

SPRING 1998

# FOCUS

NTID

National Technical Institute for the Deaf • A College of Rochester Institute of Technology



**Technology**  
**into the Millennium**

page 4



**Mya Drexler, left, a business student from Park City, Utah, and Katie Hoheusle, an imaging science student from Bethel, New York, look at an exhibit of the Kutani porcelain work by Eiichi Mitsui, a deaf Japanese ceramicist, permanently on display in the first-floor street area of the Lyndon Baines Johnson building.**

Photography by A. Sue Weisler

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#### ABOUT THE COVER

Technology continues to help students and teachers at NTID leap forward and in other directions in pursuit of knowledge. "Educational Technology for Lifelong Learning" on page 4 details some of the Institute's latest tools and approaches.

Photography by  
A. Sue Weisler

# FOCUS

NTID

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## “A sense of urgency”

**N**TID faces great challenges in its mission to educate and prepare deaf and hard-of-hearing students for employment in the rapidly changing world of technology and business which, as we all know, is in a revolutionary state of flux. The dizzying speed of these changes requires that NTID nurture what I would like to call “a sense of urgency.” The college demonstrated this in the development of our Strategic Plan and in addressing the budget challenges we faced in recent years.

Now that these issues have been addressed, in my view it is extremely important that NTID not become complacent. Instead, we must remain in trim and fighting shape, eager and able to stay on the cutting edge of the rapid changes that are impacting on the world of work and the way we live and communicate. Thus, I am resolved to foster movement at a rapid pace with confidence and conviction to ensure that we offer relevant and state-of-the-art technology and curricula to help deaf and hard-of-hearing students succeed in the new millennium. Nothing short of a firm determination leading to attainment of all of the Strategic Plan goals will do. We must direct our sense of urgency to technology, curriculum, and instruction.

To this end, I have taken several steps in the nearly two years since I became Vice President for NTID. First, I have committed the Institute to holding down tuition increases. This has to be the first step toward an affordable education for every eligible, deserving student. We want to be sure that our students can afford the top quality technical education we offer from the day they arrive to the day they graduate. We did not increase tuition costs in my first and second years because of our sound financial stewardship and

economies achieved as a result of our Strategic Plan, and I intend to hold down increases for as long as it is fiscally possible. Our responsibility is to engage in economies and other cost-reduction measures before increasing tuition. Our development and fundraising efforts have had as their first priority enlargement of the endowment fund so that we can offer increased scholarship support to qualified and deserving students.

Second, in line with these efforts to increase scholarship support and capital reserves, we have taken the bold step, with the support and assistance of The NTID Foundation, of carrying out NTID's first capital campaign, “Fulfilling the Promise: The Campaign for NTID.” This campaign, which is nearing successful completion, has brought many old and new friends together in their support of NTID, raising nearly \$10 million so far. The campaign's five components include our alumni, our faculty and staff, our parents, our corporate and foundation friends, and our performing arts.

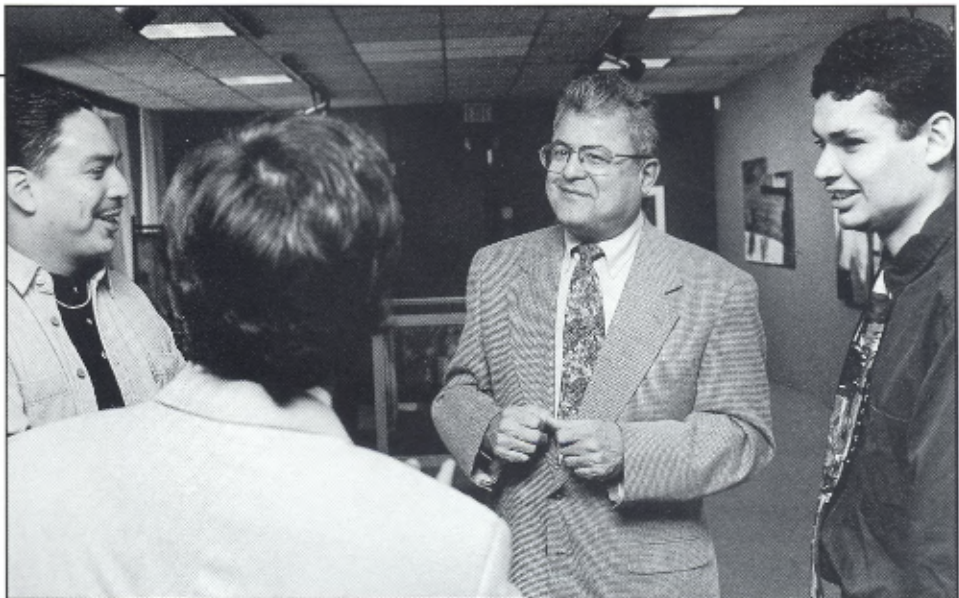
Third, NTID has the highest graduation rate among the nation's major programs serving deaf and hard-of-hearing students. Even so, we have made a strenuous effort to improve on this rate and have initiated several programs to improve retention. Not surprisingly, statistics from a cooperative study with the U.S. Internal Revenue Service show that the higher the degree an NTID/RIT student earns, the better the employment and salary opportunities for that person. The statistics also show that first-year students are at highest risk for dropping out of college. This was recognized in our Strategic Plan, and our faculty are working to address this challenge. To reduce the risk of students dropping out and increase our retention rate, we have inaugurated new programming called First Year Experiences this past fall. This program will provide

students with the opportunity to become familiar with their career options and entry skills and help maximize each student's potential for success in college.

Fourth, we need to increase our investment in faculty morale and development. Therefore, we are dramatically expanding a short-term leave program that will provide the opportunity for many of our faculty to take leaves each quarter, which run for 12 weeks. Our goal for aggressively expanding this program is to ensure that faculty members at NTID experience the opportunity to renew themselves through a variety of professional activities, including curriculum and professional development. I believe that this short-term leave program can only benefit our students because I anticipate that faculty members will bring new teaching techniques and new technologies to the classrooms of NTID.

Fifth, NTID will now move vigorously to further improve student learning and the practice of teaching by putting new state-of-the-art instructional tools directly in the hands of faculty for application in the teaching/learning process through our innovative Instructional Technology Consortium (ITC). The new ITC will provide an NTID-wide environment in which we can keep pace with the changing pedagogical needs of students and provide a model for excellence in the application of instructional technology in the education of deaf and hard-of-hearing students. We are committed to supporting our faculty as they explore and develop state-of-the-art approaches to delivering instruction. We must have a faculty that is not only committed to the imaginative use of instructional technology, but is provided with an infrastructure that fully supports its development and use. This is currently the direction in which forward-thinking institutions are moving—it is our direction.

Sixth, we have revitalized the National Advisory Group (NAG), which was originally established by the same Congressional statute that established the National Technical Institute for the Deaf in 1965. The



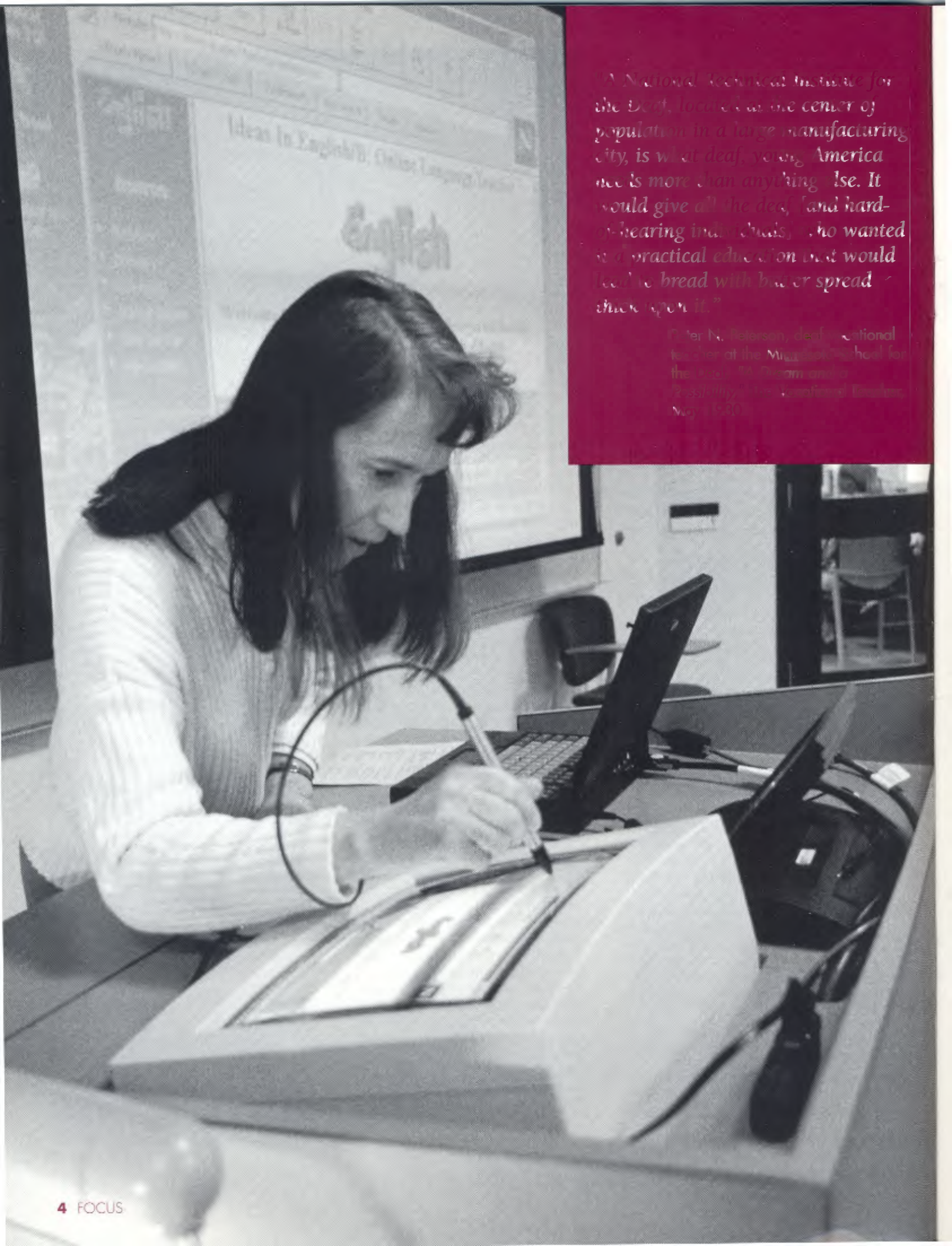
**Staying in touch with students** From left to right, Victor Medina of San Diego, Jagadish Dawadi of Nepal, Dr. Robert Davila, and Jaime Mariona of Framingham, Massachusetts, chat in NTID's Switzer Gallery.

NAG is statutorily charged with the responsibility of advising NTID on all major program issues involving the Institute. Several of the brightest minds in American education, business, and industry currently serve on the NAG, and the group meets twice a year to discuss problems and suggest solutions to these problems. We are absolutely determined to utilize their talents, skills, and knowledge in our efforts to meet the challenges facing NTID as we approach the 21st century.

On another note, the 1998 commencement exercises will have special significance because they will mark the end of Dr. James DeCaro's 13-year service as dean of the college. Jim, who has been at NTID for 27 years, will return to the faculty after a sabbatical leave abroad to pursue research studies. Jim's tenure as dean has paralleled a period of the greatest growth and accomplishments in NTID's 30-year history. These accomplishments have included a significant increase in the number of deaf and hard-of-hearing students cross-registered in baccalaureate programs in the other colleges of RIT and establishment of active curriculum and program review committees, faculty and staff development programs, and comprehensive support programs for cross-registered students. In 1992, Jim initiated and monitored the

development of a strategic plan that set clear goals for the new millennium and resulted in a number of critical cost-cutting measures that have enabled the college to fund a number of strategic initiatives and have provided a sound fiscal base for the immediate future. Jim's accomplishments and the recognition he has received for exceptional service have not all been confined to the university. He is recognized nationally for his many important contributions, and his leadership in the field of educating deaf students is highly respected and sought. I have been a close friend and an admirer of Jim throughout his tenure at NTID. He has been of tremendous value and assistance to me in my first two years as vice president for NTID, sharing with me his experience and knowledge of the Institute. My hope is that Jim will return following his leave and continue to share his wise counsel and expertise with all of us. Thank you, Jim, for your dedicated service to all of us at NTID.

Dr. Robert R. Davila  
Vice President, NTID



"A National Technical Institute for the Deaf, located at the center of population in a large manufacturing city, is what deaf, young America needs more than anything else. It would give all the deaf, and hard-of-hearing individuals, who wanted a practical education that would feed us bread with butter spread - stick to it."

Peter N. Peterson, deaf vocational teacher at the Michigan School for the Deaf, "A Dream and a Possibility" for Vocational Teachers, Nov. 1980

# Educational Technology for Lifelong Learning

by Frank A. Kruppenbacher

## A generation later

Sixty-eight years have passed since Peter Peterson wrote of his vision for a postsecondary technological education center for deaf students, and NTID is very much a reality. If Peterson were among us today, he would see much more than buildings on the RIT campus, one of which bears his name among the other structures that compose NTID.

He would see that NTID is firmly positioned in Rochester, New York, the world's image centre. He would see that NTID, by its very existence in Rochester, has fostered the nation's largest per capita community of individuals who are deaf and hard of hearing. He would see that NTID has earned worldwide acclaim as a leader in postsecondary education of students who are deaf. He would see NTID with high technology equipment in modern facilities. He would see highly qualified deaf and hearing faculty and staff partnered from business, industry, and higher education teaching up-to-date programs. He would see a 95 percent job placement rate for NTID graduates who enter the labor force.

Peter Peterson would be very pleased with these successes. Yet, NTID continues to expand on his vision by reaching higher and higher toward technologies beyond Peterson's comprehension to transform possibilities into realities for deaf and hard-of-hearing students.

## Learn to learn

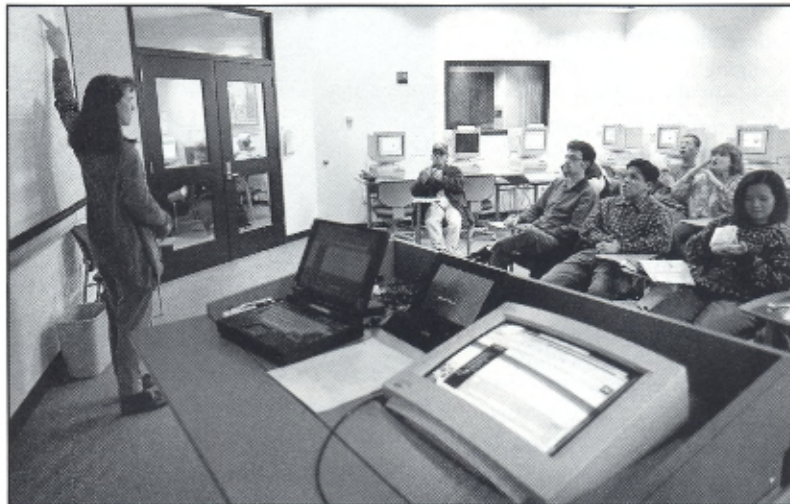
The soul of NTID is teaching and learning, with technology as a powerful tool. The latest piece of equipment, the newest version of software, or the most innovative method of teaching is not enough. People—students and faculty—must use this technology. In order to prepare deaf students for the rapid pace of future information

processing, it is NTID's fundamental mission to teach students to embrace, understand, and harness technology in order to discover and build their skills for a lifetime of learning.

"NTID is not just about teaching technology," says Dr. James DeCaro, dean of NTID. "It's about deaf students learning to learn the best technology available while they are here so they have the skills necessary to gain employment and the skills to continue to learn new technologies that they will face over their lifetime."

## Friends in high tech places

It is appropriate that the term 'high technology' came into vogue in 1968 as NTID welcomed its first students. Today, as traditional liberal arts and smaller community colleges struggle to incorporate high technology into learning environments, NTID, along



**From the front** Crandall, left, teaches English in the smart classroom in NTID's Learning Center.

with other colleges at RIT is benefiting from an early commitment to high technology as a tool for instruction that deaf students learn to use. The key to NTID's high technology presence on campus was the early establishment of a solid connection between business and industry and the technical programs offered by NTID.

"High technology is the one component that gets students jobs," says Dr. Thomas Raco, director of NTID's Center for Technical Studies. "As other colleges struggle to find their 'T,' NTID and the rest of RIT's 'T' keeps getting higher and higher, thanks to the expertise of our technical faculty as well as our long standing industry and business affiliations."

To date, the NTID High Technology Center has received nearly \$2.5 million in corporate donations of high technology equipment. The center is totally supported by industry contributions that make possible the preparation of deaf students

in numerous majors, including electronic publishing and printing, applied art and computer graphics, and imaging technology. Following graduation, students go on to find employment in areas related to electronic publishing, such as desktop publishing, digital scanning, and digital proofing.

Corporations like Graphic Enterprises, Inc. (GEI) of Ohio have supported the importance of exposing students to the same high technology equipment and applications they will use during their cooperative work experience (co-op) and over their lifetime of work after graduation. To support the development of electronic publishing skills at NTID, GEI donated a Graphic Setter 1824C, a unique high-resolution digital printer used to output documents up to 18 x 24 inches in size. This device, the only one of its kind at RIT, provides students with skills in building large-format publications.

**Multi-media options** Dr. Kathleen Crandall, associate professor in NTID's English Department, writes with a light pen on a computer monitor for visual emphasis on a large projection of the computer image.

"We need to stay as high tech as possible," says Raco, "in order to instruct deaf students on state-of-the-art technology they will use on the job."

### Smart technology, smarter students

The climate of a 'wired' college like NTID and RIT is changing forever the academic landscape for students, instructors, and curriculum. Advanced educational technology tools in classrooms and laboratories have prompted faculty to examine the mechanics of how they teach a lesson, concept, or skill. What they teach is also changing.

Newly revised curriculum sequences in English, mathematics, and science merged with high technology applications in student learning spaces better position deaf students academically to complete technical degree programs within NTID or degree programs in other colleges of RIT.

Classrooms at NTID are much smarter now than they were just a few short months ago. Several NTID classrooms and other learning spaces now have high technology instructional delivery systems with Macintosh or Windows NT ethernet environments and a large rear-screen display for computer, visualizer, and captioned video projection. Portable laptop computers can be connected, the web can be surfed, and work can be stored for later use on zip drives. Tried and true low-tech display devices like overhead projectors, white boards, black boards, and easel stands still have their place—especially when a server crashes.

"RIT's goal is to be 'first in class,' and NTID is no exception," says Dr. Laurie Brewer, director of NTID's Center for Arts and Sciences. "With the application of high technology, like high resolution imaging and data capture for example, students see, save,



From the back A rear view of the smart classroom shows Crandall at the head of the class.

and share results of science experiments. In mathematics and English courses, examples become explicit, relationships are visually clearer, and the mechanics of revising written documents is much easier."

Dr. Kathleen Crandall, associate professor in NTID's English department, may not be most 'wired' instructor at RIT, but she has embraced high technology in NTID's Learning Center smart classroom and other classrooms on campus as well.

Crandall is one of many instructors at NTID and RIT who now plan and deliver lesson material, manages class assignments, and dialogues with students outside of class electronically. However, Crandall does not advocate total dependency on high technology for teaching in her discipline.

"NTID's smart classroom is very cool," says Crandall. "Educational applications of information technology can get students excited about learning all over again. Because they can find information fast, the students do more reading and writing and are giving me more meaningful work. The time we used to spend searching for information can now be spent

on reacting to what we have found."

Crandall welcomes the new educational technology and sees it benefiting student learning immediately. At the same time, she sees it expanding course content and providing a greater variety of methods for instruction.

"Technology can't make a good teacher; technology can help a good teacher," explains Crandall. "We all need to learn how to become developers and consumers of electronic

information. This requires a lot of time and direct experience. We are fortunate to have a supportive environment here at NTID and the rest of RIT."

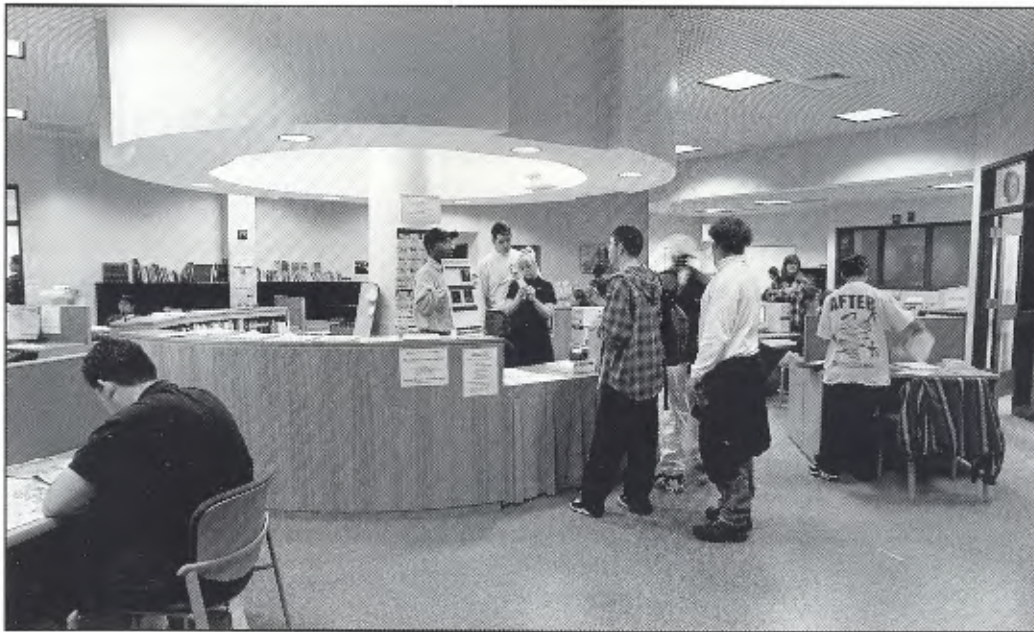
### Center of high tech attention

Smarter classrooms and the Learning Center represent a core initiative to integrate high technology academic support resources into all NTID programs. The Learning Center provides 50 computers

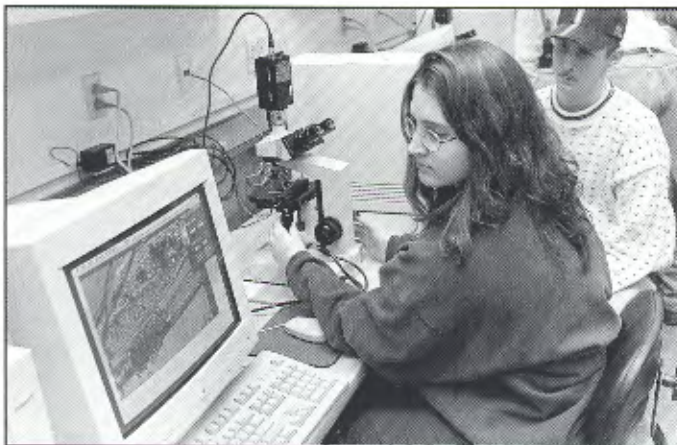


High tech toolbox Many NTID classrooms feature an instructor's workstation equipped with VCR, visualizer, computers with ethernet connections, and other technological amenities.

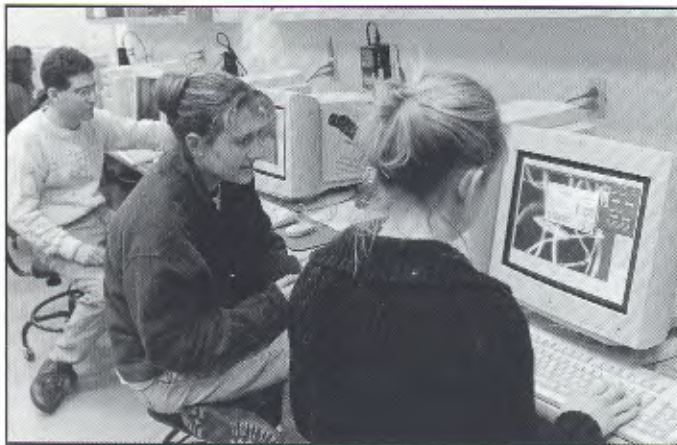




**Extensive menu** NTID's Learning Center offers students everything from computers and software to Internet access, video production, and video conferencing.



**Up close and personal** Fundamentals of Human Biology I students Colleen Russell, left, and Jerry Hess, right, use powerful micro-imaging equipment to study one-celled paramecium.



**Digital snapshot** Tai Gruver, center, and Chantal Bergeron, right, capture and store microscopic images digitally for further study and comparison in their biology class.

and four printers, all networked via high-speed ethernet and two dedicated servers. The center offers campus-wide and worldwide access through the Internet, videoconferencing, and access to a variety of current software applications to support student coursework. For an 11-week academic quarter, the center serves approximately 20,000 individual computer users for a total of roughly 18,000 hours of computer use time.

Dr. Jeffrey Porter chairs the NTID Learning Consortium, encompassing both the Learning Center for tutoring support from faculty representing departments throughout NTID and RIT and the Self-Instruction Lab, which includes state-of-the-art equipment and materials for supporting the development of sign language and communications skills. Porter stresses that technology in the classroom is a tool, not an end.

"We are all students, and technology is not the panacea for supporting all learning for all students," said Porter. "We are seeing time and space exploding before our very eyes in terms of the educational

access that technology makes possible, and we are restructuring how and where education happens. Distance learning is in NTID's very near future, and yet we will always have face-to-face instruction."

Dr. Robert Davila, vice president for NTID, in his 1997 State of the Institute address announced plans to establish the NTID Instructional Technology Consortium (ITC) following recommendations outlined in the NTID Strategic Plan. The ITC's fundamental purpose will be to support teaching and learning through applications of high technology to the instructional process.

Within the ITC, faculty and staff members will form partnerships in an atmosphere of strong, creative collaboration in order to explore, refine, and utilize innovative strategies for supporting learning through high technology. The first series of workshops for faculty and staff members under the ITC umbrella are scheduled for the summer of 1998.

Dr. Marc Marschark, director of NTID's Center for Research, Teaching, and Learning, believes that the ITC "belongs" to the community and must be as responsive as technologically possible to the needs of NTID faculty as they strive to provide quality instruction to students.

"The ITC vision," adds DeCaro, "is to use innovative technology and sound pedagogy to improve teaching and learning outcomes. The future is ours to shape in this regard, and we will seize the opportunity to do so."

### Pushing the envelope

From the hand, heart, and mind of deaf Depression-era vocational teacher Peter Peterson, today's NTID is pushing the boundaries of high technology to promote the advanced education and ultimate success of deaf and hard-of-hearing students. ■

# *A Win-Win Situation:* A college education benefits both deaf students and society

by Gerard G. Walter

**L**ike most other college graduates, Tim Conley chose to attend college to improve his chances for a better job and higher income. Conley, 31, completed his bachelor's degree in computer information technology in 1997 and works as a technical associate in NTID's department of industrial technologies.

"The reason I came to college was to acquire skills so I could find a job that would pay me more than minimum wage and allow me not to be trapped by depending on

social welfare or a low paying job," says Conley.

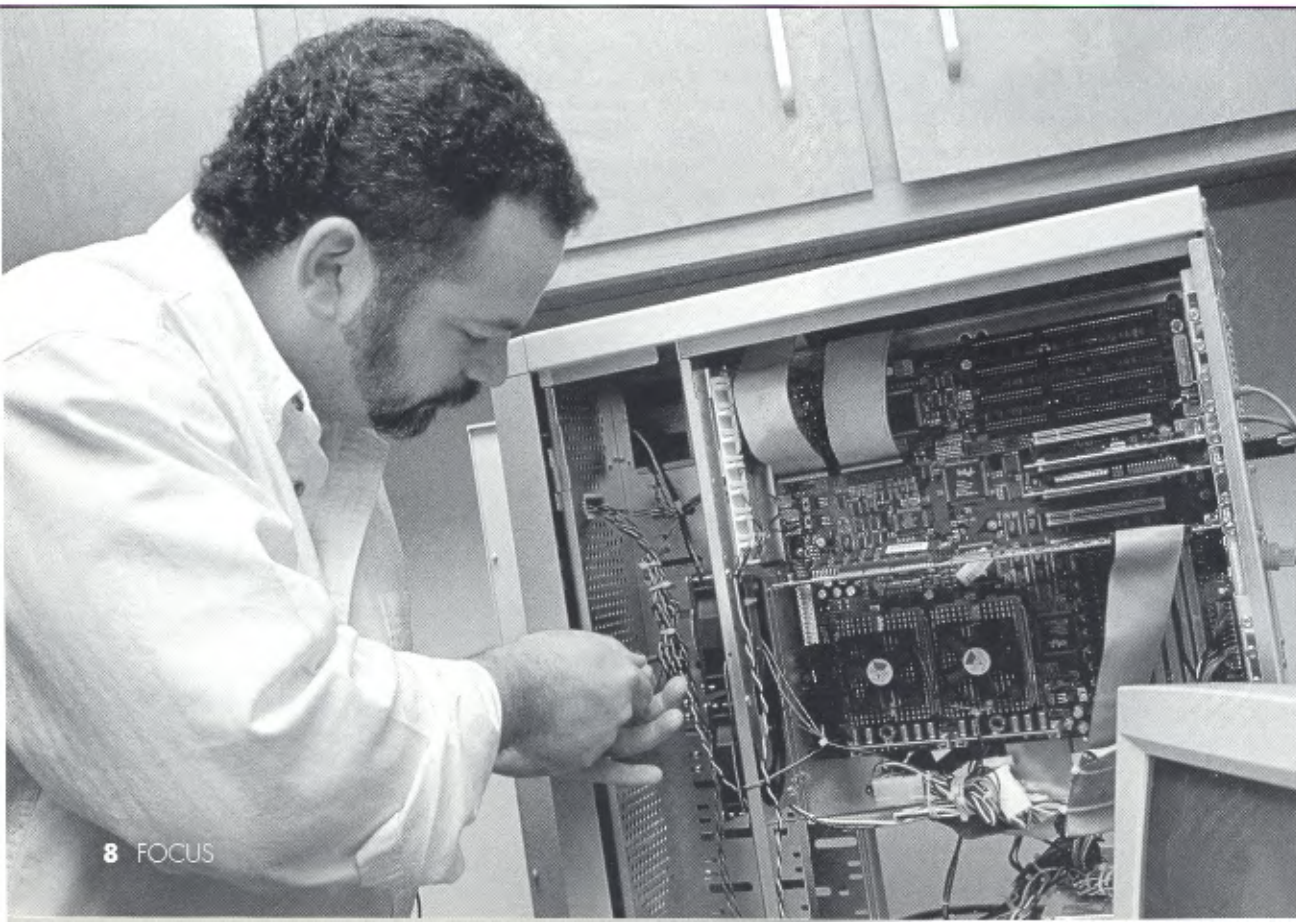
There are many reasons for attending college, but the one most often articulated relates to the expectation of a better job and higher income. Data from the U.S. Bureau of Labor Statistics show that these hopes are not unreasonable—level of education exercises a dominant influence over careers. College graduates are more likely to be in the labor force, less likely to be unemployed, and much more likely to be employed in managerial, professional, or

technical occupations, which generally provide workers with better compensation for their labors.

But the costs of higher education require investments from both the individual and society. Costs to an individual include expenditures for such things as tuition, books, board, and travel in addition to the income lost by not working during the period of matriculation. Over a period of four to five years, individual costs can amount to thousands of dollars.

Yet, for NTID students, these personal expenditures in no way cover the full cost of obtaining the quality education they receive at RIT. Differences must be made up from other sources, such as contributions from university endowments, grants in aid, and, in the case of public education, direct governmental support. These contributions are often referred to as society's investment in an individual's education.

At NTID, society's investment (in the form of appropriations from the Federal Treasury) total more than \$26,000 per



**Tinkering with electronics**  
Tim Conley upgrades a computer for laboratories in NTID's Center for Technical Studies.

student annually and can amount to as much as \$100,000 dollars per student by the time of graduation. As a result of these expenditures, the U.S. Congress, the U.S. Department of Education, and the Office of Management and Budget often ask whether the government receives any return from its investment in NTID. The answer is that deaf and hard-of-hearing RIT graduates earn two to three times more per year than individuals without a college degree—even after deducting the individual and societal investments in their education.

From an economic perspective, an RIT education is a good individual and social investment, as Tim Conley can attest.

“My education at RIT makes my skills worth a lot more than if I had not gone to college, and my degree is recognized as coming from a quality institution,” says Conley.

### Individual benefits of college

Extensive literature describes the positive effects of degree attainment on earnings for hearing persons. However, until NTID began surveying high school and college graduates in 1978, little was known about the effects of college completion for deaf and hard-of-hearing individuals. Studies at NTID have demonstrated that deaf and hard-of-hearing RIT graduates earn more money than those with only a high school education. In addition, a college degree reduces the difference between the earnings of deaf and hard-of-hearing people and their hearing counterparts.

Studies conducted at NTID in collaboration with the Internal Revenue Service indicate that a sub-bachelor degree reduces the difference in earnings between deaf and

hearing workers to 21 percent, a bachelor's degree lowers it further to 17 percent, and at the master's degree level, the difference is only 11 percent. Postsecondary certification appears to reduce the effects of salary discrimination—effects that are felt most strongly by deaf workers who have only a high school education. The higher the certification, the more the earnings discrepancies are curtailed.

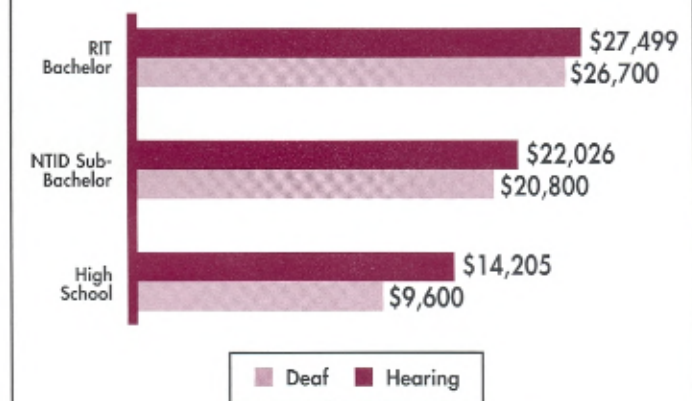
A college degree also can facilitate career mobility. Deaf high school graduates with comparatively few skills typically enter blue-collar jobs at relatively low salary levels and are faced with considerable discrimination. They also have great difficulty advancing themselves in their careers. A degree through NTID has the dual effect of providing graduates with marketable skills and opportunities to work in somewhat more enlightened environments, where they can compete on a more favorable basis with their hearing counterparts.

### Social benefits of college

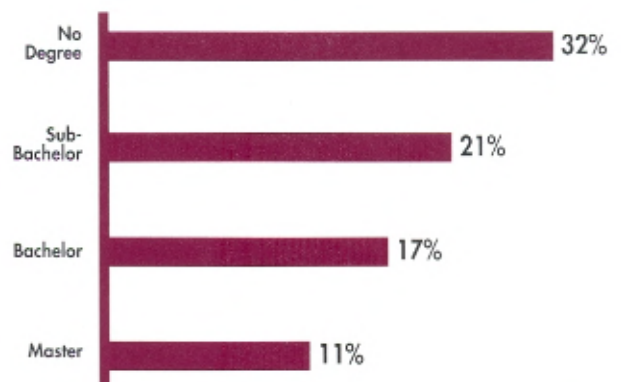
The benefits of a college education to the individual graduate are obvious. Less obvious, but no less important, are the societal benefits. The most apparent is that college graduates contribute significantly more in taxes to local, state, and federal treasuries.

Research at NTID, in collaboration with the Internal Revenue Service, indicates that college graduates from NTID contribute, over a lifetime of work, \$315,000 more to the U.S. Treasury than do deaf non-college graduates. In addition, research with the Social Security Administration shows that, in the fall of 1996, more than half of the deaf people aged 30 with only a high school education were

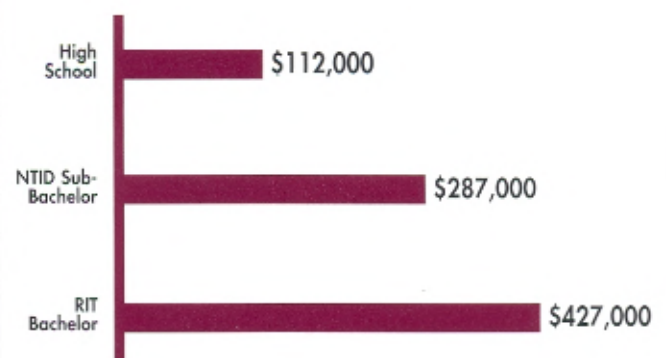
### Estimated yearly earnings by educational level

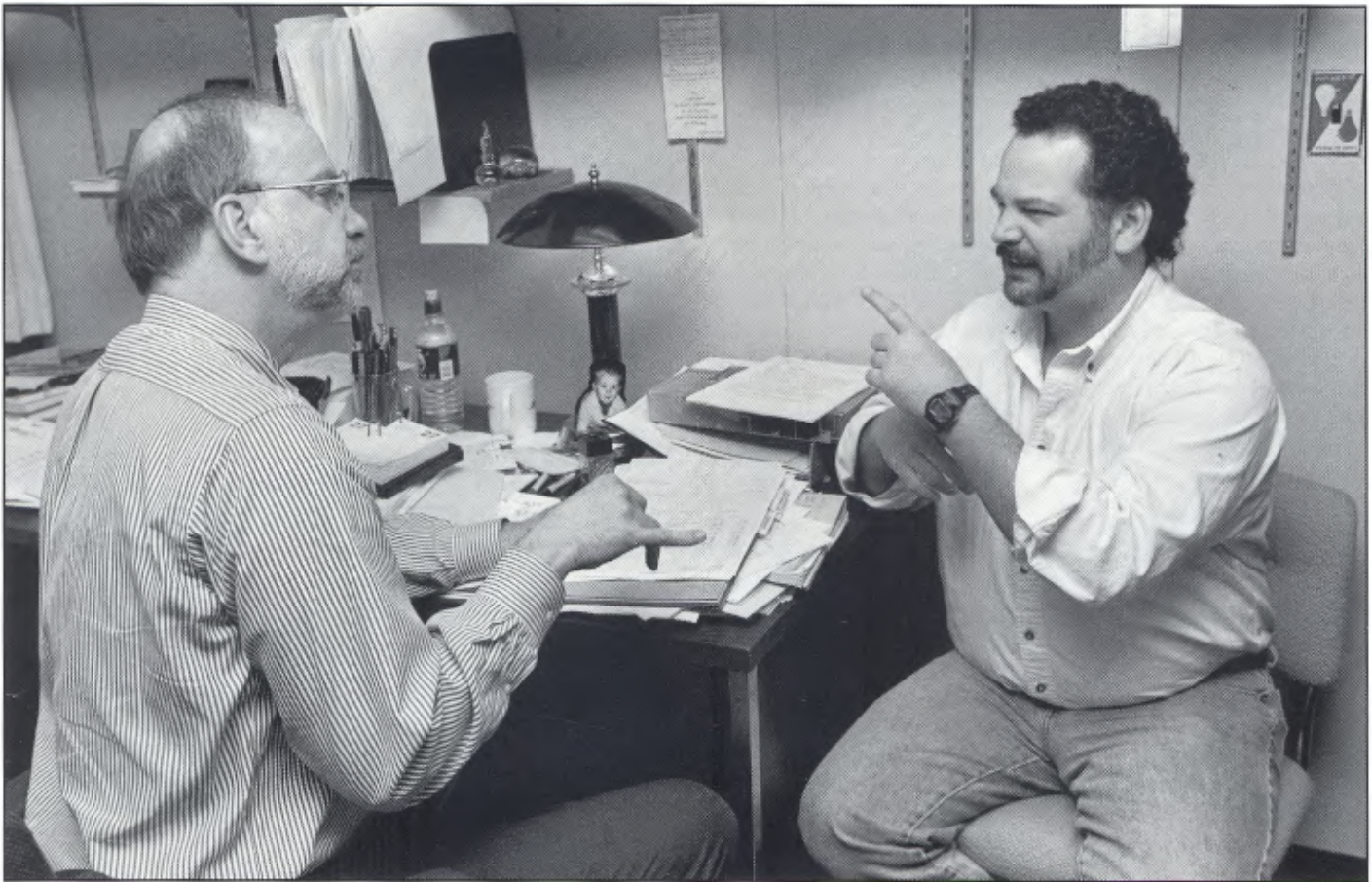


### Percentage difference in earnings between deaf and hearing workers by education level



### Estimated taxes paid by deaf workers during 40 years of employment, by education level





All in a day's work Ronald Till, chairman of NTID's department of industrial technologies, left, discusses ongoing projects with Conley.

receiving either Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI), while only 16 percent of deaf RIT bachelor's degree recipients received these benefits. NTID's studies with the Internal Revenue Service and the Social Security Administration suggest that deaf people aged 30 who have only a high school diploma will, on average, withdraw about \$300 from the federal treasury per year, while deaf RIT bachelor's graduates will contribute about \$4,500 per capita annually.

These results suggest that society benefits greatly by investing in NTID. Completing college not only has the benefit

of increasing individual earnings, it increases the amount graduates return to the local, state, and federal treasuries in the form of taxes.

Research with hearing people also indicates that college graduates tend to be more involved in community activities and thus become leaders in the organizations they join. Howard Bowen, a noted authority on the effects of college, notes that graduates' emotional and moral development is facilitated; they become better, more productive citizens, their family life and leisure time are enhanced, and they are physically healthier. Tim Conley confirms Bowen's

findings, remarking that his college education has freed him of the burdens of dependency and enabled him to live his life as a productive member of the deaf community in Rochester, New York.

"When I first came to NTID in 1985, I was receiving money from VR, SSI, and grants in aid to support my education for an associate in applied science degree," says Conley. "Later, when I returned to school for my bachelor's degree, I depended on having a job and cooperative work experiences to help me financially."

Obtaining a degree from RIT provides the deaf individual with credentials that open

doors to better jobs that provide not only higher wages and benefits, but also better working conditions. This improved compensation provides the college graduate better access to a variety of leisure time activities and a generally improved quality of life. Although the economic benefits of an NTID education are critical, these other more intangible benefits are equally important in making the graduate a truly contributing member of society, as Tim Conley has become. ■



Jenna Leon

## Jenna Leon

A self-described multidimensional British mutt from Welland, Ontario, Canada, Jenna Leon, 24, is one of RIT's best advocates for international students.

As program assistant for RIT's Center for Student Transition and Support, Jenna is setting up new programs to bring together deaf and hearing international students. Her skills earned her the job over several other candidates: she's computer savvy, with World Wide Web, word processing, and desktop publishing talents; and she's refined her interpersonal skills through her program of study.

"I can convince anyone of anything if I put my mind to it," says Jenna, a fourth-year professional and technical communications student.

Jenna's goal in her position is to help minimize the isolation of the 1,100 international students on campus. She plans to revise the office's web page and include information on local places of interest as well as to organize holiday celebrations for her peers who are so far from home.



Roberta Mather

## Roberta Mather

Roberta Mather's enormous enthusiasm and zest for college have only grown during her career at RIT. In her role as coordinator for NTID's Student Development Educators in the Student Life Team, Roberta, 20, a third-year professional and technical communications student from Chevy Chase, Maryland, organizes school-wide events, such as guest speakers, workshops, and roundtable discussions. According to Roberta, these events enrich and stimulate students and offer them different perspectives on a variety of topics.

"Learning can be fun," says Roberta. "For me, all these events, not just academics, can be summarized as 'a learning experience.' Being coordinator motivates me in my major by giving me the confidence to use my imagination, the arena to announce my thoughts, and the opportunity to put my heart in academics."



Dino Christianson

"For the first time, I'm able to bring together all my values, images, and expectations into a complete academic and extracurricular experience."

## Dino Christianson

After trying four other colleges, James "Dino" Christianson, Jr., has finally found his niche at RIT. Dino, 28, a third-year industrial design student from Grover Beach, California, arrived in 1993 to study industrial drafting technology at NTID. He later transferred into the industrial design program in RIT's College of Imaging Arts and Sciences.

"I enjoy the challenge of the major and of participating with my hearing classmates in group activities," says Dino. "I've had to learn how to work with interpreters when making my presentations to hearing people. I'm very used to just expressing myself in ASL (American Sign Language) to my deaf peers."

"I had a good experience explaining my portable TTY project to my hearing classmates."

Dino chose his program because he loves art and wants to support the needs of deaf people through industrial design.

"Deaf people should be responsible for designing the products they will use," he says.

## Joyce Song

Joyce Song found her independence by drawing on her enormous reserves of personal strength. Joyce, 22, a third-year graphic design major, lost her hearing from ear infections at age 2 in Korea and then was adopted at age 7½ by an American non-Korean family. She left the family at age 18



Joyce Song

and finished high school in St. Louis Park, Minnesota, where she became the first deaf student to join the National Honor Society from that high school since the 1970s.

Two days after she graduated from high school in 1995, she flew to Seoul, Korea, and found her family.

"I'm very satisfied with my independence," says Joyce. "Sometimes the responsibility is tough without any family support, but I feel better about it."

Now Joyce has settled on graphic design as her major after first trying photography. Her goal is to attend graduate school for fashion design.

## Jivan Petit

Jivan Petit, 21, began life as an infant in Mother Theresa's orphanage in Calcutta, India. Adopted by a French father and American mother, Jivan grew up in a happy home with three older sisters, living in Paris and Dijon. He spoke French and then learned French Sign Language when he became deaf at age 8.

When Jivan was 11 years old, his family moved to Washington, D.C.

"There was such a drastic change from French, and my English and American Sign Language skills were not very good," he says. "I knew I wanted to come to NTID and that I needed to work hard to get here. My family helped me learn English and ASL."

After attending the Summer Vestibule Program, he was accepted as an undecided major last fall.

"There are so many choices," Jivan exclaims. "I really love it at NTID. My parents are thrilled that I'm here."

## Angus English

Angus English, 20, a second-year illustration student from Vienna, Virginia, spent the first 19 years of his life primarily among other deaf people. He attended the Kendall Demonstration Elementary School and

the Model Secondary School for the Deaf in Washington, D.C., and his parents and two sisters also are deaf. Angus transferred to RIT this fall for a fresh start and a mainstream college experience.

"I saw the same faces all my life," says Angus. "I needed to become more independent, and now I feel as if I'm starting my own life. Transferring was my first major decision, and I think it was a good one."

"I'd never really interacted with hearing people," he explains. "I wanted to add balance to my life and make new friends, deaf and hearing."

Angus now studies computer animation and illustration and hopes to work as an animator for the Walt Disney Company or Nintendo.

## Andrea Zamloot

Mainstreamed in a small program for deaf students and growing up with a hearing family, 19-year-old Andrea Zamloot of Belleville, New Jersey, worked to understand and be understood. Strong family support led the graphic arts major to enter and win the Miss Deaf New Jersey pageant.

"I never intended to be involved in a pageant," she said. "But then I thought, 'why not?' It's a great opportunity!"

Andrea considers RIT to be another great opportunity.

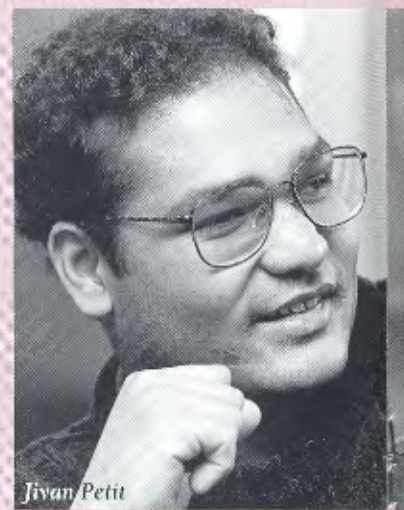
"I'm used to a school with deaf and hearing students, so RIT is perfect for me," she explains. "Here, you can just fill out a form and get all the support services you need."

Andrea hopes to become a graphic artist and work in a design firm in New York City.

"That would be a dream for me, especially if I can work on my co-op [cooperative work experience] there," she says.

## Corey Washington

Corey Washington, 20, grew up in the Syracuse, New York, area and heard about NTID from his aunt, a graduate of RIT's College of Business. Corey's family now lives in Allentown, Pennsylvania.



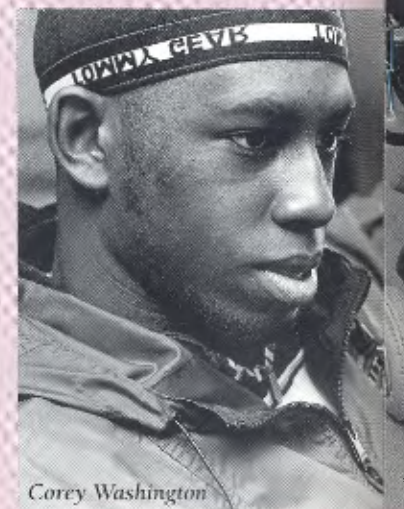
Jivan Petit



Angus English



Andrea Zamloot



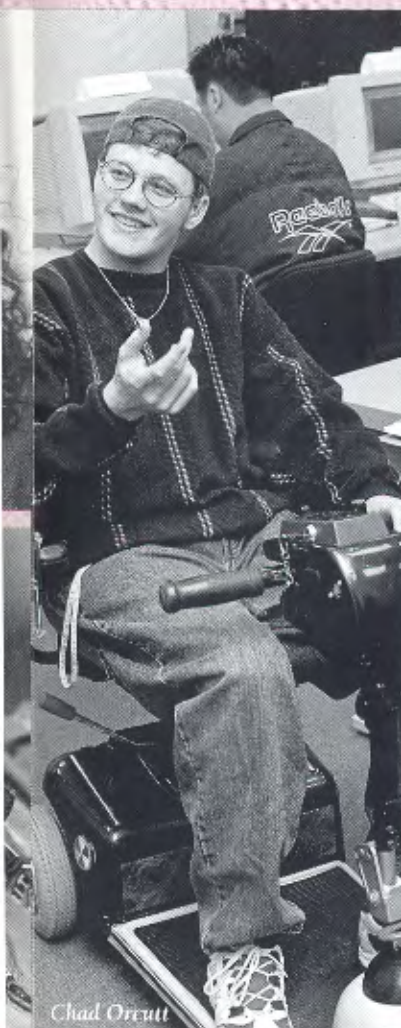
Corey Washington



Eddie Bart



Matt Hamill



Chad Orcutt

A soccer star who graduated from the Pennsylvania School for the Deaf in Scranton, Corey is not playing soccer while attending NTID because he wants to focus on his major in Applied Computer Technology and become involved in the social side of college life during his first year.

"I especially like the interactions with deaf students from a broad range of backgrounds," says Corey.

The variety and availability of computers on the RIT campus has left Corey spellbound. He is especially struck by their use in facilitating campus communication among his teachers and friends.

"My girlfriend and I can remain in touch wherever we are on campus," he explains with a smile.

### Eddie Bart

Eddie Bart, 21, of Arlington, Texas, is a proud member of NTID's winning 1996 College Bowl Team.

"Preparation for the competition, which is similar to the television game show 'Jeopardy,' began in the fall of 1995," Eddie explains. "The questions focused on art, history, mathematics, science, Deaf culture, and basic trivia."

When Eddie came to NTID and entered the imaging technology program, he never expected that the College Bowl would be part of his experience.

"I got to travel and meet people—it was a great thing to do," he says.

In the future, Eddie plans to complete a cooperative work experience and would like to eventually earn a bachelor's degree.

"RIT offers great programs," he says. "There is a lot of opportunity to work on technical equipment, and there is a lot of interpreting support."

### Matt Hamill

Last year, third-year electro-mechanical technology student Matt Hamill, 21, from Loveland, Ohio, was in top wrestling form. In March he captured the NCAA Division III wrestling championship for RIT in the 167-pound weight class and went on to pin down back-to-back gold medals at the Summer World Games for the Deaf in Copenhagen, Denmark, in July.

"No matter what the competition level is," says Matt, "I know I can win."

Matt has one decision that he's still grappling with.

While he was training in Colorado for the Copenhagen games, coaches for the 2001 Olympic Games in Australia asked Matt to quit school and train with the United States team full time. Will he go for it?

"I don't know," said Matt. "Most of the U.S. Olympic wrestlers are 30 and 40 years old, married, and have finished college. Right now I feel safer in the long run to get my degree first."

### Chad Orcutt

Like many 7th and 8th graders, Chad Orcutt loved to play football.

The St. Louis Park, Minnesota, native carried his passion for the pigskin from grade school well into high school.

By 11th grade Chad had problems with his balance, and by 12th grade he was walking with a cane. Now at 20, the second-year industrial drafting technology student is sidelined with hypertrophic cardiomyopathy. Chad's condition is so specific that doctors refer to it as "Orcutt's Ataxia."

"Call me the oddball," says Chad.

Chiropractic treatments are starting to correct nerve damage in Chad's neck. Although his heart walls are thicker than normal, medicine he takes once a day keeps his heart rate normal. He even finds time to lift weights regularly in RIT's Student Life Center.

"This can be fixed," says Chad. "I believe in my heart that I will walk again."

*Editor's note: Matt Hamill became RIT's first two-time national champion March 1998, winning his second consecutive NCAA Division III wrestling title; this time in the 190-pound weight class. He also was voted most outstanding wrestler of the 1998 NCAA Division III wrestling tournament.*

## Gilbert Varela

Second-year electronic printing and publishing technology student Gilbert Varela, 23, has a keen appreciation for NTID's slogan, "There is a place for you!"

Gilbert's father worked for a cable TV engineering company and moved often with his family. They moved from California to Texas to Washington to Arizona and eventually Alaska, where in 1986 Gilbert's father died in a plane crash. The family, now closer than ever, returned to Arizona, where Gilbert focused on finishing high school and getting ready for college.

"Most of my friends were going to NTID after high school," says Gilbert. "They tried and tried to get me to go with them, but my mind was set on a college in Washington, D.C." After three years there, Gilbert's educational and career goals changed, and he transferred to NTID.

"Now that I am here, I see that NTID was clearly the right choice for me," says Gilbert.

## Sara Calatrava

Sara Calatrava, 19, of Boca Raton, Florida, came to NTID as an imaging technology major this fall after graduating from the Florida School for the Deaf and Blind.

"NTID matched my level of determination," Sara says. "I really wanted to focus on my education and prepare myself for a number of career choices. The Summer Vestibule Program helped me to 'warm up' to college life and get started. It was a lot of fun!"

She is impressed with NTID's facilities and the use of technology throughout the campus. Sara feels that coming to NTID was a good decision for her.

"I think NTID and RIT provide a good and safe environment," she says. "The education is one of the best in the country."

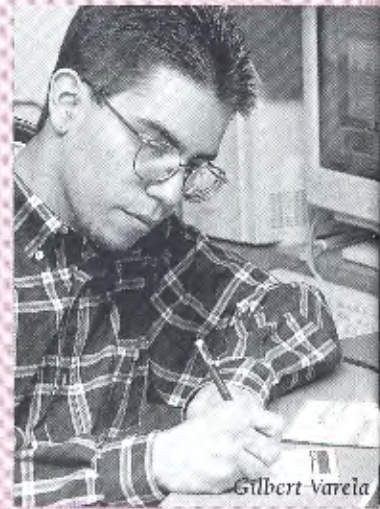
"After I graduate, I may look for a job in my hometown or stay in New York State. I know I'll be happy wherever I am."

## Megan Walsh

At age 18, in her first year of college, Megan Walsh of San Diego, California, has many interests. She's now studying imaging technology at NTID and thinking about pursuing her bachelor of fine arts degree in RIT's College of Imaging Arts and Sciences, but she's also considering the pre-veterinary major in RIT's College of Science. And she loves music. Not only does she surf the World Wide Web in search of lyrics to songs, she also plays a number of instruments. Megan first learned how to play the piano, and then she picked up the alto sax, drums, and violin, and now is learning the guitar.

"I learn mostly on my own," says Megan. "I don't have time for lessons. I'm good at figuring things out."

"I like to experiment and add some spice to my life."



Gilbert Varela



Sara Calatrava



Megan Walsh





Sara Gould

## Sara Gould

Sara Gould of Binghamton, New York, a 17-year-old freshman engineering student at RIT, decided her career goal when she was a young child.

"I watched a story on television about designing roller coasters and decided that I would design one, too," she says.

Sara's life has had ups and downs of its own. She lost her hearing four years ago, the result of a serious virus.

"My family and school didn't know how to support me," she says.

The school suggested that Sara drop advanced courses and take basic or special education courses, but her mother told school administrators, "It's not her brain that changed, it's her hearing!" Sara continued in honors courses and received high marks.

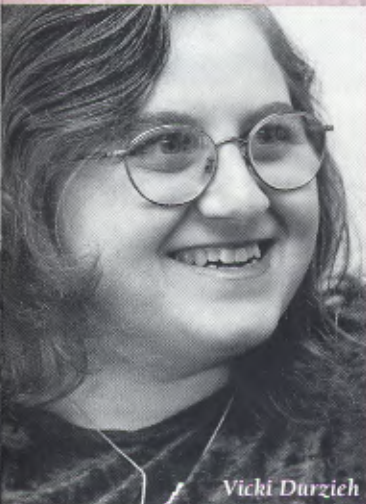
Sara has added another twist to her college career ride—next year, she will apply to the BS/MS Engineering degree program. "I'd like to find a co-op [cooperative work experience] with an engineering firm that designs and builds roller coasters," she says.



Stuart Slutzky

## Stuart Slutzky

Stuart Slutzky, 32, has little trouble finding his way around a kitchen. A 1992 graduate of RIT's Food, Hotel and Tourism Management program, he has worked as cook, chef, and kitchen manager in hotels owned by the Marriott and Hyatt corporations and



Vicki Durzieh

in establishments such as Edwards restaurant in Rochester, New York, and Houston's in Boca Raton, Florida.

"The experience I gained from working in these establishments has been invaluable," says Stuart, "but the 60- to 80-hour weeks made it difficult to have a family life. When I became a father I began looking for a way to reduce my work hours, but remain within the culinary area."

Becoming a culinary educator seemed to be one possibility.

Armed with a scholarship from the American Culinary Federation, Stuart enrolled in NTID's Master of Science in Secondary Education program last fall.

"My goal is to become an instructor at a postsecondary program training people to work in the culinary area," he says.

## Vicki Durzieh

The phrase 'Never Give Up' that appears on her e-mail messages defines fourth-year information technology major Victoria (Vicki) Durzieh. Born in Damascus, Syria, she came to America 10 years ago at age 14.

Vicki arrived at NTID knowing little American Sign Language (ASL) or English.

"The people in the admissions office took a chance with me," she says. "I was determined to prove they didn't make a mistake."

They didn't. Vicki not only became fluent in ASL and English, but she has excelled at NTID as an applied computer technology major. She completed a cooperative work experience in New York City last summer.

"At Citicorp, I was a Technical Assistant," Vicki says. "I had special access to certain areas of the building and attended staff meetings. It was great!"

Judging from Vicki's many accomplishments; her motto "Never Give Up" spells out exactly who she is. ■

# Research Leads the Way to Improving Access

by Gerard G. Walter

The last 50 years has been one of the most active periods in the history of postsecondary education in the United States. During this time, postsecondary education could be described as a growth industry. Access to postsecondary education has been extended to more and more people, including increased numbers of deaf and hard-of-hearing persons. The National Center for Education Statistics estimated that, in 1993, there were more than 23,000 deaf and hard-of-hearing students registered in U.S. two- and four-year colleges and universities. This figure represents a ten-fold increase since 1973 when the estimate was only 2,300. This ten-fold growth is evidence that access has been provided to deaf and hard-of-hearing persons seeking admission to the nation's colleges and universities.

However, access alone does not ensure success. Research shows that integration into the classroom and the general college environment increases the probability that a student will graduate. As a leader in supporting this kind of integration for deaf and hard-of-hearing students at RIT, NTID has focused a significant part of its research effort on issues of access to the college, access to information in the classroom, and access to the workplace

after graduation. NTID's graduation rate, which is comparable to national college averages, reflects the success of these applied research efforts.

## Access to college

One way of insuring that students do not drop out of college is to maximize the fit between the needs of the student and the characteristics of the college. Insuring a good fit at NTID begins with the

## **NTID provides a perfect laboratory for research relating to access for deaf and hard-of-hearing students to the mainstream of college life.**

decision to offer admission to a potential student. Research over the last two years has shown that the American College Test (ACT) provides admissions and placement counselors with information that is helpful in making better informed decisions about applicants. Beginning September 1, 1998, all applicants will be expected to submit results from the ACT Assessment as part of their application to NTID.

"The broad base of academic, vocational interest, and demographic information provided by the ACT will improve our ability to make appropriate admissions decisions for deaf and hard-of-hearing students applying to RIT," says Dianne Brooks, director of recruitment and admissions.

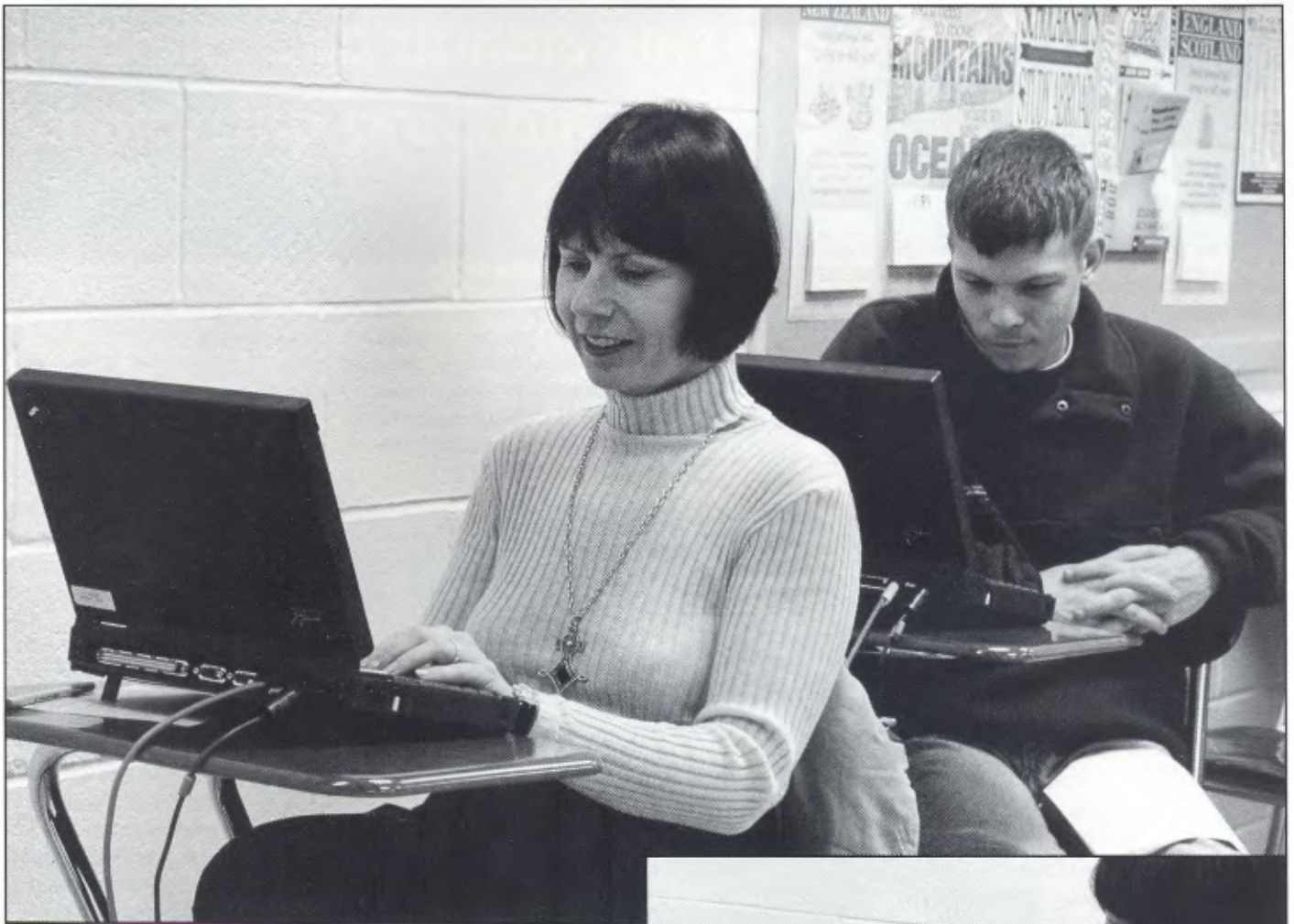
In collaboration with researchers at ACT, NTID is continuing to evaluate the test's appropriateness for making

"Our goal is to front load services to prevent dropout from occurring before it is too late to effect any change," says Dr. Gail Rothman-Marshall, chairperson of NTID's counseling department. "When a counselor determines that a student is at risk for dropping out, the counselor can employ proactive strategies to assist the student with adjustments to college life."

## Access to the classroom

Researchers are investigating the challenges that deaf and hard-of-hearing students face in accessing the college environment and the difficulties that faculty and support service personnel have in providing that access. This knowledge is critical for identifying strategies and practices designed to increase student success in college classes. While it is generally acknowledged that support services such as tutors, notetakers, and interpreters are central to student success, less attention has been paid to the role that instructional and learning strategies play in student performance.

"Isolating effective instructional and learning strategies for students mainstreamed in RIT classes is the primary purpose of our research," says Dr. Gary Long, associate professor in NTID's



**C-Print in the classroom** Joyce Gambacurta, captionist with NTID's C-Print project, captions a class lecture for Don Carter, an industrial drafting student from Middlebourne, West Virginia.

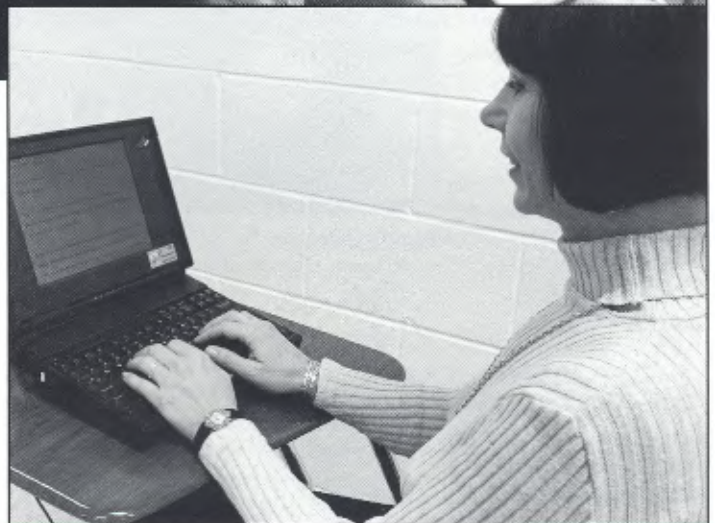
department of educational and career research.

Findings from these studies will assist in maximizing the congruence between the learning styles of deaf students attending NTID and the systems used by faculty for delivering instruction.

Technology supports learning at NTID in a variety of ways (see *Educational Technology for Lifelong Learning*, p. 4). But how these technologies are applied in instructional settings are researchable questions. One project uses a content independent multi-media system (CIMMS) to investigate the relative effectiveness of instructional features such as

text only, content movies and text, sign movies and text, and adjunct questions and text, in instruction delivered using multi-media computers. The findings will help faculty and instructional developers determine which features will help their students retain information.

The auditory and English language difficulties of deaf and hard-of-hearing students often inhibit them from using the avenues traditionally required for information transfer in college—lecture and reading. In response, a number of research initiatives at NTID address the need to make lectures understandable to deaf and hard-of-hearing students.



Automatic speech recognition and C-Print are two technologies being evaluated to complement interpreting, audition, and speechreading of a lecture at RIT. These approaches appear to benefit some mainstreamed deaf and hard-of-hearing students when receiving information from a lecture.

"We would be short sighted

if we didn't look beyond the basic support services for deaf and severely hard-of-hearing students in regular college classes and consider fresh additions and alternatives," says Dr. E. Ross Stuckless, professor in NTID's department of educational and career research. "In this context, classroom applications of

specially-adapted automatic speech recognition certainly warrant our attention.”

Use of sign language and interpreting remain the primary modes of transferring information in the classroom environment at RIT. Researchers at NTID are attempting to define the characteristics of successful interpreters. Such information will be useful both in selection and training of interpreters and in professional development of interpreters working in educational settings. In addition, an ongoing project is evaluating and documenting signs used in technical settings. The goal of this research is to make available to interpreters and teachers a standard set of technical signs that will aid effective communication in academic and professional career environments.

“Consistent use of standard technical vocabulary, whether it is spoken, written, or signed, is critical to effective, clear communication in NTID classrooms,” says Dr. Frank Caccamise, professor in NTID’s department of educational and career research.

Tutoring, often a form of direct instruction in a variety of environments, including learning centers, offices, and for individuals providing support in mainstreamed environments, is a service whose effectiveness is not yet understood. NTID has initiated the first in a series of studies that will describe the tutoring environment and then identify a research agenda for future efforts in this area.

## Access to the workplace

In addition to accepting all qualified students and providing the support necessary to facilitate their access to the educational environment, NTID assists students in the transition from college to the world of work. By offering technical majors that meet the needs of students and employers, NTID helps students find jobs. To assure that students are being provided an education that will make them employable, NTID conducts ongoing studies to evaluate the relevance of



**Boosting retention** Dr. Gail Rothman-Marshall, left, keeps in touch with Akeshia Townsend, second-year office technology student from Buffalo, New York, to monitor her progress in college.

existing majors and to identify potential new majors. These studies focus on defining the needs of employers who will hire graduates from a major area of study, on the interest of students in selecting a major area of study, and on forecasts about the future demand for graduates in a particular technical area.

Feedback from graduates about the relationship between their training at NTID and success on the job provides additional critical information about the majors offered by NTID. These studies focus on issues such as employment rates, occupational status, earnings levels, and continuing education needs.

Deaf and hard-of-hearing college graduates sometimes experience barriers to obtaining management or supervisory positions. Using successful deaf RIT alumni as informants, this research will seek to

determine what leads to deaf and hard-of-hearing persons being promoted into supervisory positions.

“Results from surveys and in-depth interviews conducted with alumni who have achieved career mobility attest to the importance of mutual, ongoing employer/employee dialogue concerning accommodation

and integration,” says Janet MacLeod-Gallinger, research associate in NTID’s department of educational and career research.

Findings from these studies will suggest ways in which the NTID curriculum can be better structured to prepare students for career advancement.

## Access research is ongoing

Providing full access to the college environment for deaf and hard-of-hearing students requires continuing

investigation and evaluation in a number of research areas. One area provides information to admissions and placement counselors about the fit between the capabilities of admitted students and the instructional offerings of NTID. Another area seeks to develop innovative approaches to teaching and learning that are sensitive to needs of deaf students by taking advantage of the advancements being made by technology. Finally, identifying technical areas of study that will provide graduates a high probability of success when competing for

jobs in a workplace is another area of research at NTID.

NTID provides a perfect laboratory for research relating to access for deaf and hard-of-hearing students to the mainstream of college life. ■

# The Art and Heart of Giving: Students and donors succeed with NTID's scholarship program

By Susan L. Murad

**Y**ou cannot hope to build a better world without improving the individuals.”  
—Marie Curie

A number of special people and organizations are following Dr. Curie's words and improving the lives of talented, deserving deaf and hard-of-hearing students by offering scholarships through The NTID Foundation.

“Scholarships create not only a ‘window of opportunity’ for students, but forge a bond between donors and recipients as well,” Dr. Robert Davila, vice president of RIT for NTID, says.

In its tenth year of existence, The NTID Foundation has grown to include 56 funds, 49 of which are directed to scholarship support for students. Among the scholarships that are offered each year to deserving students are the Citibank/Citicorp Scholarship Fund; the newly-established Elizabeth W. Williams Endowed Fund for the Performing Arts; the Milton H. and Ray B. Ohringer Endowment Fund; the William Randolph Hearst Scholarship for Minority Students; and the Ryoichi Sasakawa Scholarship Fund.

What makes creating a scholarship so important? The answers are as diverse as the donors and recipients themselves. Each has formed a lasting impression on the other, and in turn, has helped to strengthen students' pursuit to scholarship and donors' commitment to making a difference.

## Heart at the bottom line

A combination of good business sense and deep personal commitment led to the establishment and growth of the Citicorp/Citibank Scholarship Fund at NTID.

Established in 1988 to support scholarships for students enrolled in

business programs at NTID and deaf students pursuing baccalaureate degrees in RIT's College of Business, the fund began through the efforts of former Citibank executive Max Gould, the father of two deaf sons who attended NTID and a former member of NTID's National Advisory Group.

After Gould's move to Aetna, stewardship of the fund was passed on to Peter Thorp, vice president of university relations and educational programs at Citibank.

“The Citicorp Foundation is deeply committed to improving access to education and the learning that goes with it, particularly to underrepresented minorities, women, and deaf people,” Thorp says. “It makes good business sense. The future will demand bright, intelligent people of all experiences. As a leader in the financial world, Citibank has an ethical obligation to ‘lead by example’ and form partnerships with the best and brightest the world has to offer.”

Thorp's original “bottom line” interest in NTID grew into personal dedication after visiting the campus and meeting with the Citibank Scholars in 1996.

“People in the mainstream will never understand the challenges or rewards until they visit here,” he says. “One cannot help but come away without being deeply moved by the students. To not be involved would be just plain wrong.”

“The importance of the scholarships to these students is immense, not only in a financial sense, but emotionally as well. When students sit with you and tell you about the issues they are dealing with, and the gratitude they feel because of your belief in them, it's overwhelming.”

*“You cannot hope to build a better world without improving the individuals.”*

—Marie Curie

Thorp, who now is a member of NTID's National Advisory Group, has taken the institution to heart.

“I was deeply honored to be asked to become a member of the group,” he says.

This year's 16 Citicorp/Citibank Scholars consider themselves fortunate to continue pursuing their academic dreams with the help of Thorp and the Citicorp Foundation. The gratitude of this diverse group of students was summarized by Jian Wang, of Shanghai, China, a third-year applied computer technology major, when he wrote, “I know that I wouldn't be able to attend RIT without this scholarship. I made up my mind to study hard, and I am sure I will be successful and complete my chosen field of study in the future.”

## Remembering the dream

For Elizabeth “Cookie” Williams, the idea of establishing an endowed fund for NTID students involved in various aspects of the performing arts comes from her great love of the theater.

“I have always been interested in theater and the arts,” Williams says. “My mother taught theater and directed plays. She used to ask me to paint and draw backdrops and work on costuming as well.”

Explaining her commitment to the performing arts at NTID she says, “I

Dear Mr. Thompson

Thank you for the Citibank Scholarship. I still work hard with my education since my goal is always A's and B's. I am a third-year student majoring in Applied Computer Technology at NTID/RIT. I will graduate next fall in 1998. I truly thank you very much for the scholarship you gave me.

Sincerely,  
Bruce J. Jordan

Dear Mr. Flansburg,

My name is Santiago Avila and I am a third year student at NTID/RIT. I am writing this letter to say thank you for your support of my scholarship at NTID. I am pleased to be receiving this support from you. I have been at NTID since 1995 and I have learned a lot. I really enjoy school. Thank you very much for your scholarship support.

Santiago Avila

I am truly honored to have been named winner of the 1987 NTID Performing Arts Scholarship. The NTID Foundation is an excellent example of why NTID is one of the world's leading universities for deaf and hard-of-hearing students. I certainly commend you for being on the board! Be proud that you have been able to help so many deaf and hard-of-hearing students in their college education and prospective careers! The NTID Performing Arts Department is most certainly grateful for your generous donation, making it possible for me to continue exploring my love of theater. Who knows? Maybe I'll be the next "Huckleberry Finn" or "Annie" (ah, heh heh)!  
Thank you again, for showing faith by honoring me with this award. I certainly hope to be seeing you when you visit NTID!

Yours,  
Kevin Earnest

Dear Mr. Sasakawa,

I'm very grateful to have this opportunity to thank you very much for your continuous support of my education at NTID/RIT. Without your support I wouldn't be able to attend NTID/RIT. I am a junior now and hope to graduate with a B.S. degree in Criminal Justice in May 1999. Thank you again for your wonderful support.  
Christina Kragger

Dear Mr. and Mrs. Milton Ohringer,  
Thank you for your support of my education at RIT. I really appreciate your generosity and I will do my best to make you proud that I received your scholarship. I am majoring in applied photography and I enjoy my major very much and I look forward to this last year. Your scholarship has made my education easier and I truly appreciated it. Thank you again.  
Lothar Kretz

think NTID is a great school. I wish I were younger; I'd go here, too!"

Because of Williams' prior gifts to assist in renovations to the Robert F. Panara Theatre, students are already aware of the award and grateful to Williams for her caring and generosity. Kevin Bernadt of Scotia, New York, a third-year biology major in RIT's College of Science, has participated in a number of performing arts productions at NTID. He wrote to Williams, saying, "Be proud that you have been able to help so many deaf students in their college education and prospective careers! Your generous donation is making it possible for me to continue exploring my love of theater."

## A sense of pride

Milton and Ray Ohringer of Boca Raton, Florida, established an endowed fund at NTID in 1985 to "provide assistance to NTID students in financial need." Their vision was to provide tuition, board, and books to students who would otherwise be unable to complete their education at NTID.

The Ohringers are among a growing number of individuals who recognize the importance of helping students in need.

"Because we are both deaf, we wanted to support other deaf people who need financial help to go to college," Ray Ohringer says. "My husband and I know how financially hard it is to get through college."

Students who receive this scholarship feel a special sense of pride and a desire to make the Ohringers feel the same. Katherine Groves of Woodstock, Vermont, a second-year applied photography major in RIT's College of Imaging Arts and Sciences, expressed her gratitude to the Ohringers in a note that stated, "I will do my best to make you proud that I have received your scholarship."

## Diversity and opportunity

Established by the Hearst Foundation to "support scholarships for deaf minority students enrolled at NTID through RIT," the William Randolph Hearst Scholarship for Minority Students at NTID was established in

July 1994 for minority students who are "academically qualified, demonstrate financial need, and reside in the United States."

Recently, 12 students were selected to receive the scholarship, among them Tao Eng, a third-year applied computer technology major from San Francisco, California. Each of these students has their own unique story, but their gratitude for receiving the Hearst Scholarships was summed up by Eng, who wrote, "Thank you again for your scholarship. You have made a profound difference in my life!"

Through a \$2 million gift from the Nippon Foundation, formerly the Sasakawa Foundation of Japan, the Ryoichi Sasakawa Scholarship Fund provides scholarship assistance to deaf students from developing countries in good academic standing enrolled at RIT through NTID.

Recipients of the scholarship this year include Sindile Mhlanga of Zimbabwe, a fourth-year business administration/information technology student. Mhlanga's words of gratitude to the scholarship benefactor echo the sentiments of the other Sasakawa scholars: "I really appreciate your efforts to help bring international students to RIT/NTID, and I assure you that the results of my being here will benefit other deaf people back home."

"The chance for these students to take their place as role models and to assume leadership roles in their home countries may not have been possible if it were not for the generosity and vision of our donors," says Davila. "The effect of these scholarships is far-reaching and has positive implications beyond the RIT campus."

## How to build a better world

If knowledge is the destination, then opportunity is the path. Officials of the Citicorp, Hearst, and Nippon Foundations, along with individuals like the Ohringers and Williams, not only understand this fact, but have been moved to create the path of opportunity young deaf and hard-of-hearing students need to enhance their lives and the world of tomorrow. ■

# 1997-98 Recipients

## Citicorp/Citibank Scholarship Fund at NTID:

- Brian Abshier, Pembroke, Massachusetts, business
- Michael Bartlett, Sherburne, New York, applied accounting
- Harvey Bradley, Rochester, New York, applied computer technology
- Hubert Chinn, Watsonville, California, information technology
- Kevin Eck, Jersey Shore, Pennsylvania, applied computer technology
- Brian Farney, Evansville, Indiana, applied computer technology
- Andrew Graves, Fairfax, Virginia, applied computer technology
- Ulysses Hammen, East Peoria, Illinois, applied computer technology
- Michelle Hendry, Mississauga, Ontario, Canada, accounting
- Andrijana Kudjerski, Toronto, Ontario, Canada, office technology
- John Meusel, Stratford, Ontario, Canada, applied computer technology
- Stephen Semler, Hagerstown, Maryland, office technology/accounting
- Daniel Senatra, Silvis, Illinois, applied accounting
- Jian Wang, China, applied computer technology
- Mark Wilver, Batavia, Ohio, applied accounting.

## William Randolph Hearst Scholarship for Minority Students at NTID:

- Santiago Avila, Texas City, Texas, industrial technology
- Damon Banks, Philadelphia, Pennsylvania, applied computer technology

- Harvey Bradley, Rochester, New York, applied computer technology
- Marlene DeJesus, Chicago, Illinois, applied art and computer graphics
- Samuel Dien, Peoria, Illinois, electronic publishing and printing technology
- Avery Dominguez, Hazel Crest, Illinois, business management
- Tao Eng, San Francisco, California, applied computer technology
- Ramon Gonzalez, St. Augustine, Florida, imaging technology
- Takiyah Harris, Kankakee, Illinois, applied art and computer graphics
- Jared Katakura, Honolulu, Hawaii, accounting
- Elton Roberson, Virginia Beach, Virginia, industrial drafting technology
- Andy Tao, St. Louis, Missouri, biology.

## Ryoichi Sasakawa Scholarship Fund:

- Jagadish Dawadi, Nepal, social work
- Margaret Kangai, Kenya, criminal justice
- Benny Kurian, India, applied computer technology
- Sindile Mhlanga, Zimbabwe, business administration/information systems
- Karl Reddy, South Africa, international business
- Robert Sampana, Ghana, electronic publishing and printing technology
- Rashmil Saxena, India, communication design
- Jian Wang, China, applied computer technology
- Werner Zorn, Zimbabwe, electrical engineering technology.

# Cooperative Work Experience: An education in progress

by Susan Cergol



In the right field Danielle Goueta, who completed three degrees at RIT, now works as an Internet programmer for Simon & Schuster in New Jersey.

**W**hile a student in NTID's photo/media technologies program nine years ago,

Danielle Goueta made a startling discovery about her career choice.

To fulfill one of the graduation requirements for her associate in applied science degree, Goueta completed a cooperative education (co-op) experience as a photo lab technician with Rochester's Eastman Kodak Company. For 10 weeks in the summer of 1989, she worked alongside

Kodak employees, earning college credit while learning to apply her classroom education in a professional work environment.

As it turns out, Goueta learned more than she expected that summer. She was prepared to learn how to put her technical skills to work, to communicate effectively with her co-workers, and to be a team player. But she also realized that she didn't want to pursue a career as a photo lab technician after all.

"I wasn't completely satisfied with the work," Goueta admits. "I'm glad I

had the experience because it helped me decide that I wanted something different for my future. That's when I realized the importance of pursuing advanced degrees to fulfill my goals."

That kind of self-discovery through practical application of classroom theory is one of the main goals of RIT's co-op program. By working in a professional environment in their field of study, students gain real world experience and learn valuable lessons about both the workplace and themselves.



"When students participate in a co-op experience and then return to school to complete their course work, they can process the experience and reevaluate their choices," says Lynne Morley, senior employment advisor in NTID's Center on Employment. "Sometimes they discover that the work they performed on their co-op job isn't what they want to do for the rest of their lives. What's important is that co-op gives students an opportunity to be exposed to a variety of people, opinions, individuals, and work ethics and then decide what works for them."

In Goueta's case, her co-op experience taught her that she needed more advanced skills for the kind of job she *really* wanted. She returned to campus and completed her associate's degree in photo/media technologies in 1990, then stayed to earn a bachelor's degree in biomedical photographic communications as well as a master of fine arts in computer graphics design. Several months after graduating in the spring of 1996, Goueta landed a choice job as an Internet programmer with the prestigious educational publishing company Simon & Schuster in New Jersey.

## Flexibility and a range of choices

David Sicoli, on the other hand, knew right away that he had made the right career choice when he started his co-op three years ago. As a student in NTID's electronic publishing and printing technology program, he went back to his homeland of Canada for a co-op experience as a desktop publishing designer for the City of Ottawa.

"I liked my co-op job very much," says Sicoli, who created print materials such as folders, flyers, and booklets as well as t-shirt designs and other graphics for the city's recreation department. "I learned a lot about different kinds of computer software programs and how to use them for creative design."

Through hands-on training at his co-op job as well as in NTID's High Technology Center, Sicoli gained a broad range of experience working with some of the finest and most sophisticated

digital publishing equipment available. When he graduated with his associate's degree in 1996, he not only had expertise and practical experience as a desktop publishing designer, he also was certified to operate the Xerox DocuTech, a state-of-the-art electronic publishing and printing system that works hand-in-hand with many desktop publishing programs.

"As a student, David was an excellent desktop publishing designer and DocuTech operator," recalls Nancy Marrer, a certified Xerox trainer who developed and teaches NTID's DocuTech courses. "He has an advantage knowing both systems because desktop publishing design often feeds DocuTech imaging."

Sicoli now is one of three DocuTech operators at Kinko's in Austin, Texas, and hopes one day to manage a DocuTech and desktop publishing operation himself. He says he appreciates the flexibility he has in his career options, thanks to the range of training opportunities he received at NTID.

"The NTID program, including course work and co-op experience, gave me many options to find jobs in my field," he says. "That's one big advantage over training in just one area."

## Moving from co-op to career

Both Goueta and Sicoli returned to campus from their co-op jobs with a clearer picture of their skills as well as what they still needed to learn to succeed in their careers. NTID's employment advisors stress that this is one of the primary purposes of the experience and one of the benefits of students scheduling their co-op before the completion of their course work.

"When students come back from co-op, they have a more mature attitude toward their subject matter," says Paul Seidel, senior employment advisor. "They come back to the classroom understanding why they're taking courses as well as the value of those courses."

Seidel is one of two employment advisors who teach a course called Employment Seminar, which serves as a complement to the Job Search Process course. In Job Search, students

learn the basics of how to write a résumé, how to interview for a job, and how to network and locate sources of possible employment. Employment Seminar is designed to help students returning from co-op take the next step by reviewing what they learned during the experience in order to prepare for an ongoing position in their field.

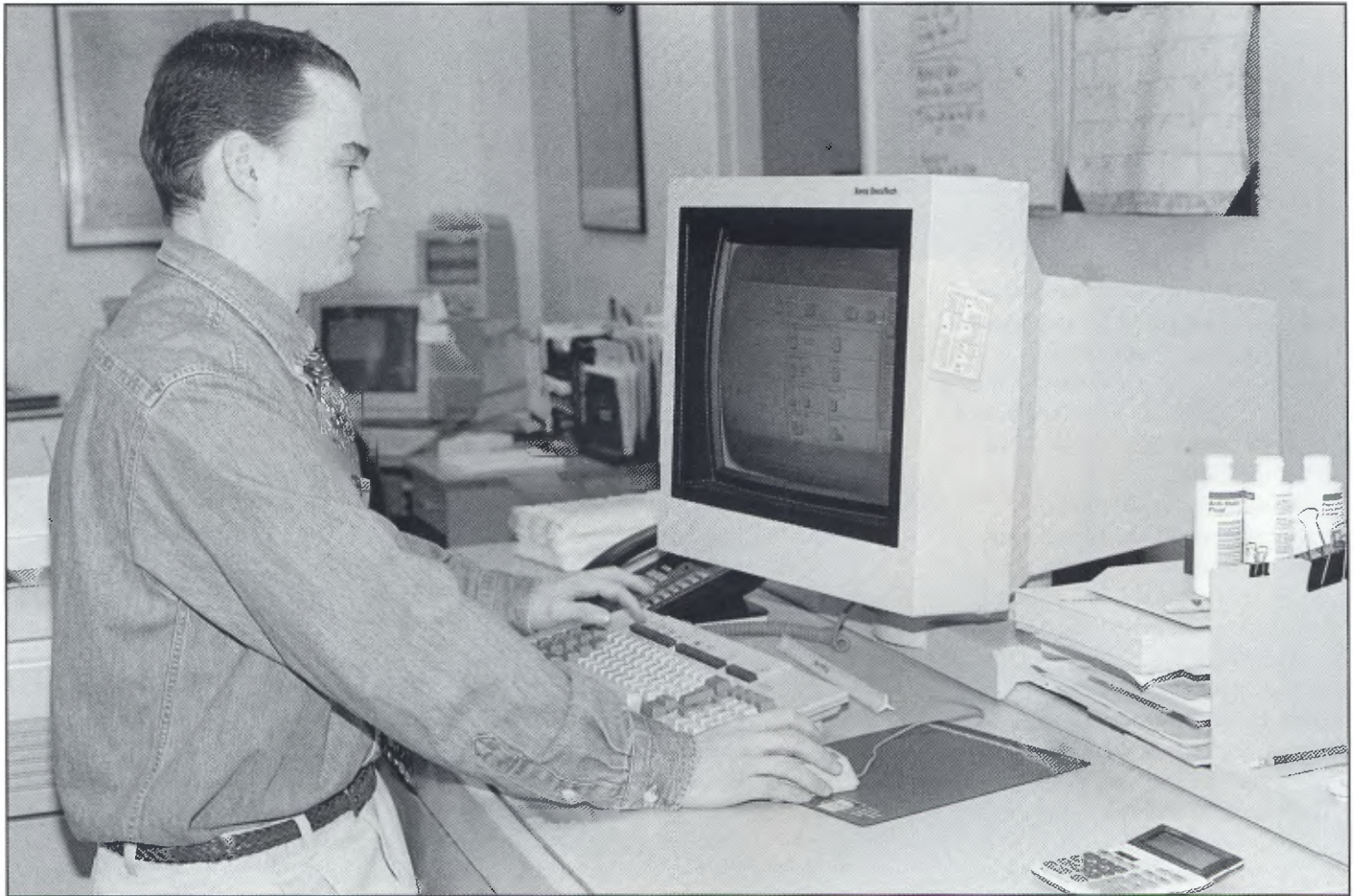
Seidel notes that another key lesson deaf students learn during co-op is how to communicate effectively with their co-workers, an important issue for both students and employers. In addition to the support and practice offered to students to enhance their self-advocacy and assertiveness skills in the communication process, NTID's Center on Employment works with hearing employers to help them understand deaf people's varied communication styles.

"We answer many questions from employers about how to handle communication with a deaf student," says Linda Iacelli, senior employment advisor and coordinator of NTID's employer outreach and training efforts. "I tell them that the best way to learn is to participate in our Working Together program, either by attending one of our scheduled workshops around the country or by hosting it on site at their own company."

Working Together: Deaf and Hearing People is a specialized training workshop developed by NTID. Through discussion, videotapes and other materials, and sensitivity exercises, participants of the half-day workshop learn strategies for communicating with deaf employees and, Iacelli believes, come to view NTID students and graduates as capable, competent professionals.

"When working with potential employers, I emphasize that our students are trained in the most current processes and techniques using state-of-the-art equipment," she says. "I assure them that our graduates are prepared for today's workplace through academic course work and co-op experience, and that with minor strategies in place, they can accommodate a deaf employee very well. The 95 percent employment rate of our graduates attests to this."

Although his busy schedule didn't



From college to work David Sicoli works on Kinko's Xerox DocuTech, a sophisticated machine that he learned to use at NTID.

allow him to attend a Working Together program, Bruce Johnson says NTID convinced him that he could hire deaf employees with confidence. Johnson, vice president and general manager of Digital Print Services for Quebecor Printing Pendell Inc., traveled to the Institute last year when his company was recruiting new employees.

"I was impressed with the outstanding technical skills of the students I interviewed," he says. "Any time I see a college graduate coming out of an academic environment with practical work experience, I know that he or she will be a better employee who can 'hit the ground running.' Going from classroom to workplace can be a difficult transition. That's why I believe there's tremendous value in RIT's co-op experience."

### Career 'insurance' for a changing job market

Like Sicoli and other NTID alumni, Goueta recognizes that another important measure of co-op's value is the flexibility and preparedness she gained to navigate the constantly changing world of work. By learning *how* to learn on the job, Goueta says she's been able to adapt her skills to a variety of employment situations.

Her current position as an Internet programmer, for example, required Goueta to translate her knowledge and experience with multimedia to a technical application that RIT was only just beginning to teach by the time she graduated.

"Simon and Schuster hired me without direct experience as a web programmer," she says. "I guess they knew that with my experience in multimedia, I could learn to do well

on the Internet. And of course I emphasized that I felt confident about learning new skills."

"Danielle definitely was prepared for the job, even though she wasn't trained specifically for work on the Internet," confirms Goueta's supervisor, Margaret May, senior systems analyst at Simon and Schuster. "She has a strong design background, and she shows initiative. That's important, because these days it's more likely that people will have to look for work in areas that don't exactly match their academic training."

Today, when she looks back on her many and varied academic experiences, Goueta marvels at how well her career has come together.

"Co-op experiences are so important because they can give you a sense of direction," she says. "You may not see it right away, but eventually it all becomes clear." ■



Say cheese! Many NTID alumni who attended the 1993 reunion will return to campus this summer for the 30th anniversary reunion to make new memories.



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