TTY's.

"One was installed in my office, and the other in the home of a housewife who stayed at home all day and was willing to answer my business calls for a small fee. Bear Graphics' phone number was coded so that calls would be routed to the phone installed in the woman's home. She wrote down all messages from the calls, then would contact me through her TTY and type the information.

"But there were still some problems. Occasionally the woman's husband or one of her children would answer my calls by simply saying, 'Hello' instead of using the company's name. The answers weren't always consistent and messages were sometimes confusing. Eventually, the time came for a change. As the business grew, I felt a real need for more professional contact with customers over the phone. Bear Graphics needed a full-time office worker."

That office worker turned out to be Janna Stone, an attractive, petite brunette who is Warren's secretary and is being trained as a paste-up artist and typesetter keyboard operator. Janna started working for Warren this past spring and is enthusiastic about her new job. She explains that working for a deaf employer takes some extra effort. "It's just a matter of adjusting, like trying to get used to someone with a strong accent. It took a few days to feel comfortable with the office situation, to understand what Warren wanted me to do. But now it's fine."

Now Janna answers the incoming calls. But Warren still wants and needs to talk to the customers himself and has found a workable solution to the problem of understanding the customer during phone conversations. Janna listens to the dialogue through a small, specially designed receiver that can easily be plugged into the side of the telephone. As the customer is talking, Janna mouths his/her words so that Warren can read the words on Janna's lips. Then Warren verbally responds to the comments. Thus, he and the customers communicate directly, comfortably and naturally.

Though most of Warren's hours tick by during business operations, he reserves a few for a change of pace. Topping his list of favorite pastimes is skeet shooting. When a working week's stress demands a more relaxing sport, he looks for a fishing rod and heads for the water. Sports are important, but they are not his only diversions. Frequently aesthetic interests draw him to the theater for modern dance and ballet performances.

Summarizing his thoughts about working for himself Warren said, "Sure, going into business on your own involves a lot more work and responsibility than working for someone else. Sometimes the hours get pretty long. But there's always variety in trying to come up with new ways to meet each customer's needs. I guess the real reason for starting my business is that I enjoy the constant challenge of keeping the customers happy."

Jerry Cushman:

Movement is His Specialty

A funny thing happened on Jerome J. Cushman's way to New York City—he got sidetracked to Greenwood, Wisc., teaching pliés to the high school wrestling team.

"Of course they would have been horrified if they knew pliés were ballet movements, but I just told them to bend their legs!"

Jerry had been heading to New York, after completing his master's degree in theatre and dance at the University of Wisconsin in Madison, to become a dancer with the Martha Graham dance company.

"Instead of fame, I chose security in Greenwood, Wisc., teaching 150 juniors and seniors English and drama. I taught Shakespeare to country kids, and our drama group made it to the state contest that year. It was the first time they had ever seen scenery and colored lights," he recalls.

The wrestling team, which he took over from another instructor, was praised as being extremely fast, coordinated and flexible—all because of the movement exercises Jerry had instituted.

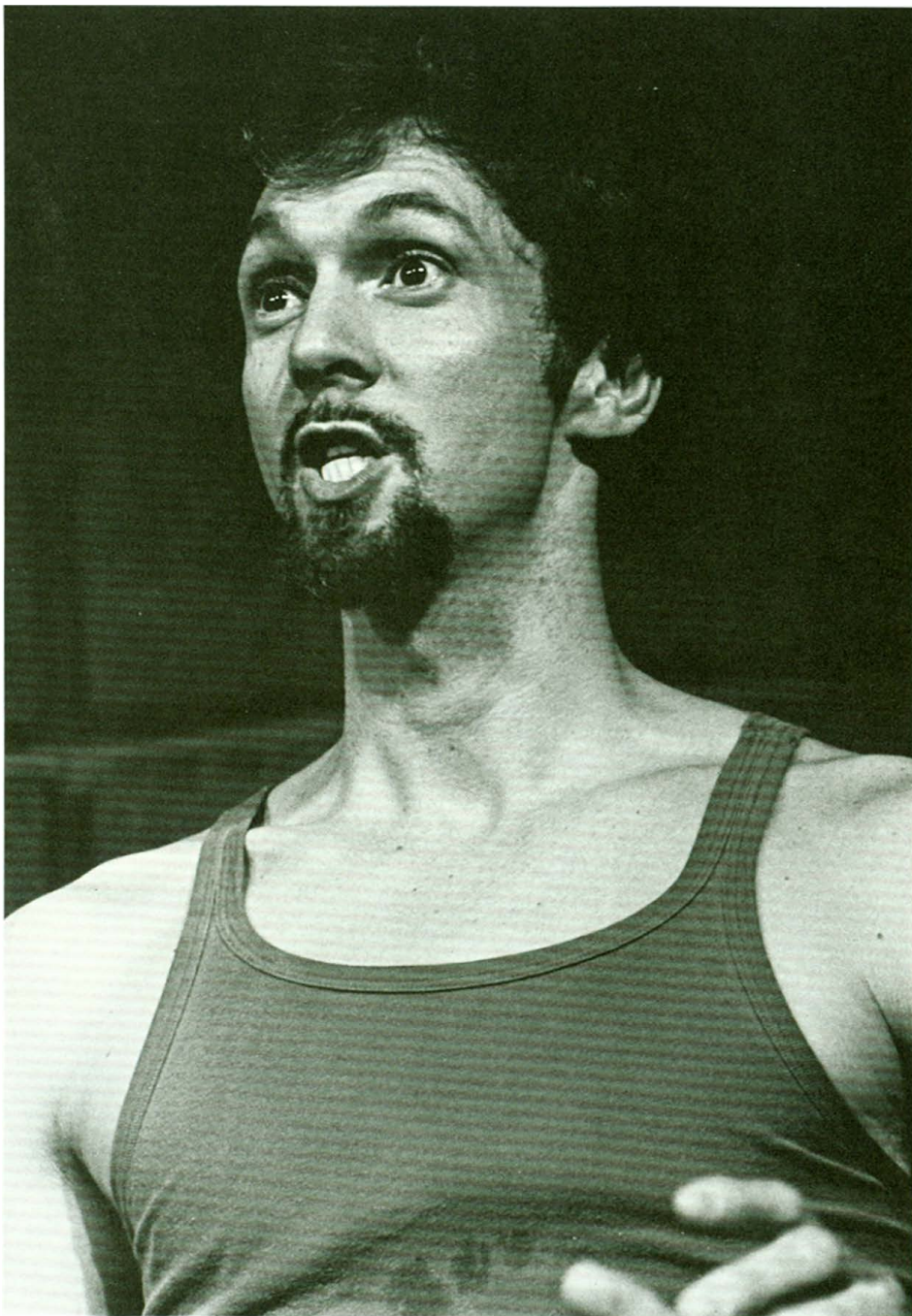
After several other teaching jobs and working towards his doctorate summers at Michigan State, Jerry was invited to NTID to do a workshop and, much like the man who came to dinner, he decided to stay as assistant professor of theatre and dance.

Theatre movement is Jerry's speciality. Contrary to the belief that stage movement is limited to dance, Jerry's theory of theatre movement incorporates a wide range of action. Stage fighting, tumbling, mime, body language—all enable an actor to become a character physically.

With his background in ballet, modern dance and other movement techniques, Jerry's six-foot five and three-quarter inch frame becomes a moving dictionary of body language.

His philosophy of experimental theatre is to deal with life's experiences by using unique theatrical methods.

"I also think it is important for students to focus in on both positive and negative aspects of life. I like to work with theatre that deals with what people deal with in life—good and bad."



Jerry's original experimental play, "Wall," did just that. The play presented a collection of experiences of NTID students and combined them into a moving performance about the experience of deafness, which moved theatrically sophisticated audiences around the country to tears. The play was honored at the University of Michigan's Invitational Experimental Theatre Festival last year.

Jerry gets his greatest pleasure from challenging students into thinking and growing.

"Students get immediate feedback when they accomplish something in the theatre. They see instantly that they can do things. They must confront themselves in a totally new way. They must express themselves. They must create.

"Their involvement in the theatre helps them develop a certain type of confidence in their abilities. They get the chance to see what communication is all about."

'Captioning' Decoder

The NTID TV Center will receive a decoder unit permitting captions to be displayed on a variety of programs offered by the Public Broadcasting System (PBS) according to Frank Argento, director of NTID's Division of Curriculum Development and Evaluation.

The prototype decoder units were developed by PBS and make it possible to transmit captions in the broadcast signal which are "hidden" so that the general public is totally unaware of their presence.

The use of captioning for television programs is the result of interest from groups such as PBS, the U.S. Department of Health, Education and Welfare and the National Association for the Deaf to "make accessible to non-hearing persons the same wide spectrum of television programming available to their hearing peers." Doris C. Caldwell, coordinator of PBS's programming for the hearing impaired, said.

The concept of inserting hidden information in the broadcast signal is as old as television itself. Since the mid-1950's, TV programs have often contained special test waveforms without our knowledge. By the late 1950's, continued advances in electronic circuitry made the widespread and more sophisticated use of hidden signals a common occurrence.

NTID's TV Center will use the decoders to make captions visible on TV receivers in the NTID academic building and in individual dormitory rooms and lounges. Approximately 50 percent of NTID students on campus have their own TV sets, and there are 45 receivers placed throughout the NTID complex.

The controversy about the use of 'open' or seen captions versus 'closed' or unseen captions results from objections by the general hearing public to what they consider "an annoying intrusion on their own viewing pleasure," which makes 'open' captioning a limited service, according to Ms. Caldwell.

"Open captioning as a service to the hearing-impaired population has been and will continue to be firmly rejected by the television broadcast industry in deference to the demands of that larger group who can hear," Ms. Caldwell said.

PBS began working on a closed captioning project in conjunction with HEW's Bureau of Education for the Handicapped in 1973. PBS also began collecting data from sample audiences at 12 test sites across the country.

The interest and results were so positive from the audience sampling at the original 12 stations tested that PBS executives decided to offer all its stations 'open' captions. A recent report indicated that 70 percent of all 267 PBS stations nationwide were carrying 'open' captions.

PBS then decided to offer their prototype decoder units to a number of large residential schools for the deaf throughout the country who have closed circuit TV systems. Ms. Caldwell said.

NTID will incorporate these programs into captioned and interpreted programming already offered to NTID students. Planning is also taking place to research and collect data on impact of the PBS programming at NTID.



Deaf and hearing students and staff enjoy watching a decoded episode of PBS's "The Adams Chronicles."

Supervisors' Workshop on Campus

Supervisors of medical record departments from five hospitals throughout the United States attended a two-day workshop at NTID.

The supervisors came to learn about the Medical Record Technology (MRT) program that the Institute offers, to become oriented to the psychology of deafness and to meet with the students who would participate in a cooperative work experience at each of their hospitals.

A cooperative work experience is one in which students spend time working on-the-job to gain actual experience in their field of study.

None of the five supervisors had worked with a deaf employee before "and we thought a workshop of this kind would enable them to ask questions about the experience and get a feel for the students they would be supervising." Marilyn Fowler, Registered Record Administrator and instructor for the program, said.

Fred Hamil, department chairperson for the Technical Science Department, of which Medical Record Technology is a part, said. "The supervisors discussed the expectations for the cooperative work experience with the students, met with NTID staff to learn

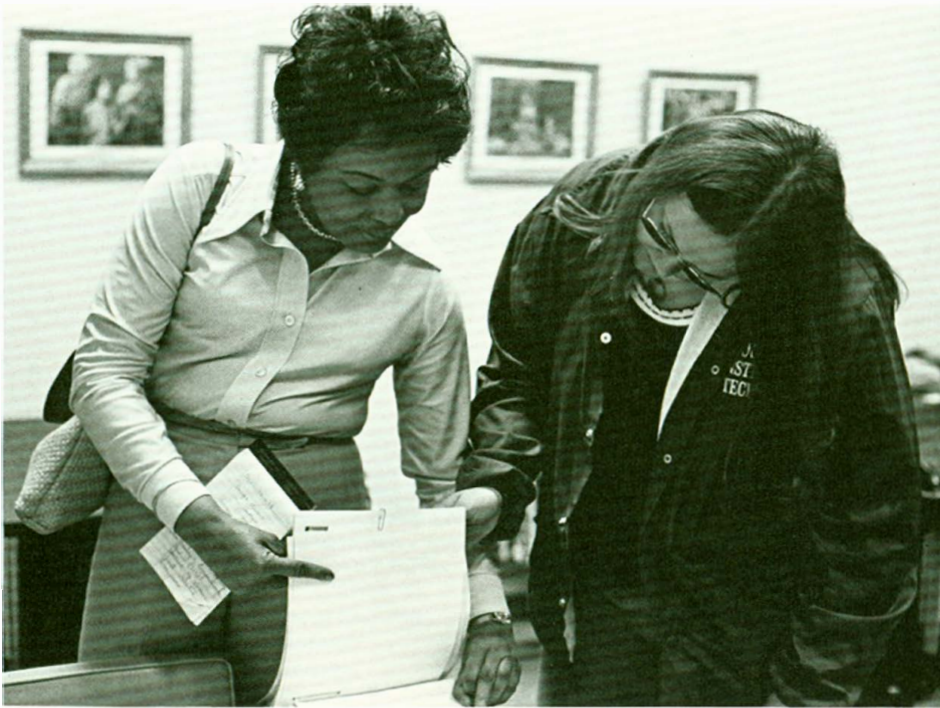
about communication techniques, and generally picked up tips to help make the co-op experience as beneficial as possible for the student and the hospital as well."

One of the participants in the workshop was Elaine McFarland from Michael Reese Hospital, Chicago, Ill. Ms. McFarland is an Accredited Record Technician and holds the position of assistant director of the Medical Record Department at the hospital. She supervised Judy Sylvester, daughter of Mr. and Mrs. Fred Sylvester, Chicago, Ill., and a second-year student in the Medical Record Technology program.

Ms. McFarland was initially apprehensive when considering her role as Judy's supervisor because "this was my first experience working with the hearing impaired. However, I felt much more confident after coming to NTID and participating in the MRT supervisor's workshop," she said.

Based upon what she learned at NTID's workshop, Ms. McFarland could skillfully design Judy's summer program to expand Judy's present experiences and skills in the medical record field. Judy's task included abstracting and coding data, accompanying the courier who picks up medical records at each of the 32 nursing units for delivery to the medical record department, and working on the record keeping system used by the hospital, called Problem Oriented Medical Record (POMR).

Other participants in the workshop were: Elizabeth Pazzo, ART, Leonard Hospital, Troy, N.Y., who supervised NTID student Toni Smith of Waterford, N.Y.; Mary Mike Bertrand, RRA, Hennepin County Medical Center, Minneapolis, Minn., who supervised Debbie Yosick of Plymouth, Minn.; Joan Howe, RRA, St. Joseph's Hospital, Stamford, Conn., who supervised Mary Ann Gregory of Brooklyn, N.Y.; and Mildred Curtis, ART, Rocky Mountain Hospital, Denver, Col., who supervised Nancy Krohn of Denver.



Elaine McFarland (left), assistant director of the medical record department of Michael Reese Hospital, Chicago, Ill., gets acquainted with her co-op student, Judy Sylvester.

Unique Job Development for U.S. Steel and NTID

Gene Rusiecki, Niagara Falls, N.Y., and Paul Mente, Pittsburgh, Pa., have benefited from a unique job development program established between NTID and the United States Steel Corporation.

Two years ago NTID sent letters to all employers recruiting at RIT, informing them of the availability of qualified deaf graduates at the baccalaureate and sub-baccalaureate level.

U.S. Steel responded positively, and a series of exchange visits began. John Frey, coordinator of College Relations and Ernest Helms, superintendent of Personnel Services were first oriented to NTID and to deafness. Later, members of NTID visited U.S. Steel, surveying job opportunities there to see where our graduates would fit in best.

A major breakthrough occurred when U.S. Steel representatives

interviewed deaf applicants at NTID for jobs. Late in 1975 two cooperative work experiences were offered to Gene and Paul.

Paul is majoring in digital computer design. He graduated with an associate's degree in electro-mechanical technology from NTID in 1974 and is currently pursuing a bachelor of technology degree at RIT from the Institute College.

In his co-op with U.S. Steel, Paul worked for the American Bridge division's Engineering Department and says the experience he gained on his co-op really tested what he'd learned in his classes.

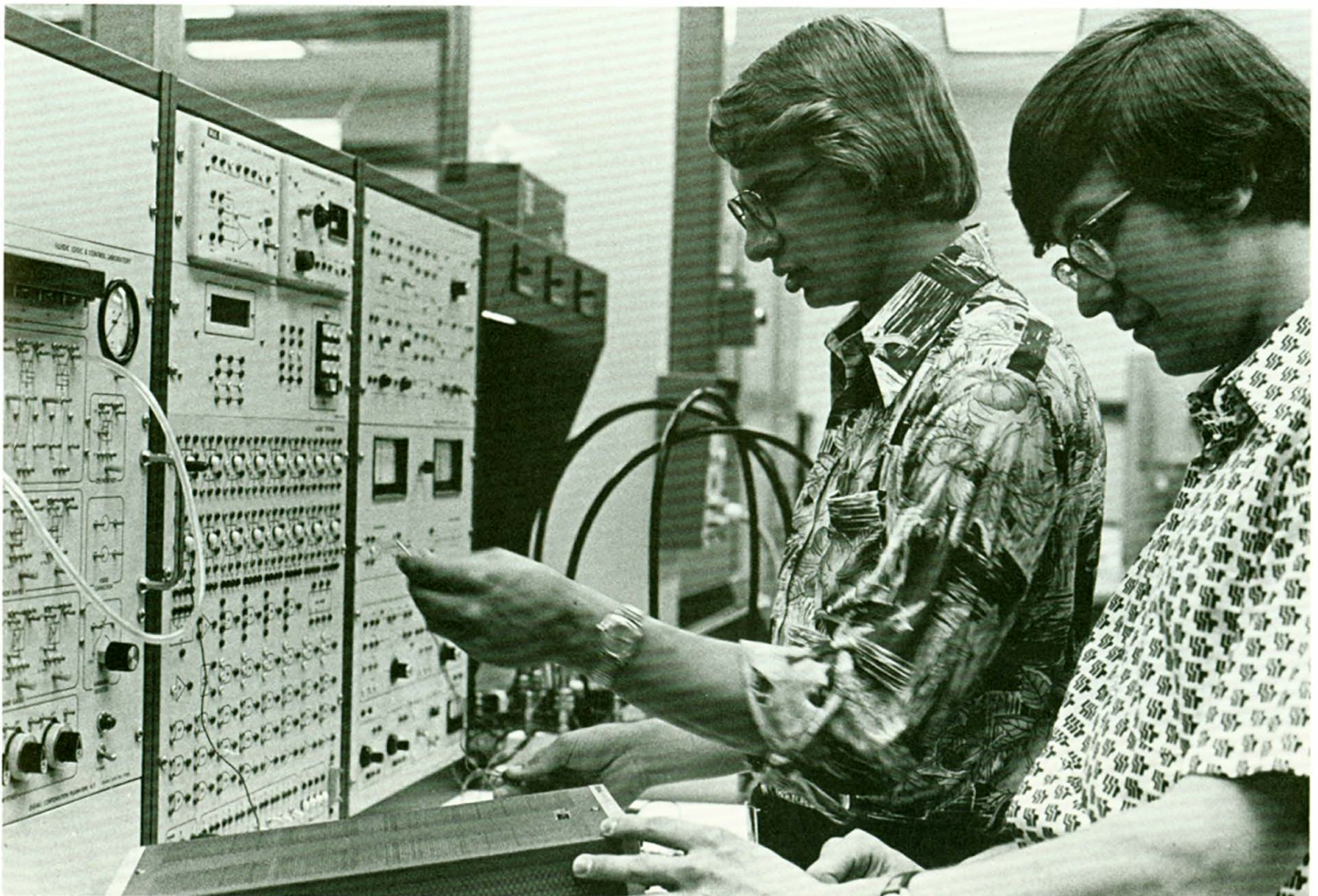
After receiving an associate's degree in electromechanical technology from NTID, Gene entered the Institute College and is now pursuing a bachelor of technology degree in electrical engineering.

In his co-op, he worked closely with two electrical engineers testing equipment and working on an automated roof bolt drilling system; both projects were related to the area of coal mine operations.

As part of his job Gene designed a special circuit to work with a microprocessor. U.S. Steel was so impressed, according to Gene, that he was asked to make a presentation on his circuit design in West Virginia.

Both Paul and Gene are looking forward to future co-op work experiences they will have with U.S. Steel.

Another NTID student, Suzanne Lemanski, Pittsburgh, Pa., took part in the co-op program with U.S. Steel during the summer of 1976. She is majoring in office practice at NTID.



Gene Rusiecki (left) and Paul Mente, at work in NTID's electromechanical technology lab, apply theories they learned during their U.S. Steel co-op experience.

Learning About Deafness

This story is reprinted with the permission of *The Times-Union*, Rochester, N.Y.

A woman on television warns a roomful of people that a tornado is going to strike, and they will die unless they make special preparations. Yet only a few follow her instructions. The rest wander around, confused.

These people were learning what it's like to be deaf. The television commentator was using sign language, and many understood her as well as deaf people understand Walter Cronkite. "I couldn't tell heads or tails what was happening," said one person.

The 18 people were new staff, faculty and interns at the National Technical Institute for the Deaf (NTID) on the Rochester Institute of Technology campus. This exposure to "A Deaf, Deaf World" was the introduction to their eight-week orientation program.

Although all except one of the participants could hear perfectly, they were forbidden to speak. They attempted a variety of daily encounters—applying for a job, ordering lunch in a restaurant, visiting a hospital admissions office, and registering for a program—communicating with signs, gestures, fingerspelling and other means. At each encounter, the teachers (NTID students and staff) gave points to each person, depending on how well he or she communicated.

None of the participants broke the non-speaking rule, although they sometimes became frustrated and angry. "At the beginning I just wanted to scream out, 'Hey, you didn't give us enough instruction!'" said Kathy Callan, an intern who just graduated from the Wayne State University audiology department. She knew no sign language.

The television warning perplexed almost everyone. The commentator, Barbara Ray, told the audience to go to the nearby information booth and obtain a red poker chip to ward off the tornado. But only a few persons could understand her frantic, yet distinct signs.



Kathy Warren, manual communication coordinator, explains procedures in sign language to new staff members.

"I just followed somebody who looked like he knew what he was doing," said one intern. "but I chose the wrong colored chip anyhow."

"That's just the point," said Katherine Warren, coordinator of manual communications instruction of the NTID Office of Professional Development. "Deaf people have to rely on others to find out what's happening—and they often get the message wrong. Mass media communication is almost useless for them."

"Even supposedly easy, day-to-day conversation takes on different proportions for deaf people. Too many hearing people think that deafness is not being able to listen to Beethoven's Ninth. We're trying to prove that it's the isolation that's much more intense."

In discussion after the 90-minute workshop, the participants expressed new appreciation of their own hearing and talking skills.

"You have to learn a whole new mode of communication," said one new staff member. "My natural reaction was to read lips, but I knew I had to concentrate on learning signs. I found it difficult to concentrate on both at the same time."

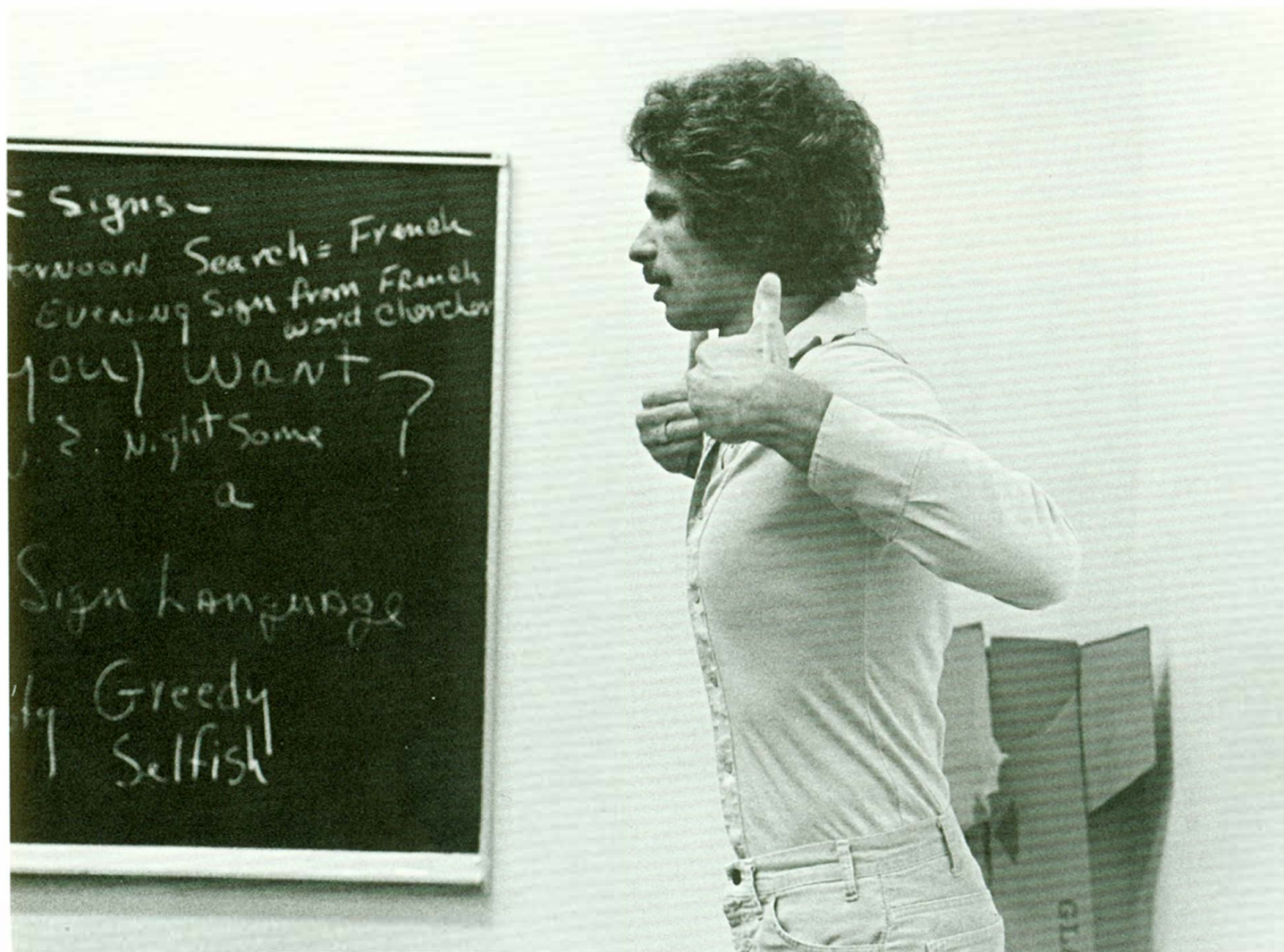
The teachers rewarded the participants on an arbitrary point system, ranging from negative three for "reading lips only" to 12 for using both signs and fingerspelling. They gave extra points to those who appeared to be trying very hard.

Mimi Mallory, a teacher with the Berlitz School of Languages who is

learning sign language, received 15 points during her visit to the hospital. She described herself as so sick that the worker felt she deserved a three-point bonus.

"The hospital didn't even ask me what was wrong," said Betty Hargrave, an intern. "But I was still relieved. When I first read our instructions, I thought we were going to have to go over to Strong Memorial Hospital and communicate with real personnel."

At the "classroom," Paul Menkis, a sign language instructor at NTID, taught signs that could be used, such as "I want some French fries" or "this is an emergency." With elaborate theatrics, he urged the people to make the signs close to their bodies, and to keep their thumbs tucked in.



Manual Communication Instructor Dale Kennedy uses body language to emphasize his message.

Curriculum Advisory Group for Data Processing

"Will the jobs of business application programmers be viable for the next 5-10 years?"

"Is depth of knowledge and problem-solving experience in one computer language preferable to introductory knowledge of several computer languages?"

These questions typify the concerns of the Curriculum Advisory Group (CAG) for NTID's Data Processing program of the Business Technologies Department which met to discuss curricula and course revisions needed to correspond with the changing data processing needs of business, industry and government.

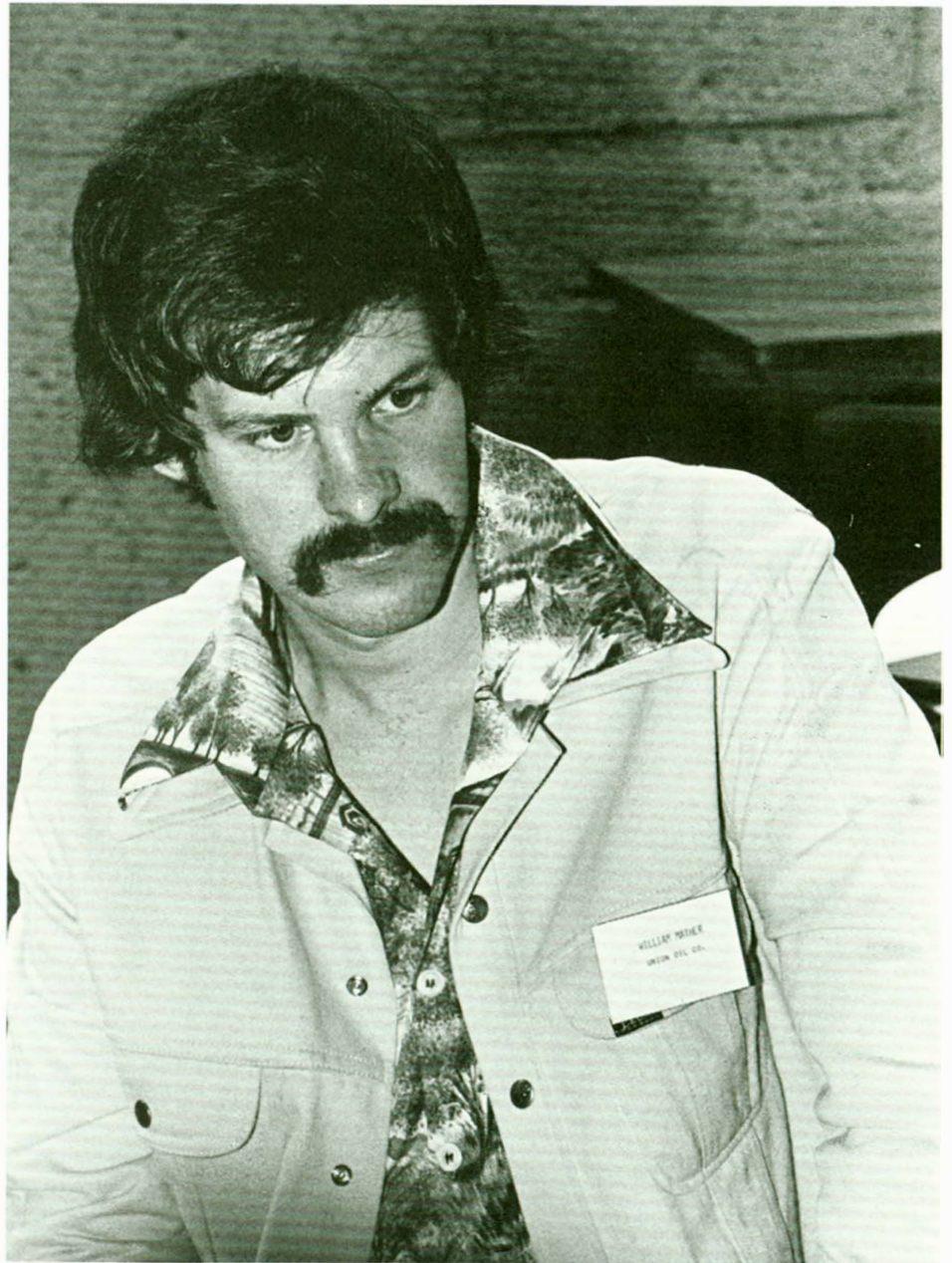
The CAG provides guidance and leadership for the program and serves as a mechanism to enhance communication between the Business Technologies faculty at NTID and those of other colleges at RIT.

The committee consists of six practicing professionals in the data processing field, plus two members from the faculty of the School of Computer Science and Technology at RIT, as well as several members of NTID's Business Technologies Department.

The semi-annual meeting this year included a panel discussion by five deaf computer professionals who work full time in the computer field. Three of the participants, Sophie Bleiweiss, William Mather and Charles Jones, graduated from NTID's Data Processing program. Thomas Thompson graduated from RIT's Computer Science program, and Phillip Bravin, is a graduate of Gallaudet College, Washington, D.C. The panel members discussed their work from a perspective that would aid new NTID students in deciding if data processing was an appropriate career for them. The experience also served to orient the CAG to the unique needs of deaf professionals in this field.

The afternoon session was a working meeting to discuss curricula revisions.

Members of the committee are: NTID graduate William Mather, who is employed as an applications programmer for the Union Oil Company, Palatine, Ill.; Philip Bravin, systems engineer, International Business Machines Corp., N.Y., N.Y.; Robert Berl, manager of Data Processing Mixing Equipment Co.,



NTID alumnus William Mather is an employee of the Union Oil Company, Chicago, Ill., and a member of the Curriculum Advisory Group for NTID's Data Processing program.

Inc., Rochester, N.Y.; James Carbin and Wiley McKenzie, professors in the Department of Computer Science and Technology, RIT, Rochester, N.Y.; Jack Cover, systems analyst, American Can Corp., Greenwich, Conn.; Daniel McCracken, author and vice president

of the Association for Computing Machinery, Ossining, N.Y.; and Donald Stabley, supervisor of training and development, Eastman Kodak Company, Rochester, N.Y.

Japanese Intern: Suki Shigemori

Are deaf students in Japan very different from their American counterparts?

Not very, according to Setsuko Shigemori (better known as Suki) from Tokyo, Japan, who spent eight weeks this summer interning in the audiology department at NTID.

"I think all teenagers have a lot in common, so I found the students I worked with at NTID similar to the students I taught in Tokyo," she said.

What she does not find similar are what she considers the better educational opportunities available to deaf students in the United States as opposed to the educational programs offered to deaf students in Japan.

"I feel there are very few good programs in higher education available to deaf students in Japan. Some elementary schools have special programs for deaf students, but there are only a few good residential schools serving the deaf," she explained.

Suki graduated from Tsuda College in Tokyo with a bachelor's degree in international relations in 1974 and also received teaching certification. Her first job was teaching high school English to Japanese deaf students, which was a definite challenge to her teaching abilities.

"At first I was almost overwhelmed by how little I knew, but with some training I realized I wanted a career in audiology and realized I needed some in-depth study," she said.

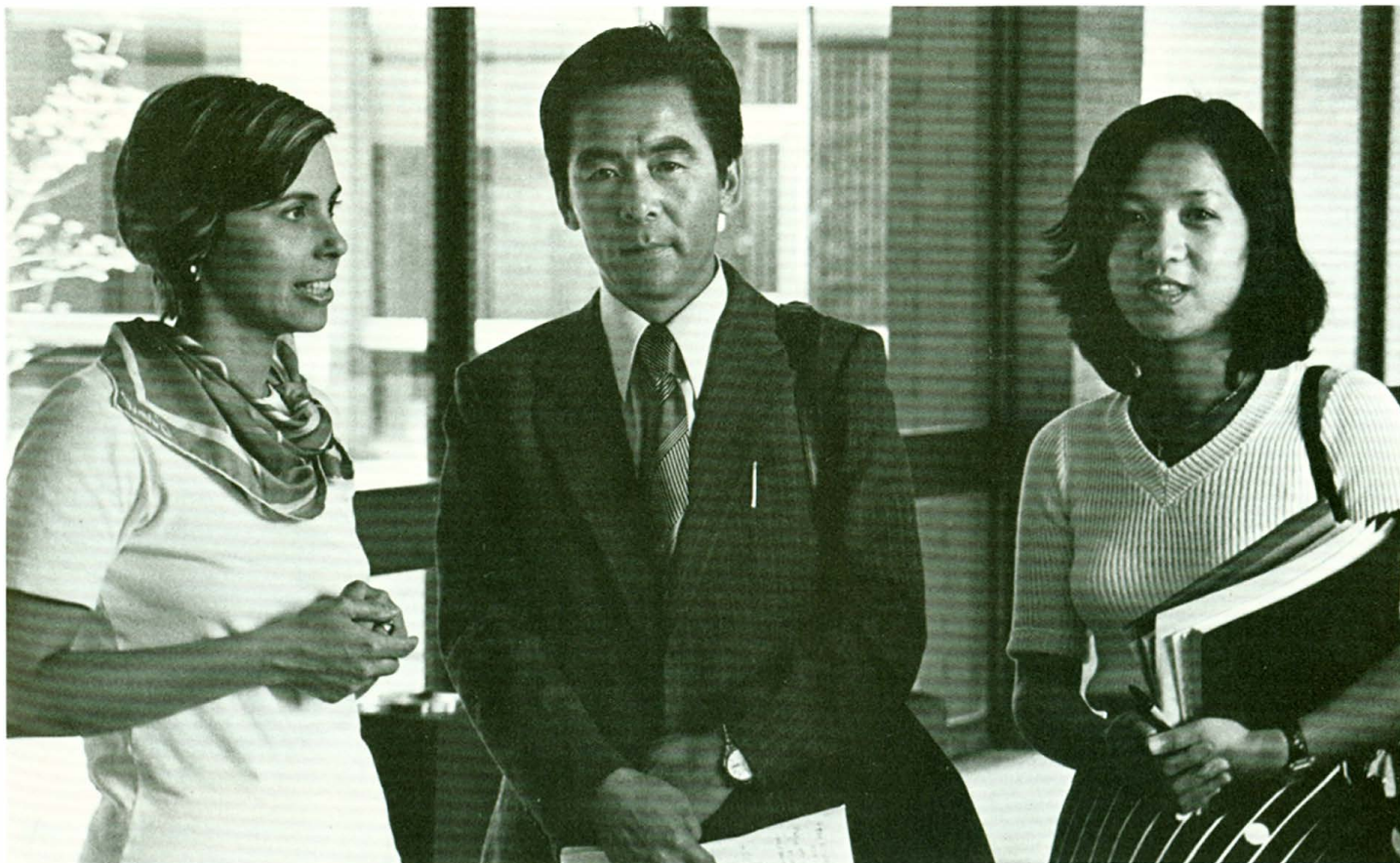
She is currently studying speech therapy and audiology at Elmira College, Elmira, N.Y., and entered NTID's internship program to gain more experience working with college-age deaf students.

"At Elmira I work mainly with hearing people, and I know in Japan I will be working with the deaf. I participated in the testing of new students and was very interested in the computerized filing system and new approaches

toward audiology testing being done at NTID. Audiology is a relatively new field in Japan, and the information I received at NTID will be very useful," she explained.

During the summer NTID hosted several visitors from Japan who are working to establish a post-secondary institution for the hearing impaired there. Suki served as the English interpreter for one such visitor, Shuichi Obata, deputy superintendent, National School for the Deaf, Tokyo University of Education, Tokyo, Japan.

"I realize I have a lot to learn, but I know in the future I would like an opportunity to contribute to the establishment of an institution of higher education for the deaf in Japan. I feel I have learned a lot about the deaf in the United States and hope to be able to help the deaf in Japan with my new knowledge," Suki said.



Intern Suki Shigemori (right) provided translation for Japanese visitor Shuichi Obata (center), deputy superintendent of the National School for the Deaf at Tokyo University of Education. He recently petitioned the Japanese government to establish a center for post-secondary opportunities similar to NTID. Keitha Boardman (left), NTID visitors' specialist, conducted the tour of the facilities.

Two NTID Alumni Receive Special Recognition

Two NTID graduates recently earned two of eight Distinguished Alumni Awards presented by the Rochester Institute of Technology during recent Homecoming festivities. The awards are given to alumni from each of RIT's colleges who have made noted professional contributions in their fields.

Donald Stoops, a 1972 graduate in data processing, won the award from the National Technical Institute for the Deaf. He is a programmer in the Kane County (Ill.) Data Processing Department, working on systems for real estate taxes, capital expenditures, and various other items. In addition to working with the Waubesa Community College's Hearing Impaired Program, Don has been honored to serve on a panel of the President's Committee on the Employment of the Handicapped in conjunction with the Association for Computing Machinery.

Gerald Nelson received his award as a 1974 graduate of Institute College in engineering technology. He currently works as a mechanical engineer with FluiDyne Corporation in Minneapolis,

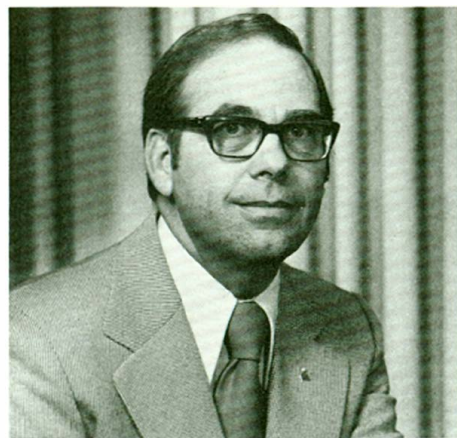


NTID alumni Donald Stoops (right) and Gerald Nelson.

Minn. Gerald is the first deaf mechanical engineer in his state, is an elected member of NTID's Alumni Advisory Council, and was recently

chosen to serve on the NTID National Advisory Group. He is also very active in the deaf community in Minnesota.

NAG Welcomes New Members and Chairperson



Edward F. Rose, new NAG chairperson.

The National Technical Institute for the Deaf's National Advisory Group (NAG) welcomed three new members and elected a new chairperson during its October meeting.

Edward F. Rose, deputy executive director of the President's Committee on Employment of the Handicapped, was elected chairperson of the NAG. New members of the NAG include T. E. Lyons, personnel training expert with the Lockheed Aircraft Corporation for thirty years and currently job development specialist for handicapped and disadvantaged



(Left to right) New NAG members Gerald Nelson, Debbie Helwig, and T. E. Lyons.

persons with the Center for Employment Training in San Jose, Calif.; Deborah Helwig, accounting technician with the Continental Illinois National Bank and Trust Company, Chicago, Ill.; and Gerald Nelson, mechanical engineer with FluiDyne

Engineering Corporation, Minneapolis, Minn. Both Ms. Helwig and Nelson are graduates of NTID.

The NTID National Advisory Group serves in an advisory capacity to the director of NTID in all matters of growth and development.



Distinguished Visitors

Rochester Institute of Technology Chairman of the Board Richard Eisenhart (left, temporarily on crutches from an accident), recently visited the NTID Optical Finishing lab. He discussed aspects of the program with Optical Finishing Technology Coordinator Patrick Coyle (center) and Mr. Eisenhart's out-of-town guest, Martin Topaz (right), president of Professional Press, Inc., Chicago, Ill. Mr. Topaz's company publishes Optical Index, a monthly magazine devoted to the optical industry.

Architect Learns About NTID's Unique Facilities



Architect Michelle Morgan (right) recently visited NTID to gather information about designing facilities for the deaf. Ms. Morgan received a special grant from the Federal government to study environmental factors in designing facilities for the deaf. While at NTID, she talked with Larry Barone, Rochester Institute of Technology environmental design student, who along with other environmental design students, has plans to initiate an information center on design for the deaf at RIT. Ms. Morgan is associated with Interface, human factors design consultants, Raleigh, N.C.

For further information contact:



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