

# ntid focus

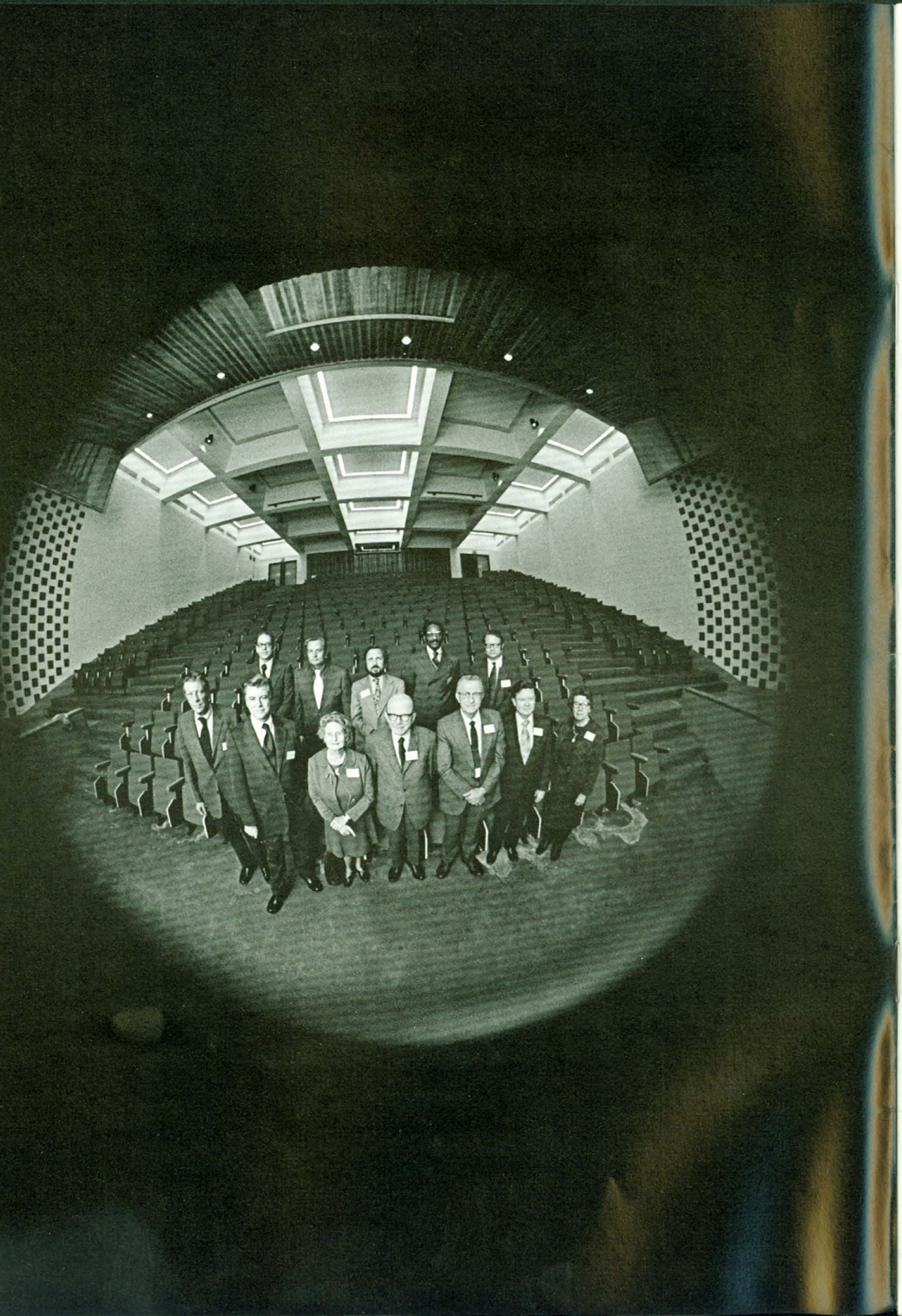
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**NAG Meetings Spark Insight . . . page 3**







# NAG

## NAG Meetings Spark Insight, Ideas for NTID Development

"We get a much greater insight into the problems and programs of NTID after these meetings."

"We're a much more intelligent advisory group because of the kind of treatment we get from NTID."

"To look at the original intent of this institution and then to be able to see what's actually happening . . . it's marvelous."

Those were just a few of the comments made by the 13 members of the National Technical Institute for the Deaf's National Advisory Group (NAG) when they met for their winter meeting.

The NAG serves in an advisory capacity to NTID in all matters of growth and development. Discussions at the two-day meeting centered around various NTID projects and NTID's relationship with Rochester Institute of Technology, the sponsoring institution for NTID.

What makes NAG members respond so positively to their meetings at NTID?

"You inform us about the guts of the operation rather than the cosmetics," Dr. Ralph W. Tyler, chairman of the winter meeting said. "You give us much more understanding of what NTID really is."

At the first session NAG members

were treated to a presentation by Dr. Ross Stuckless on the various projects taken up by the Office of Research and Educational Extension. Dr. Stuckless outlines specific projects including the training of graduate interns to prepare them for careers relating to the deaf; a film developed for parent groups and high school students; a slide series narrated by author Jean Shepard on deafness; and an on-going in-depth study on the relationship of NTID to elementary and secondary school programs for the deaf.

Dr. Robert Frisina, vice-president of RIT and director of NTID, further explored this relationship by discussing the linkages that can and do exist between NTID and other agencies for the deaf.

"We're in a position to know what is and isn't happening in high school programs for the deaf and we must decide what our role is in trying to help," Dr. Frisina said. "Deafness is a very real obstacle to learning and we have to be fully aware of this, and because of this, we must look into developing linkages between elementary, secondary and post-secondary education."

Research into elementary and secondary school programs for the deaf is one of the major roles NTID must

play, according to NAG member Gustave H. Rathe of the IBM Corporation.

"Part of the problem with research in the field of deaf education is to have large enough numbers," Dr. June B. Miller, educational director of the L. B. Spake Hearing and Speech Department, University of Kansas Medical Center, said. "To be able to pursue that research, to be able to try out and revise programs. That's one of the reasons that the concept of NTID is so exciting."

Dr. Tyler echoed this feeling, "the main purpose of the NAG is to make reports and recommendations to the director of NTID and the Department of Health, Education and Welfare (HEW). A few years back HEW questioned the role of NTID and research and wanted to cut research funds. We strongly advised against it. HEW respected our recommendation and we still feel research is a major part of NTID's role in deaf education."

Another relationship explored at the winter session was the one between NTID and other units within RIT, a relationship often riddled with "miscommunication," a term used by Dr. Frisina.

How to really get deaf and hearing populations together. How to devise



a program where there would be no losers in an ever-changing college environment. How to minimize miscommunication.

Those were just a few of the considerations that had to be studied in making the NTID/RIT relationship a workable one, according to Dr. Frisina.

The differences are many. RIT is a private institution with a college-prepared, hearing population. Seventy percent of its students come from within the state. Its government is by a Board of Trustees and its major goal is professional education for its students.

NTID on the other hand is a public institution whose population is deaf, but just as important, its students are also non-college prepared, and come from all over the U.S. RIT's development and operation of NTID must take into account the NAG, to HEW, the federal Office of Management and Budget (OMB), and the Congress. These relationships require difference in NTID's accounting procedures and

the Institute as a whole. NTID's major goal is direct employment of its students with emphasis on research and training which is national in scope.

Tryng to blend two such educational enterprises is "unparalleled" according to Dr. Frisina, but he also indicates that with the element of miscommunication lessened, it is a challenge that can be met.

Some of the things already being done in this area were set up from NTID's start. Dr. Frisina serves a dual role as RIT's vice president for NTID. NTID Dean William Castle works with RIT deans. There also are subcommittees currently working on the interrelationships between RIT and NTID which will have their reports ready sometime this spring.

The main idea that NTID tries to communicate is that RIT is no longer simply RIT, but RIT plus Public Law 89-36, the law which founded NTID. At the same time, RIT administrators are eager to displace any misconceptions regarding NTID's place on the

RIT campus, deaf students and new facilities which are slightly more than 65 percent completed.

"We are trying to dispel any notions that the deaf are going to be isolated when the new structures are completed. The new facilities are designed to complement existing RIT facilities," Dr. Frisina said.

"In spite of the problems involved from what I've seen while here, NTID and RIT have benefited from each other," Edward F. Rose, director, Public Policy Employment Programs, Washington, D.C., said.

"I've been especially impressed by the concern NTID places on the emotional and personal development of its students, as well as their technical training. I think it's marvelous that hearing impaired students have a place like RIT as an interim step to the great big world, a place where they can begin to develop insights of what the hearing world is all about. It'll be exciting to see what the future brings." Dr. June Miller summed up.



CONFERENCE — Dr. Ralph W. Tyler, left, chairman of the NAG, checks his notes as Dr. Robert Frisina, vice-president of RIT and director of NTID, addresses the group.





## ***New Members Add Expertise To National Advisory Group***

The National Technical Institute for the Deaf has named five representatives from business, education and the deaf community to its National Advisory Group (NAG).

As required by Public Law 89-36, which resulted in the establishment of NTID, the NAG serves in an advisory capacity to the director of NTID.

Selected to serve on the advisory group were: Dr. June B. Miller, Robert J. Behnke, Maurice R. Forman, Lloyd A. Harrison, and Frank B. Sullivan.

Dr. Miller is the educational director of the L. B. Spake Hearing and Speech Department at the University of Kansas Medical Center in Kansas City, Kan.

She has taught at the Kansas City (Mo.) Day School for the Deaf and at Lexington School for the Deaf in New York City. She presently holds the rank of professor at the University of Kansas Medical Center, and served as president of the Alexander Graham Bell Association for the Deaf from 1969-1971 and vice president of the American Board of Examiners in Speech Pathology and Audiology in 1971.

Dr. Miller's education, training and research in the education of deaf children have been notable, as have her writings and research publications, which number nearly 50.

She resides at 6017 Lockton Lane, Shawnee Mission, Kan.

Behnke is vice president and treasurer of Skinner Corp. in Seattle, Wash., and former mayor and city councilman of Medina, Wash.

Behnke, whose son is deaf, has long been interested in the education and general welfare of the deaf. He has been a board member of the Seattle Speech and Hearing Center since 1955 and has served as its president. He also served two terms as president of the University of Washington Alumni Association, and is a member of the Seattle Chamber of Commerce, the Board of the Cornish School of Applied Arts and the Board of Patrons of the Northwest Charitable and Cultural Organization.

He lives at 617 Evergreen Point Road, Medina, Wash.

Forman is the chairman of the board of B. Forman Co. in Rochester, N.Y. and is a member of the Board of Trus-

tees of both RIT and St. John Fisher College, also located in Rochester.

His other board memberships include the Memorial Art Gallery; the Jewish Home for the Aged; the Rochester Center for Governmental and Community Research, Inc.; the Rochester Housing Commission; the Metropolitan Housing Commission, and the Community Chest.

Forman is vice president of Midtown Holdings Corp. and serves as a director of the Associated Merchandising Corp. in New York City, the Federal Reserve Bank of New York and Edmac Associates.

He lives at 80 Ambassador Drive, Brighton, N.Y.

Harrison is superintendent of the Missouri School for the Deaf in Fulton, Mo.

He also serves as president of the Conference of Executives of American Schools for the Deaf (CEASD). Prior to joining the Missouri School, he was a teacher and administrator of programs for the deaf in Connecticut, California and Missouri.

Harrison is a past president of the Missouri Federation of the Council for



Exceptional Children; a member of the Board of Associates at Westminster and William Woods Colleges, and a member of the Executive Committee of the Council on the Education of the Deaf.

Sullivan is a long time leader within the nation's deaf adult community and is president of the National Fraternal Society of the Deaf in Oak Park, Ill., an organization insuring deaf persons and their families.

Sullivan, of 4824 N. Nordica Avenue, Chicago, Ill., is a graduate of the Montana School for the Deaf and Gallaudet College in Washington, D.C., and he has served as a teacher in schools for the deaf in both South Dakota and West Virginia.

He is a member of the Gallaudet College Board of Directors, has taught at DePaul University and is presently

an adjunct faculty member at Northwestern University.

During the past 20 years Sullivan has participated in many national and state meetings related to deafness. He is also a member of the National Association of the Deaf; the Professional Rehabilitation Workers with the Adult Deaf; the Illinois Association of the Deaf and the Registry of Interpreters for the Deaf.



***"You inform us about the guts of the operation rather than the cosmetics."***





SIDE-BY-SIDE — NAG members (right to left) are Gustave Rathe, Frank B. Withrow and W. Dexter Douglass.

## Withrow Named New HEW Liaison

Frank B. Withrow, the new liaison officer for the Bureau of Education for the Handicapped (HEW) with NTID, isn't a newcomer to the field of deaf education.

Dr. Withrow, former director of the Division of Educational Service for the Bureau of Education for the Handicapped within HEW's Office of Education, has a strong reputation in the area of deaf education, as well as in other areas of education for the handicapped.

He made his first official visit to NTID as liaison officer during the winter meeting of NTID's National Advisory Group. He was impressed with what he saw and heard.

"This advisory group," said Withrow, "is one of the more interesting and imaginative advisory groups that I work with."

And what he was especially pleased to see was the "fine interaction the group has with the deaf and a good representation from the deaf community."

As well as serving as the liaison officer to NTID, Dr. Withrow currently serves as the executive secretary for the National Advisory Committee on the Education of the Deaf, and is liaison officer for Gallaudet College and the Kendall School and Model Secondary School for the Deaf located at Gallaudet College. He is

also executive secretary of the executive committee of the National Advisory Committee on Handicapped Children and liaison officer for the American Printing House for the Blind.

His background lends itself well to his new assignment with NTID. Dr. Withrow is a graduate of Washington University, St. Louis, Mo., where he received a B.S. in education, and M.S. in speech and hearing and a Ph.D. in audiology. Before joining the U.S. Office of Education's Bureau of Education for the Handicapped, he was a classroom teacher at the Central Institute for the Deaf in St. Louis, and was Director of Clinical Services and Research at the Illinois School for the Deaf.

He sees his position as both a monitor for the federal government on programs for the handicapped, and in the specific case of NTID, as the person who must act as the federal partner for the U.S. Department of Health, Education and Welfare with NTID to see that the intent of, i.e. expanded technical educational opportunities for deaf youths and adults, is carried out.

"I'm looking forward to the job," Dr. Withrow says. "It gives me more direct involvement with the deaf, but because of my other involvements, doesn't limit me to working only with the deaf."

One of Dr. Withrow's major con-

cerns is the need for continuing education for the deaf. He is working closely with Gallaudet College in this area, and is "extremely pleased to see that NTID is attempting to come up with a plan for the needs in this area."

Another area which interests him is the prospect of having student representation on advisory groups.

"In the future, I anticipate moving toward some student representation on these groups, but the idea is not unique. It's a general movement in advisory groups, and I think a good one."

Withrow does believe that all institutions are in a "period of change in relationships with the federal government. With revenue sharing and the tendency of the administration to return money and power to the state and local governments, it creates a new point of decision making.

"We are in an overall period of change and institutions such as NTID and all the others will have a re-analysis of their role. It is a time when all areas have to redefine and reconfirm their commitment to the deaf.

"While such periods may raise anxieties on the part of some, there is also a greater opportunity for new directions. At such times there is a greater opportunity for the consumers to become more directly involved with the leadership of such programs."







# **Drama Club Relies On High Visual Impact**

Somewhere on most college campuses there is a drama club, where aspiring actors and actresses speak the ancient lines of Shakespeare, paint scenery and agonize over opening nights.

At the National Technical Institute for the Deaf there is a Drama Club where actors paint scenery and agonize over opening nights, but instead of merely speaking their lines, the actors and actresses of this Drama Club express their lines with gently moving bodies, arms writhing in pain, faces wreathed in smiles or crawling, posed postures.

"Deaf performers in some ways communicate better, more totally, than hearing performers, David Hagans, coordinator of the new Experimental Educational Theater program and an advisor to the NTID Drama Club, said.

Hagans has been with NTID just a few months but in that time spent observing the Drama Club he says "the mode of communication relies heavily on the visual. There's really a lot of advantages to that."

There are other advantages, too, in the Drama Club, advantages that exist for the students involved; advantages that can make a shy girl lead a drama workshop for hearing students in Geneseo, N.Y., or enable a deaf student to gain college credit by spending two summers with the National Theater Institute, an institute designed mainly for the hearing.

Barbara Ray of Huntington, W. Va., and Chuck Baird of Kansas City, Mo., are both members of NTID's Drama Club. Both feel they have benefitted from the experiences they have shared in Drama Club.

Barbara joined the club last winter quarter simply because "a friend of mine dropped out and made me take her place." From that shaky beginning

she's developed "a real love for acting," and was judged by Robert Panara, faculty advisor to Drama Club, talented enough to spend a summer in the National Theater of the Deaf's summer program.

"I learned a lot that summer. We had to work very hard and I developed a real love of acting while I was there," Barbara said.

Chuck Baird, one of the founders of NTID's Drama Club, was encouraged by another student to join. He had done some acting in high school and at Gallaudet College before transferring to NTID. Chuck initially joined Drama Club because "I was interested in improving my communication skills and then I became interested in the technical aspects of theater."

Chuck's interest has grown to such a degree that he is planning to pursue a career as a scenic designer in the theater. He is currently a third year student in the fine arts program.

"If I limited myself to acting there would be just one company for me, the National Theater of the Deaf. As a scenic designer, there are no barriers," he said.

Chuck and Barbara both agree that the major benefit they've received from their Drama Club experiences is the ability to express themselves more fully.

"Drama gives you the chance to mimic, to create a new person or new role and this broadens your experience. Acting also increases your ability to use your body to express yourself and to look into other characters through literature," Chuck said.

Barbara says she was much more afraid of people before her acting experiences. "Drama Club has given me confidence in myself because I've learned how to express myself in ways other than talking."

Through the use of plays such as Chekov's "The Cherry Orchard," Chuck feels he can get to know these characters, "so I can feel how they felt and lived." He also feels the degree of role-playing involved in acting helps him to better understand himself and broadens his use of language.

Barbara is working with the Rochester Shakespeare Theater, Inc., along with other Drama Club members on an experimental presentation involving non-verbal communication.

She says she is learning a lot from the experience because of the technique they use to develop character.

"In Drama Club we start with a written script already worked out. In the Shakespeare Theater sessions we have to read the story and develop the character ourselves and really create our own play. It's very exciting."

An unusual aspect of NTID's Drama Club, according to Hagans, is that it gets out into the community much more than other clubs.

"This year we've conducted a workshop at Geneseo College for students in deaf education; performed for a PTA group; gone to Temple B'rith Kodesh for a workshop; performed for the Nathaniel Rochester Society at RIT and worked with the Brockport Theater group. This mixing with the community is good experience for them."

Hagans also stresses the social aspects of the club for students who do not do a major part of the acting and the way their involvement increases their leadership potential.

"It's the kind of thing that puts Barbara, who describes herself as shy, into a role where she's conducting a workshop for hearing students in Geneseo. There's nothing else at NTID that gives students that kind of experience."

In his role as coordinator of the theater program he intends to "build from the things we've learned from Drama Club."

"The students have gained so much good from their experience in Drama Club that we can only grow from the best parts of that experience."

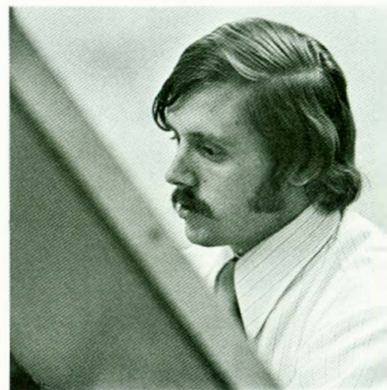


# 3 Drafting Grads Join Same Firm

JOHN TIERNEY



RICHARD OLSON



ROBERT OLSON

Slightly more than a year ago, Jespersen-Rochester Inc. had two employees, Edward C. Collins, the executive vice president, and a secretary. Today the firm employs nearly 100 people. Among those 100 are seven draftsmen, three of whom are graduates of the National Technical Institute for the Deaf.

The employment of the three deaf draftsmen, John Tierney and twin brothers, Robert and Richard Olson, is typical of the innovative nature of the newly formed corporation.

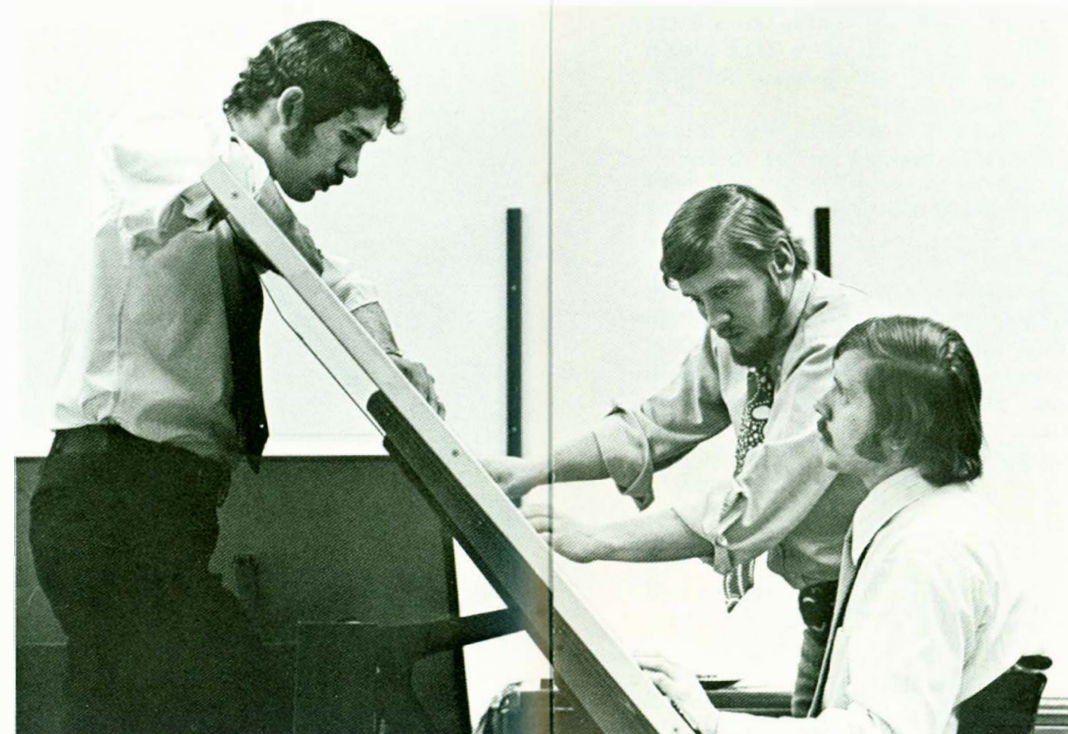
The firm was founded by Thomas F. Judson, president of John B. Pike & Son Inc., and Richard Bennett, chairman of the board of Stewart & Bennett Inc., both Rochester-based construction companies. It is presently owned by Stewart & Bennett, and Judson.

Jespersen-Rochester Inc. evolved because the principals recognized the need for a versatile, economical and fast building system in the Rochester area which would satisfy the requirements of the community building needs.

The Jespersen system is a building system which employs modular precast concrete building components in the design and construction of single to multistory structures.

"When I was given the opportunity to run the corporation, I decided I'd give young people who wanted to work hard the same sort of opportunity," says Collins. And that's where the deaf students came in.

Judson, who's on the Board of Trustees of Rochester Institute of



SIDE BY SIDE — Deaf draftsmen work side by side at Jespersen-Rochester with their hearing peers. Below, Richard and Robert Olson discuss their work with the head draftsman, Terry Lawrence, and at right, is an overall view of the firm's drafting room.

Technology, the sponsoring institution for NTID, had been approached by Dick Elliott of NTID's placement office about the possibility of hiring deaf draftsmen at Pike. At the time, Pike was not hiring, but Judson had the idea that when Jespersen-Rochester began hiring draftsmen, NTID graduates should be considered.

"I have naturally been exposed to NTID because of the RIT Board of Trustees, and I was interested in the wide variety of jobs which the deaf are being trained for, and can do," says Judson. "I knew we'd have a large need for draftsmen at Jespersen-Rochester, and that the deaf were being trained as draftsmen."

John Tierney was the first NTID graduate hired, and he's been on the job since December, 1972. Aside from

the actual drafting—the shop drawings of floors and walls and the layouts and detail drawings which are the normal work of draftsmen—Tierney has also done inspection work on the completed precast concrete panels.

Both John Haas, the design manager, and Collins were "very excited and impressed with what John brought to us," Collins says.

"It's usually hard to find good draftsmen," says Haas, "because most draftsmen have learned on the job in specific areas of drafting. Our business is so different that it's hard to find people who can adapt."

John did adapt, says Haas, because of the good drafting foundation he received at NTID. When the need arose to hire more draftsmen, the Olsons



were recommended by Elliott and consequently, hired.

Because much of the communication is presented graphically, there hasn't been too much of a problem with the deaf graduates, but as Haas puts it, "We've used a lot of paper, pen and ink."

One of the two engineers at Jespersen-Rochester, John Houle, has learned manual communications. His teachers are the three draftsmen.

"But they don't depend on me to talk for them," says Houle, "unless they need to make a phone call."

The NTID graduates are happy with what they do, but are still learning the job. All of them received A.A.S. degrees from NTID, and all are doing the same type of work.

Both Dick and Bob Olson of Salem, Ore., plan to continue their education at RIT, and eventually hope to become architects.

For John Tierney of DeWitt, N.Y., there is security in his job, and the chance to learn more. He plans to be married in August, and feels that the Jespersen-Rochester job is ideal for him as a "family man."

Jespersen-Rochester plans to continue hiring the deaf.

"We are very pleased with the performance of these three deaf draftsmen," says Collins. "I'd be more than receptive to hiring more deaf and other handicapped people as the need arises.

"And I'd be an advocate of anyone giving these deaf students a chance," he concludes.



# NTID Fits Plans Of Vietnam Veteran



## *"It's amazing what the mind can do"*

"I'm basically a hearing person who can't hear," says George Lewis, 24, an NTID student enrolled in the College of Business.

And for George, who had perfect hearing until the age of 19, the comment is not a confirmation of false pride, but instead the reality George has faced of mind over matter.

George was serving with the Army's 1st Infantry Division near An Loc, South Vietnam on May 18, 1968 when he received shrapnel wounds and a concussion resulting in his loss of hearing and the loss of sight in his right eye. The nerve in his right ear was severed; the nerve in his left ear was shattered. The optic nerve in his right eye was destroyed.

Five years later, following two weeks of hospitalizations in Vietnam, ten days in Japan, a six month stay in Walter Reed Hospital and two years at NTID, George has adjusted to his new world.

"I feel very lucky," he says. "The future looks very good."

George, who has been retired from the Army because of his disabilities, which also include minor seizures due to scar tissue pressing on his brain, feels that he has definite control over

his future—the same kind of control he has had over the past few years of his life.

It was nearly ten days after he was injured before George realized he was deaf.

"I came to in Vietnam one day when some medics were moving me. I asked another GI for a cigaret and a light, and he gave them to me. A sergeant came in and grabbed the cigaret. He looked like he was talking, but no words came out of his mouth," George remembers. "Until then, it really didn't hit me what had happened."

The first reaction to his questions about his hearing was "a pep talk. They told me about the compensation; they told me not to worry, I was going home. And they also told me my hearing would come back, that it was just a matter of time."

It was weeks later, in Walter Reed Hospital, when he realized the extent of his injuries, and the reality that neither his hearing nor eyesight would be restored.

George began receiving speech reading aid at Walter Reed, but no other communications therapy, other than how to use a telephone.

"They're concerned with preparing you for the regular world," he says, "not the deaf world."

Boredom at Walter Reed put George's campaign of mind over matter into action.

"There were no duties, and after awhile, I got tired of it. You begin going out and picking up litter just for the heck of it."

He began to understand that it was up to him to prepare for his future.

I started a program of my own. There were a few things I desperately wanted to get straightened out on my own."

His right eye was not coordinated, and he remembered something his mother had told him when he was younger about how someday, if he continued to cross his eyes, they'd stay that way. Using that principle, he began staring at bright lights and the moon when he was alone at night in order to improve that coordination, and to his amazement, it somehow worked. His right cheek bone had been shattered, and the doctors told him they would have to break it again so that he could open his mouth comfortably. To avoid the pain of surgery, he began stretching his jaw "and doing a lot of talking," and never did have to have the surgery. Because of the scar tissue on his brain, he was told that he would have difficulty walking, but a bicycle riding campaign he started solved that problem.

When he walked out of the hospital for the last time, he felt "elated." He began looking into places he might want to live, and after an analysis of the plusses and minusses of the various places he favored, he went to Chapel Hill, N. C., near where one of his sisters lives. He began taking correspondence courses from North Carolina State, and eventually enrolled in Campbell College, Buies Creek, N. C. George had gone to college for a year before he was drafted, and decided to continue studying business. He lasted there a week.

"That didn't work out too well," he says. "I guess that's when the hearing problem began to be a burden."



His biggest problem was understanding what the teachers were saying during lectures. "I wasn't discouraged because I knew there were schools that were equipped to teach me, but I just didn't know where those schools were. As much as I liked Campbell and was sorry to leave there, I knew I needed a school equipped to teach the deaf."

Through the director of admissions at Campbell, Robert L. King, he found out about Gallaudet College and the National Technical Institute for the Deaf. He visited both, interviewed at NTID with Dr. Jack Clarcq, assistant dean for Technical Education and enrolled at NTID in January of 1971. He is now studying business and is confident that NTID is the "place to be."

He chose NTID for various reasons: the integration of the hearing and the deaf and the fact that NTID is "more equipped and better equipped in every way."

"NTID fits in very well with my plan for myself," he says. "It came to my rescue. I know I need a school which is equipped to teach the deaf and has a good faculty."

He does not use the services of an interpreter ("I can use sign language and fingerspelling to talk to my friends, but I can't understand it very well, yet"), but finds notetakers a support service he really can't get along without.

"Notetaking really comes in handy. And I can't think of one case where I haven't been able to get a notetaker."

The educational specialists in the College of Business, Tom Connolly and Dan Strong, have been "a tremendous help. The biggest help has been their aid in setting up a program for me. Their knowledge is good to have—they know the courses and the professors."

He has spent his cooperative work-study program with the Veterans Administration, and hopes to be employed in the VA finance division when he graduates from NTID in 1974. His ultimate goal is to work for a major government office, probably in Washington. But he has a lot to do in the meantime.

He hopes that the peace in Vietnam will become strong enough that he can travel freely there and help a South Vietnamese boy he befriended come

to the U.S. for schooling. He also wants to travel to Taiwan to visit a small orphan he is supporting through an international agency.

Probably the biggest lesson George has learned from the whole experience is his discovery that "the mind is so very, very powerful. Besides controlling normal body functions, you can interpret senses. Just like yoga, it's amazing what the mind can do."

He still remembers many sounds, and has concentrated on remembering what the voices of his parents, Mr. and Mrs. George Lewis, Jr. of Royal Oak, Md., sound like. And, he says, he remembers the sounds of car engines and birds: "You can do that in your head."

"I'm kind of excited now about my whole future. I'm so thankful that I'm not badly disabled and immobile. And I can do a lot more now that I never would have done before.

"It's been a worthwhile experience," he says. "And I'm not bitter. There is something good in everything. I'm really very lucky."

The future does look very, very good for George Lewis.



**PLAN AHEAD** — George Lewis, right, discusses his future with Tom Connolly, educational specialist in the College of Business.



# Numerical Control Program Expands Rick Clark's Vision

Ask Rick Clark where some of his favorite time is spent and he's likely to tell you "around machinery."

Clark is the first National Technical Institute for the Deaf student to take the advanced course in Numerical Control offered by the Engineering Technologies Department.

The numerical control course is an outgrowth of the machine tool operation program at NTID which prepares students to operate machine tool equipment used in industry. With an additional two quarters of study in numerical control the student learns to operate machine tools that are controlled by a numerically punched tape.

"Numerical control is a relatively new manufacturing concept in the machining industry that has come about as a result of the great technological advances in our space-age industries. Machining by numbers, or numerical control, was developed to solve the

problems discovered in making increasingly complex machine tools for the aerospace industries," NTID Numerical Control Instructor Charles H. Barron explained.

Barron has nothing but praise for Clark's development in his numerical control course.

"Rick had completed five quarters of regular machine tool operation when he heard I was planning to offer the more advanced numerical control course. He has done remarkably well in both. He has a great willingness to learn," Barron said.

In order to take the numerical control courses, NTID students must have a good background in machining with a knowledge of the properties of metals, plastics and the newer exotic space-age materials. A solid math background with emphasis on algebra, geometry and trigonometry and strict attention to detail are also of major

importance, according to Barron.

"I decided that the more I could learn about the latest concepts in machining, the better equipped I'd be when I went to look for a job," Clark said.

Barron stresses this aspect of the numerical control course, pointing out that "most students graduating from this course will not simply walk into an advanced programming job after graduation. The degree of sophisticated knowledge needed for such a job requires most numerical control programmers to go through an extensive apprenticeship. As in any other field, you don't start at the top."

The most important thing NTID provides its students in this area, according to Barron, is "the climate for learning."

"We give our students the chance to work on sophisticated equipment using the latest techniques so that





when they enter the job market, they are at least aware of these factors and are presumably not overwhelmed when they report to their first jobs."

Clark's interest in machinery started in his high school machine shop.

"I took three years of machine shop in high school at Corning, N.Y., and after I looked around at schools I decided that NTID seemed to have the kinds of courses and training to help me get the best job," he said.

Clark estimated he has written some 15 total programs in his two numerical control courses. He begins by manually writing out the program and then typing it on a Friden Tape Coding Flexowriter machine. The machine punches out a tape which in turn is placed in the Controller. The Controller then instructs the actual machine cutter, such as a contouring lathe, by translating the punched tape into actual movements.

How would students in machine tool operations benefit from taking the numerical control course?

"The trend today in machining is toward more numerical control," Robert Klafehn, chairman of the NTID Engineering Technologies Department, said. "Our research has shown more and more companies are converting to numerical control. It's the coming thing."

There are some definite advantages in the machine tool/numerical control courses for the deaf, according to Klafehn.

"Jobs in this field usually require little interaction between workers and there are already many deaf in conventional machining. Also this type of job gives the worker a sense of achievement since it usually involves the worker from beginning to end, giving him an added sense of responsi-

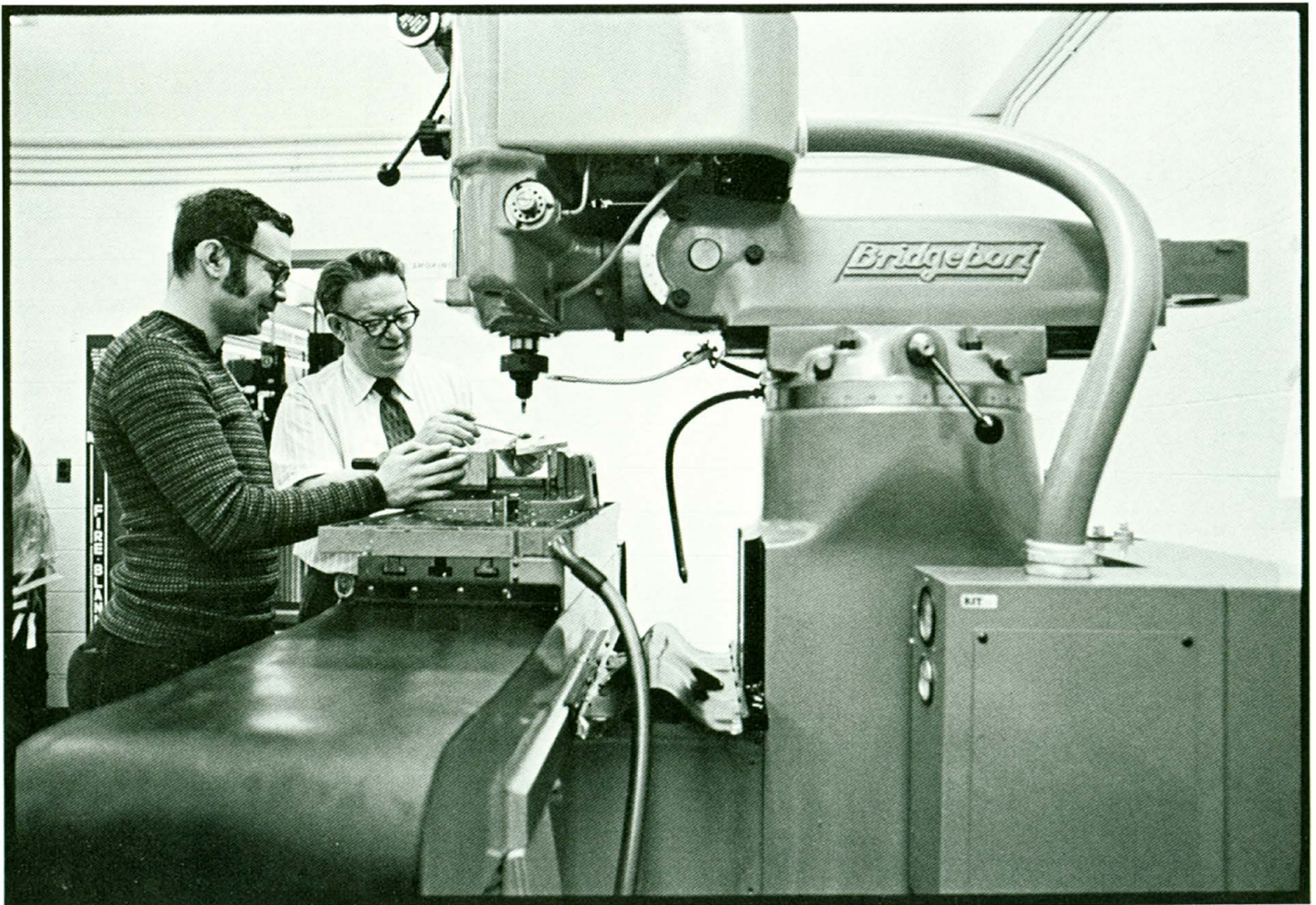
bility and accomplishment," Klafehn said.

NTID's new facilities, to be completed in January 1974, will enable Klafehn and Barron to expand the numerical control course to include a "total manufacturing concept."

"Our new lab may be the only one in the country to have such sophisticated equipment. The person who writes the programs for machine tool controllers is in an enviable position in the job market. The job field is rapidly opening up and the pay is good," Barron said.

Clark's dream is to someday be a programmer, but he faces his future with a realistic vision.

"I know I'll probably start out at the technician level when I get my first job, but with the advanced training NTID has given me I know I'll be better equipped to get ahead in my field," he said.





# Construction Progresses Smoothly



**MOVING AHEAD** — Progress on the construction of the NTID complex is going smoothly with 70 percent of the total work completed.

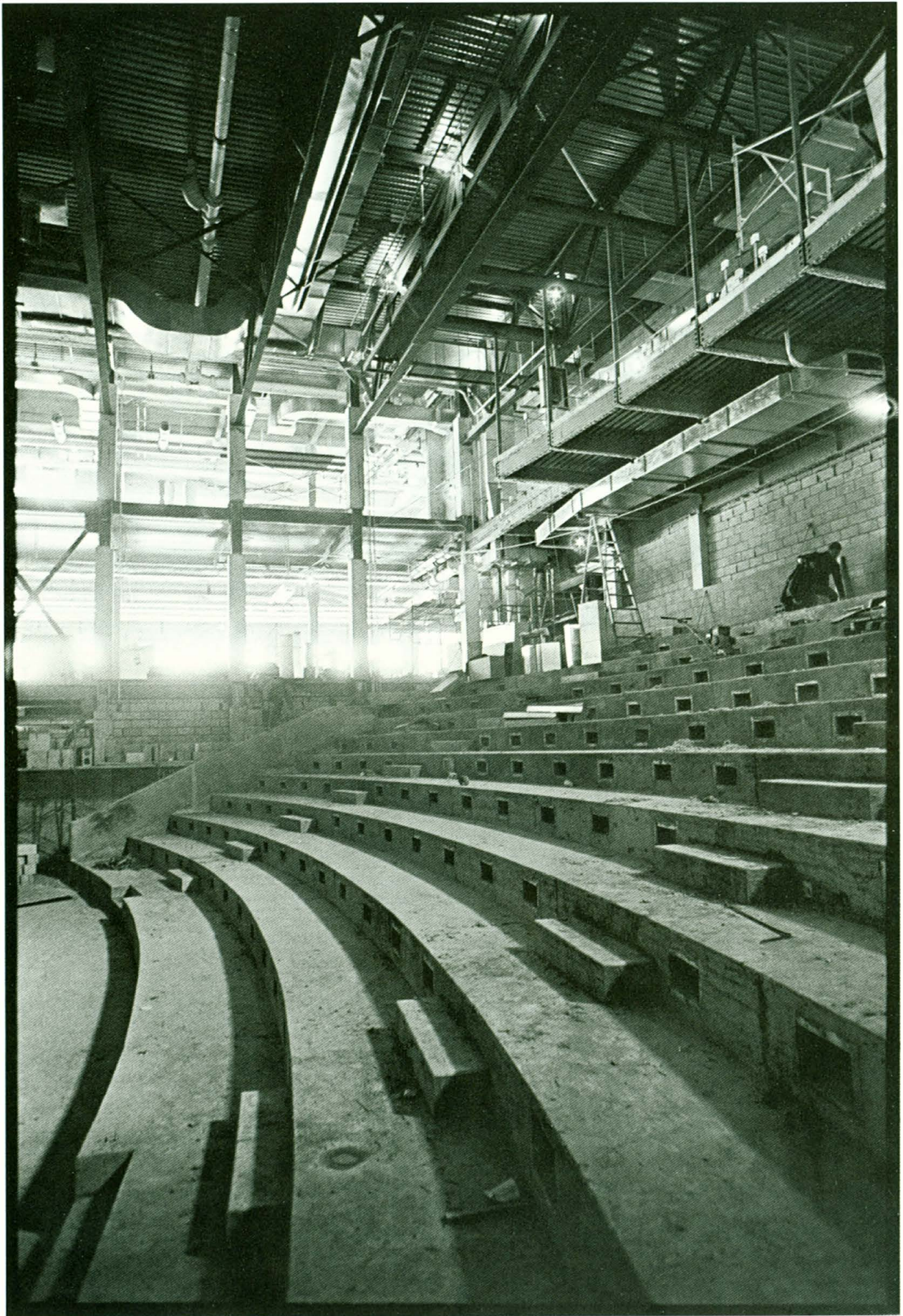
The mechanical and electrical work on the academic, dining hall and residence buildings are 75 percent complete. A view of the academic building, left, shows 71 percent of the work finished on that building. The steel work and masonry are more than 85 percent complete, with construction on dry wall and ceilings underway.

Below, is a view looking from the dining hall to the three-wing dormitory complex. The dormitory is 67 percent finished. The final floor of exterior brick work is being completed, all the windows are in, and interior partitioning has begun. The dining hall is 56 percent finished.

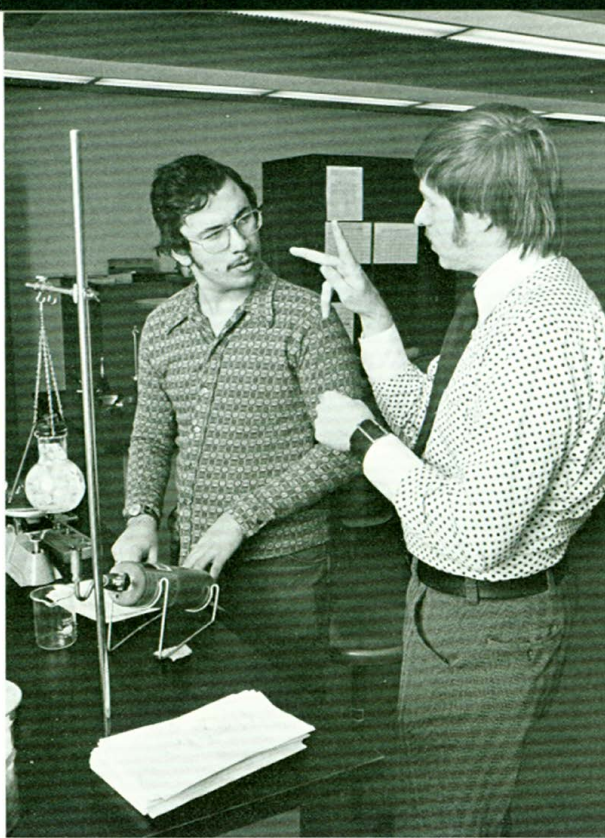
Right, is a view of the progress on the NTID theater.











## Physics Learning Center Provides Innovative Touch

Deep in the lower regions of the science building at RIT is a nondescript room, outfitted with the usual tables and blackboards, and with little to indicate the unique program it houses. This small room is the site of NTID's new Physics Learning Center, which has been functioning for almost two years.

Fifty students are presently enrolled in the program and, on any given day, approximately 15 can be seen at work in this room, singly and in groups.

A little closer look will reveal that it is not as ordinary as it first seems. Just inside the door stands a typewriter which is tied into a computer which helps with programmed instruction, furnishes instant grading of quizzes, and keeps up-to-date progress reports on each of the students.

Another notable difference is that although several different projects and activities are taking place, it is without the din one would expect in an equally open hearing classroom.

When approached, Fred Hamil, the department chairman for Technical Science, quickly offered a tour of the center and introduced its most enthusiastic guide, Harry Lang, a deaf instructor and able spokesman for the new program.

Lang began by pointing out that "The most important innovation is that the instruction has been individualized, and the student is allowed to progress at his own speed."

According to Lang, "This idea of 'self-paced' study was first suggested by Dr. Fred Wilson, then an educational specialist in the College of Science, and first attempted with a small group of NTID students."

The evolution which then took place during the following year was most important because of the differing backgrounds and language skills of the students. Those who were having difficulty in the typical classroom situation were frustrated; and those who moved more quickly were bored. Now, as each student finishes a unit of work, and has passed the tests, he can go ahead with the next unit. He also has a hand in determining his own grade. When a test score is received, the student can either elect to let it stand, or he can re-do the work and be tested again. Grading is based on proficiency quiz scores, lab reports, homework assignments, lab final, and a recall exam which is an objective type test.

In a paper prepared for delivery before a meeting of the American Physical Society & American Association of

Physics Teachers, Lang described the new program.

"The NTID physics program is a four quarter sequence of nine weeks each. To allow for the wide diversity of functions and responsibilities, we have divided the courses into units, approximately one week long. But this segmentation fits together nicely at their endpoints to present a continuous course for each individual. The topics are presented in a unit on a mathematics and vocabulary level most suitable to the average student. Additional work is available for the more aggressive student and tutoring is available for the slow student."

Lang pointed out that this freedom from a rigid schedule encouraged the students to help one another in addition to the help afforded by four RIT student assistants—three from the Physics department, and one an educational specialist from the College of Science. All are in the Cooperative Education Program which allows students to go into industry in preparation for their careers or vocations.

In addition to the student help, teaching aids include the use of film clips, transparencies, and color slides.

In his paper, Lang stated some of the goals of the Physics Learning Center. "Flexibility has been a key word in every program within NTID. This flexibility in the physics program has aided us in a slow transition where we have tried several types of teaching approaches."

Lang listed three main responsibilities of the program. First, "it must prepare the student for the more rigid courses at RIT . . . which requires close contact with RIT's Department of Physics." The second is to "teach key courses for NTID's programs." Finally, it must "evaluate the student in order to determine whether or not his chosen field is commensurate with his potential and background."

One of the most difficult problems to overcome in fulfilling these responsibilities is that of communications. The NTID students come to their classes with vast differences in their language skills. There are those who are oral and are strong in lip reading and speech skills, but have little or no understanding of sign language. Then, on the other side of the coin is the manual student who is fluent in signs with little or no ability to read lips. With individualized study, each can be taught with the method most in keeping with his training and skills.

The center tries to maintain a very flexible schedule where class hours are concerned. It is open five hours



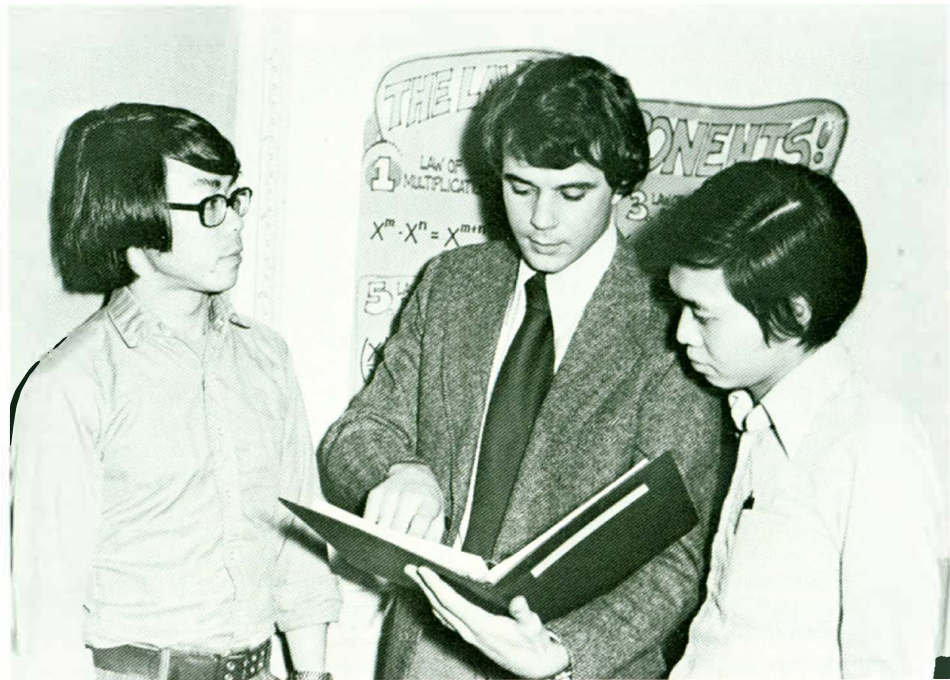
each day, and the student may reserve his hours at the beginning of each week or on a day-to-day basis. The RIT physics majors are always there, and even though they limit the number of deaf students to 12 at one time for teaching effectiveness, physics can be placed in the student's daily class schedule without conflict.

Even though it is still in the pilot stage, Lang is confident of the center's success; and opinion surveys taken among the students indicate general satisfaction with the program.

The concluding sentence of Lang's paper is a reflection of the enthusiasm he exudes as he takes visitors through the center.

"The students seem to be enjoying physics much more now. They regard themselves as individuals. Grades are not as important as the acquisition of their technical and social competencies."

To this he added a personal note. "I wish I'd had this kind of experience when I was in college."



**PROBLEM SOLVERS** — Mike James, Math Learning Center Instructor at the American School for the Deaf in West Hartford, Conn., discusses a problem with Hong Kong students Tony Lee, left, and Edward Li.

## ***NTID, American School Starts Unique Math Project***

If there is any other situation quite as unique as this one on any other college campus, the National Technical Institute for the Deaf would like to hear about it!

Two students from the American School for the Deaf in West Hartford, Conn., have been admitted to Rochester Institute of Technology as special students and are taking college credit courses through NTID's Math Learning Center (MLC). The American School for the Deaf has its own MLC, patterned after the one at NTID and set up with the help of John Kubis, chairman of the Technical Math Department.

The two students, Tony Lee and Edward Li are both natives of Hong Kong, in the United States on student visas. Both are taking college algebra and trigonometry using the resources at the American School, and an electro-writer which connects them electronically with Kubis and the staff at the NTID Math Learning Center. Their "in-person" teacher at ASD is Mike James.

When you put all the factors together, the situation is quite unique. The students are taking the actual courses at the American School, are being graded by Kubis at NTID, and probably will never set foot on the RIT campus.

According to Kubis, this is the first time such a project has ever been tried where students at a secondary school for the deaf have taken college level courses and received credit.

"The success of a program like this depends on the readiness of the students," says Kubis, who recently visited the ASD and interviewed the students. "I can't see many secondary schools for the deaf doing this because most of them don't have the facilities to take the students past geometry. At the American School, students can go as far as they want in mathematics because of the MLC. These students now even will have the chance to take college level calculus."

The MLC at NTID and ASD operate on a principle of individualized modules, or segments of the total course,

best equated with the chapters of a book. The students complete the modules at their own speed with assistance from the mathematics faculty.

The modules which the two special students will be working on were developed at NTID.

Donald Hoppe, dean of admissions at RIT, sees the concept of admitting special students as "not really unique."

"The whole strategy of the special student process is that if there is a seat vacant in a class at RIT and someone out there in the big wide world is qualified to fill that seat, it enables them to get together," says Dean Hoppe. "RIT, through NTID and the Math Learning Center, has the resources so that these two students can benefit."

But, adds Hoppe, in this particular instance, these special students are unusual.

"When you have two students who are deaf and receiving college credit from an institution 350 miles away from the high school they attend, then we as educators can say we truly exist for our students," Hoppe says.



# Sigler Swings Big Stick in RIT Hockey

Deane Sigler feels as comfortable with a hockey stick in his hands as he does a drafting pen.

The 6-0, 185 pound second year student at NTID swings the hockey stick with more authority; he's a veteran hockey player and only a rookie in drafting.

Sigler entered NTID in January 1972 to learn to be a draftsman. But he's not about to deny the fact that by enrolling at NTID he could compete on the team of NTID's sponsoring institution, Rochester Institute of Technology. And that meant travel to cities like Boston to meet good competition.

While the rugged 20-year-old likes almost all sports, he admits a par-

ticular love for hockey.

"When I was about five years old I used to go to a park in Ann Arbor, Michigan, to watch the kids play hockey," recalled the son of Mr. and Mrs. Louis E. Sigler of 1443 Covington Drive, Ann Arbor. "Then one winter I found a broken hockey stick someone had thrown away. From there I gradually got all of the hockey equipment to be fully equipped. And from then on I played every chance I got."

On offense or defense, Sigler has proven to be from the ranks of the outstanding. He was named to the all-Michigan high school team on defense during the 1969-70 season. And while competing on a Senior League team the following year, he was the second leading point getter with 65 points on 20 goals and 45 assists. His Geunther Builders Club team was then 23-1-2 and third in the state in the 1970-71 season.

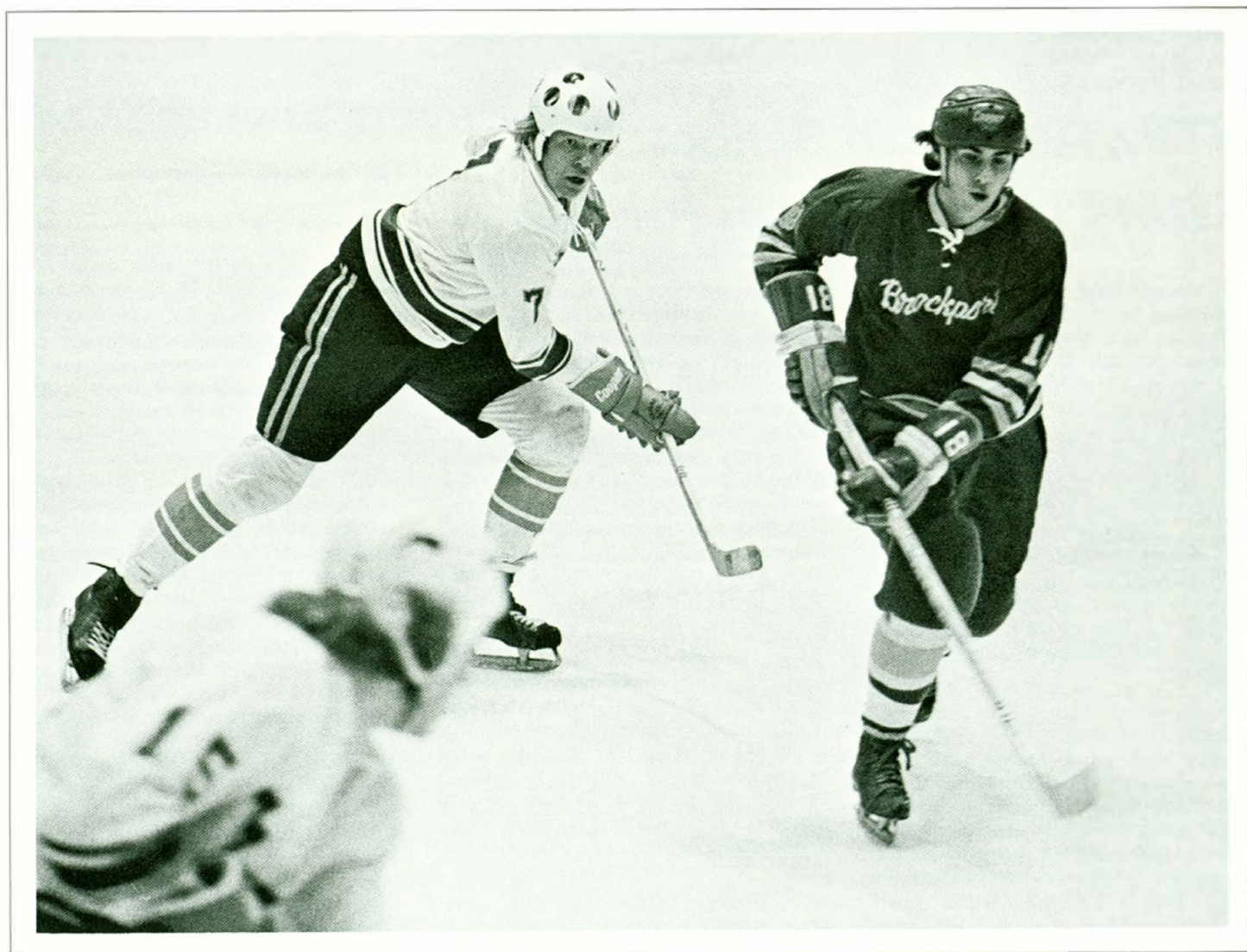
Deane's most frustrating hockey experience came in high school when

he was thrown out of a game for whacking an opponent with his hockey stick. It was all a misunderstanding, according to Deane. He was about to score a goal when an opponent got him in a head lock. The opponent, who didn't know Deane was deaf, caused enough pressure on his left ear to cause some bleeding. Deane feels his reaction was natural.

In order to avoid any misunderstanding, coaches began informing the referees that Deane was deaf. Since he can't hear the refs' whistles, he doesn't always stop action the way hearing players do.

"I've tried to watch the reaction of other players to find out if play has stopped," he said.

Deane made an immediate impact on the RIT hockey team. He started out on offense, but was switched to defense by Coach Daryl Sullivan because of his size and strength. His ability was recognized as he was named to the all-star team in the Fin-





ger Lakes Hockey League, and NTID's top winter athlete. He sees as much or more ice time than any other Tiger and has one of the "hardest shots" on the team, according to Coach Sullivan. He scored 11 goals and 16 assists during the regular season this year.

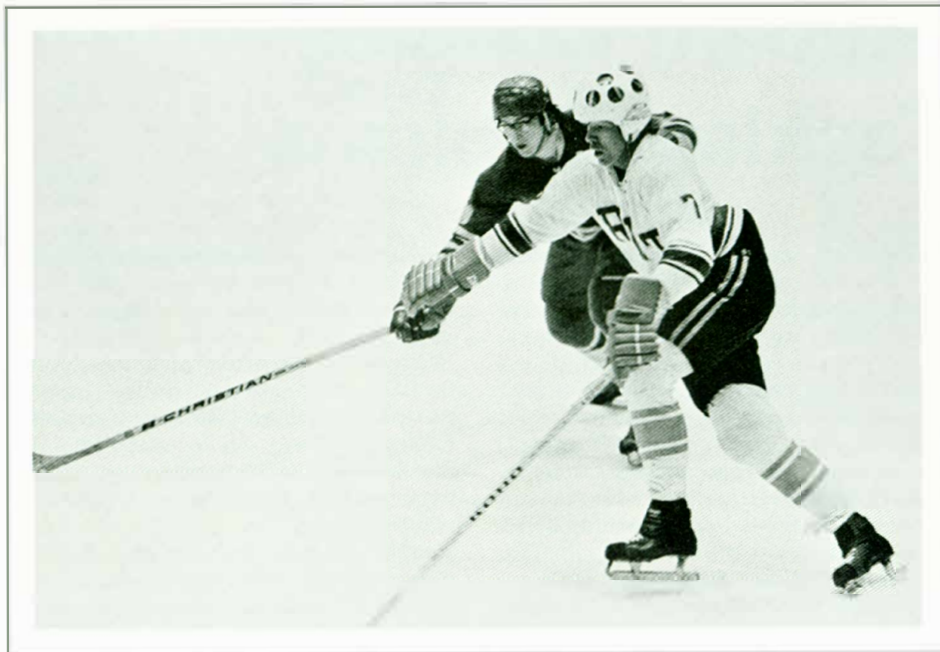
He recently was named captain of a U.S. team that will compete in the Deaf Olympics in Lake Placid, N.Y. in 1975. He also will play on an American team against two Canadian teams in April. Next winter he hopes to tour with a deaf team against European competition.

"I love winning," Deane said with a grin. "If we win and I do my part of stopping opponents and clearing the puck well, then I'm happy."

Hockey has become a favorite spectator sport of NTID students and they turn out in force to support RIT and their favorite son.

The support means a lot to Deane as he thinks about his future. While he wants to become a good draftsman, he also wouldn't mind becoming the first deaf professional hockey player.

How about a defense of Deane Sigler and Bobby Orr?



**NTID SWINGER** — Deane Sigler, right, shows off the kind of style that makes him a tough competitor.

## Survey Reveals Students Active

"The results of a survey recently released by NTID's Division of Developmental Education points out that deaf students are probably more involved in campus activities than students on most college campuses," says Sue Rose, a specialist in social and cultural development.

Miss Rose, who completed the survey with Frank Zieziula, the former coordinator of social and cultural development, also says that the survey, which was taken of 300 of the 307 deaf students enrolled at NTID during the spring quarter of 1972, proves that "we often underestimate the ability of the deaf, and that Rochester Institute of Technology, as NTID's sponsoring institution, is including deaf students and making them feel welcome in campus activities."

The students were asked to list their activities and the total number of hours spent in those activities during the winter and spring quarters, 1971-

72. The activities were broken down into categories: formal activities under the auspices of RIT which did not include hobbies, personal interests or class-oriented activities; RIT out-of-class activities organized by RIT students with membership primarily of hearing impaired students; activities credited to a student if he spent a minimum of five hours in that activity throughout one quarter, and activities where a student held a leadership position (appointed or elected) that carried a title designating the member from the rest of the group.

The survey showed that 199 of the 300 were involved in one or more of the classifications of activities. The highest participation by the deaf students was in the area of athletics and NTID activities.

Special note was made in the survey to point out that the Jr. National Association of the Deaf organization was a temporary organization set up

to service the Jr. NAD Convention which was held on the RIT campus in the summer of 1972, and that the NTID Student Congress was in its formulative stages at the time of the survey.

What does the information tell us?

"We do know that two-thirds of the NTID students keep themselves pretty busy in formal activities," says Miss Rose. "We also learned that deaf students have lots of 'push' to get involved because it's sometimes more difficult for them than for a hearing student."

But there are still more questions yet to be answered. Do activities assist the student in developing leadership qualities? Do formal activities assist the student in becoming more socially aware? Will certain activities in which the NTID students participate endure?

"There's a lot more to come out of this type of survey," she says. "We still have much to learn."



# Student Congress Tackles Problems

Lack of communication, student apathy and the development of a Student Advisory Group (SAG) are the three main areas the National Technical Institute for the Deaf's National Student Congress hopes to tackle and conquer this year.

Sound like the impossible dream? Not to the four new officers of the NSC. President Mark Feder, Vice-President Tom Mather, Treasurer John Swan and Secretary Beth Loehwing each feel that the NSC is on its way to making NTID a better place for deaf students.

Mark Feder is from Wilmette, Ill.; Beth Loehwing, Franklin Lakes, N. J.; Tom Mather, Oak Park, Ill.; and John Swan, Ballwin, Mo.

Patrick Cullen, Thomas Penny, Peter Pudela and Gail Schreiner were elected as Department of Technical Education representatives. Howard Mann and Barbara Wood were elected as RIT representatives. Sue Rose, Department of Social and Cultural Development Specialist, was appointed NSC advisor for the faculty and Dr. James Speegle was appointed as the administration advisor.

"NTID students have been apathetic about getting involved and taking an active part in the future of NTID. We feel we can change this attitude and replace it with one of involvement," Feder said.

How do they plan to accomplish their goal?

"By helping students to learn by doing. Last year there weren't enough activities in which to involve NTID students. With such few organizations to channel their interests most students tended to do nothing. This year we've set up committees dealing with a

whole range of functions that will enable the students to learn new skills and feel more a part of things," Feder said.

High on their list of things to do is the development of a Student Advisory Group which they feel could prove to be a very effective means of communication and feedback among students, staff and the administration.

"The idea is just in the planning stages right now, but basically the objective of a SAG will be to provide meaningful feedback by continually evaluating programs and their effectiveness," Mather explained.

The SAG would be set up with one student representative to each of the five technical education areas, one from Curriculum Development and Education, Administration, Communications Center, Personal Development, Student Planning and Evaluation and four more representatives for the advanced programs. SAG representatives also would sit in and report on NTID staff meetings.

"We feel that a SAG could do a lot to improve communication among faculty, students and the administration and also make the students feel that they have some input as to the kind of programs being developed for them," Feder said.

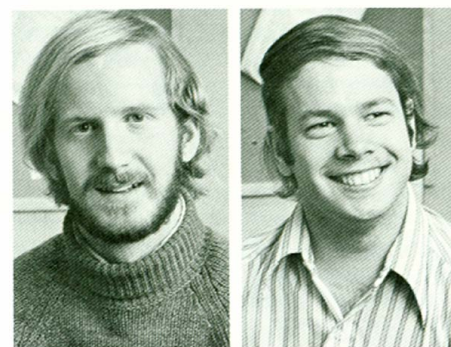
An Athletic Committee has been set up to give more NTID students exposure to sports.

"We've applied to the American Athletic Association for the Deaf for Membership. The AAAD holds softball and basketball tournaments every year," Mather said.

The Athletic Committee also is making arrangements for the Second Annual NTID-Gallaudet Weekend to be held at Gallaudet College in April to promote better understanding between the schools.

The NSC is working with the RIT Techmila staff to establish a new NTID yearbook to be combined with the 1973 Techmila yearbook. The NTID yearbook will have a magazine format and "it should be good experience for interested NTID students in art, photography, and writing," Feder said.

Other NSC projects include a Pub-



**NEW FACES** — New Student Congress officers are (clockwise), Mark Feder, President; Beth Loehwing, Secretary; John Swan, Treasurer; and Tom Mather, Vice-President.

lications Committee to coordinate production of the NSC Journal and EYE newsletters; a Workshop Committee to set up lectures and discussion groups for students on a variety of practical subjects, and a Banquet Committee to coordinate the annual NTID banquet.

The NSC is planning for a week devoted to the deaf sometime next year. They would like to invite guest lecturers, have a cultural exchange and perhaps an appearance by the National Theater of the Deaf.

They also would like to get more involved with the Summer Vestibule Program.

"We would like to have a booklet explaining the functions of the NSC along with some rules of parliamentary procedure. We feel new students would like to have other NTID students to talk with when they first come here in the summer," Feder said.

The officers of the NSC feel they have a lot to accomplish but they say they're looking forward to the challenge.

"We want to make getting involved a real learning experience for NTID students and at the same time show them that getting involved can be a lot of fun too."



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## Youst Named Assistant Dean

David B. Youst, former program administrator of the Interim Junior High School in the Rochester city schools, has been named assistant dean for Developmental Education at the National Technical Institute for the Deaf. Dr. Youst, 34, was head of the experimental Interim Junior High School, at 31 Prince St., last year during its first year of existence. The school is one of Rochester's "alternative" schools which may soon be phased out because of city school budget difficulties. Youst's new job will be to coordinate the personal counseling and the social and cultural development programs for deaf students at NTID. He will replace James L. Collins, who be-

came assistant professor of education in the Department of Exceptional Children at Ohio State University in Columbus. Youst worked in the educational research laboratories at Eastman Kodak Co. from 1970-71, consulting with schools interested in individualized education. From 1963 to 1970 he was with the Rochester School System. From 1967-70, he was director of the Rochester Career Guidance Project, sponsored by the city schools. He was an elementary school counselor at School 15 from 1966-67 and a senior high counselor at Monroe High School from 1963-66. Youst has a doctoral degree in guidance and personnel from Michigan State University, a master's degree in guidance from Syracuse University and a bachelor's degree in biology from the State University of New York in Albany.



**BOOST EDUCATION** — Dr. Jack Clarcq, left, assistant dean, NTID Technical Education, and W. Doyle Nichols, production manager, IBM Corporation, watch an NTID student in data processing operate one of IBM's business machines. The machines have been available to Business Technologies students through Itek Corporation, 1001 Jefferson Road, Rochester.



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