# Teaching, Scholarship, and Practice:

# **A Provocative Balance**

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**Rochester Institute of Technology** 

**Community Address** 

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#### WELCOME

Good morning and welcome to the academic year 2005-2006. There are 2,749 faculty and staff at RIT, including 137 who are new this year. Will all of the new faculty and staff rise so we can give you an RIT welcome? Thank you for joining RIT. I know your first year here will be exciting.

In what follows, I shall first review some of the highlights from last year. Then I shall look to the year ahead. I shall conclude with some thoughts – which I hope will provoke discussion throughout the year – about teaching, scholarship, and practice.

#### YEAR IN REVIEW

### **Capital Campaign**

We are in the final ten months of our 1998-2006 \$300 million capital campaign. So far, we have raised \$232 million. These funds make all the difference in RIT's positive momentum. Specifically, the following enhancements would not have been possible without the Campaign's success to date:

- Launching RIT's eighth college, the B. Thomas Golisano College of Computing and Information Sciences, which opened its doors in 2001 as the most comprehensive computing college in the nation.
- Building a new signature, 160,000 sq. ft. student facility, the Gordon Field House and Activities Center, which, in just a few short months, has become the center of student activity across campus.
- Establishing 145 new student scholarships and awards.
- Creating six new endowed professorships.
- Adding over \$25 million to the RIT endowment.
- Transforming the former Thruway Marriot Hotel, a gift from the E. J. Del Monte Corporation, into the RIT Inn and Conference Center.
- Creating the Eastman Kodak Quad, a stunning new landscaped space in the center of campus.
- Installing *The Sentinel*, the largest installation ever from world renowned metals artist and RIT professor Albert Paley. This massive sculpture now serves as the visual center of the newly redesigned administration circle.
- Adding an all-weather turf field to our Tiger Athletics facilities.

- Reaching an impressive 62% participation rate (so far) for RIT faculty and staff giving to The Campaign, representing about \$800,000.
- Increasing membership in The Ellingson Society, formed to honor individuals who make deferred gifts to the Institute, by 239% to 251 members.
- Increasing the average number of donors supporting RIT in a single year from 9,000 to over 12,000.

During this past year, \$51 million was raised. This year's Capital Campaign highlights include:

- Confirming of nine commitments of \$1 million or more, including the largest commitment ever (\$5 million) from an alumnus.
- Receiving gifts for the Annual Fund (now called the Fund for RIT) from 9% more donors, including 5% more alumni.
- 12,000 alumni participating in 358 events.
- Brick City Festival alumni attendance increasing 90% to 1,544.
- The Development staff having more than 2,000 interactions with prospects.
- Planned Giving increasing by 41%.
- Corporate attainment increasing by 73%.
- Major gifts, not including bequests and annuities, increasing significantly. Examples are:
  - Bausch and Lomb, \$2.5 million for an endowed chair and an additional \$2.5 million for research support.
  - Eastman Kodak, \$2.0 million for an endowed chair.
  - Excellus, \$2.0 million to support the Center for Bioscience Education and Technology.
  - The Nippon Foundation, \$1.3 million to support international programs for the deaf.
  - Analog Devices, \$1 million to support research in the Electrical Engineering Department.
  - McAfee, \$1 million to support our Telecommunications program.

We need everyone's help, in every way possible, to successfully complete this campaign. In particular, we seek to achieve 100% participation of faculty and staff. If you have not already made your commitment, large or small, please do so now. I'm counting on you.

#### **Alumni Relations**

Alumni Relations piloted new regions last year. As a result of the associated assessment, we expect to add seven chapters this year. This brings the total number of chapters to 26. Thirteen years ago there was zero.

In my 2003 Opening Day Address, I announced the formation of an Alumni Relations Task force to invigorate our alumni participation in RIT. The good work of the Task Force is now complete, and we must take the next step. Every great university has an outstanding alumni network and outstanding alumni participation. We are making positive moves right now, but we still have a long way to go to get where we want to be. Recently, following the recommendations of the Task Force, I have authorized additional resources for alumni development.

I plan, now, to establish a President's Council on Alumni Relations to continue the strong effort of Kelly Redder, Executive Director of Alumni Relations, and the Alumni Relations Task Force which has completed its charge. You will be hearing more shortly.

#### **Academic Affairs**

Academic Affairs was very active:

- A sweeping and critical revision of the undergraduate curriculum affecting all
  colleges was completed amidst a highly charged and much debated year-long
  discussion. The curriculum change makes the curriculum much more flexible and
  fluid, enhancing significantly student choice, student retention, student breadth and
  interdisciplinary learning, and double majors and minors. Provost McKenzie
  deserves high marks for leading this effort in accordance with the very tight time line
  (implementation in September 2005) I imposed on him.
- The meaning of "scholarship" was defined and clarified as a foundation stone of the new Strategic Plan. The emphasis on "scholarship" is part of the Strategic Plan's culture change, which raises significantly the expectations we have of faculty. Scholarship enriches the teaching and learning of undergraduate students, and a number of faculty need to change their approach to teaching. New faculty will be hired and subsequently evaluated based on their ability to incorporate scholarship into their teaching and professional activity.
- A Learning Community Program was implemented. Fourteen Learning Communities (293 students), involving all colleges, were initiated. So far, the results are impressive. The retention rate for the Learning Communities is projected to be in the

high 70% range, compared to the 60% range for other students. This year, 24 Learning Communities will be formed. The Learning Communities are made up of freshman students. During the coming year, we will be targeting upper-class students in colleges where there is the most attrition. We believe, in this way, that we can get on a track to 90% retention, which is the best that any university can achieve.

- The RIT Incubator was fully operationalized. The Incubator includes 8 faculty and alumni companies and 2 student companies. We developed a Program for Innovation and Entrepreneurship which connects all academic programs with the Incubator.
- The concept (which still needs to be refined) of a "Women's College" was developed.
- A Ph.D. in Computing and Information Sciences was approved, subject to review by the State of New York.
- A Ph.D. program in Color Science was approved, subject to financial review by the Board of Trustees (BOT) Executive Committee.
- The BOT Education Committee endorsed the preparation of proposals for a Ph.D. program in Sustainability and in Astrophysics.
- M.S. programs were initiated in Applied Experimental Engineering Psychology (College of Liberal Arts) and in Learning and Knowledge Management Systems (Golisano College of Computing and Information Sciences).
- A B.S. program was initiated in Advertising and Public Relations (College of Liberal Arts).
- Certificate programs were initiated in Elements of Health Care Leadership and in International Logistics and Transportation (College of Applied Science and Technology) and in Materials Science and Engineering (College of Science).
- After much internal and external angst and discussion, the B.S. program in Social Work was discontinued.
- The First Year Experience course was granted academic credit, after a faculty discussion that has been on-going for several years.
- Authorization was granted from the Chinese government to offer degree programs in China through RIT's newly formed Global Delivery Corporation.

#### **Student Life**

Life on the RIT campus continues to be more spirited and varied, attributable to staff and student leadership, new facilities (such as the Gordon Field House and Activities Center,

playing fields – including artificial turf, and student gathering places). Significant activities include:

- The first Spring Fest Parade.
- Sold out audiences at the Gordon Field House to see nationally recognized entertainers (e.g., actor Robert Redford, singer Bob Dylan, singer Kanye West, singer Alison Kraus and Union Station, and the Rochester Philharmonic Orchestra).
- The Women's Volleyball team tour of China and hosting of China's national team here
- The Cross Country Team completion of a coast-to-coast run to celebrate RIT's 175<sup>th</sup> Anniversary.
- Move to Division I in hockey.
- Establishment of a Leadership Institute for students.
- Residence Life offerings of over 9,000 programs.
- Reduction in alcohol-related violations by 3%, and reduction in the overall number of policy violations by 150.

#### **Student Recognition**

Our students continue to be recognized by external organizations for their excellence, particularly in competition with outstanding students from other top universities. I shall focus on two colleges in this report.

In the College of Imaging Arts and Science:

- A student won the top Princess Grace Foundation Award in Film and Animation. This is the sixth year in a row that a CIAS student has won this award.
- Three students were among the regional finalists in the Student Academy Awards for their animated films.
- The RIT Student Chapter won first place in the student publication and in the non-print publication categories at the Technical Association of the Graphic Arts 2005 Toronto Student Chapter competition. A graduate student won the best student paper competition for her paper, "Brand Color Consistency in Packaging Printing".
- A graduate student in the School for American Crafts won the NICHE Magazine Student Award in the ceramics-functional category.

In the Kate Gleason College of Engineering:

- The Student Chapter Society of Women Engineers received the Outstanding Student Section Award at the 2004 SWE National Conference (second year in a row).
- Student teams:
  - Won First Place in Subject Matter Expert Bowl competition at the SWE National Conference.
  - Won First Place in the IEEE Student Design Contest.
  - Won top awards in Formula SAE competition in Australia and Michigan
  - Won top awards in the spring 2005 national Moonbuggy competition.
  - Won top awards in the EPA P3 Award ("People, Prosperity, and the Planet") for its design of a solar oven.
  - Won top awards in the 2004-5 National Material Handling Student Design Competition.
  - Were selected to participate in a multiuniversity/multidisciplinary approach to a research project at the Air Force Research Lab in Rome, New York.
- Individual students received:
  - ASME Scholar Award
  - Spring 2005 ASME Thermal Analysis and Microfluids Award
  - NASA 2005 Goddard Honor Award for Exceptional Achievement
  - 2004-5 Texas Instruments Fellowship (\$40,000).

#### **Enrollment and Career Services**

For the academic year 2004-5:

- Total headcount and FTE enrollment in fall 2004 were essentially flat, when compared to fall 2003, at 15,338 and 12,290, respectively.
- Total fall 2004 headcount was 106 (.7%) less than projected. A primary contributor to the shortfall in the projected fall 2004 enrollment increase was a dramatic (19.1%) increase in the number of students out on co-op assignments. The annualized enrollment picture improved significantly when these students returned over the course of the year.

• The entering 2004 freshman class increased by 5%.

#### For fall 2005:

- Freshman applications have increased by 3% to an all-time high; transfer applications are up 5%; and graduate applications, up 2%.
- This fall we welcome 3,115 new freshman and transfer students to RIT.
  - The freshman class in Rochester is 2,255, approximately 30 fewer than enrolled in the fall 2004.
  - The transfer class is 860, approximately 60 greater than last year's entering class.
- The number of Graduate students entering the Institute is expected to be similar in size with last year.
- In addition to students entering in Rochester, we also expect to welcome approximately 250 new students to our programs in Eastern Europe.
- Overall enrollment for budget purposes is expected to be level with last year.

# For the 2005 freshman class:

- Women will increase by 6% (from 561 to 652), comprising 29% of the class.
- AALANA (African American, Latino American, and Native American) enrollment will grow by 20% (from 185 to 227), comprising 10% of the class.
- 52% will come from outside of New York State.
- 5% will be international students, a dramatic increase from post 9/11 classes.
- The quality of the students (measured by grade point average and SAT scores) is stable.
- The admission rate is stable.

Turning briefly to co-op and career services for the academic year 2004-5:

• Annualized co-op placement was 4,200, an all-time high.

- Career fair employer participation was up 21% (from 124 to 157 companies).
- Interviews from career fairs were up 51% (from 397 to 811 students).
- Overall campus interviewing was up 14% (to 1,538 students).
- Total job postings are 13,953 with three months to go.
- Microsoft has emerged on the top ten co-op list (number 4) for the first time.
- Microsoft, Honda, and Standard Register emerged for the first time on the top ten permanent employment list, with Microsoft leading the way.

# **Diversity**

Campus-wide programs focusing on diversity continued. Highlights include:

- Campus Week of Dialogue (October 2004)
- Martin Luther King Celebration (January 2005)
- Expressions of Diversity Week (April 2005)
- Eleventh Annual Thomas Jefferson Middle School Career Conference (April 2005), with 150 middle school students and 70 RIT faculty, staff, and students participating.
- Partnerships in Pluralism, in which forty minority faculty, staff, and (a few) students were paired with a similar number of majority faculty, staff, and students in a structured program to enhance diversity understanding and networking. This coming year, the Partnerships in Pluralism Program will be continued (with new pairs), a diversity video and a book on RIT's legacy in diversity will be created.
- The National Action Council for Minorities in Engineering (NACME) selected RIT as a partner institution, resulting in RIT receiving \$225,000 in scholarship funds to support minorities in engineering.
- RIT has been selected for scholarship support by the Graduate Engineering for Minorities (GEM) initiative.
- AALANA faculty represented ten (36%) of the 28 new tenure track faculty hired. This is the fourth year in a row that AALANA faculty have accounted for more than 30% of new faculty hired. This remarkable result clearly leads the nation.

#### Personnel

Several significant personnel changes occurred:

- Lisa Cauda was appointed as Interim Vice President. In a very short time, she has taken the Division to a new level, increasing morale and activity among her staff, partnering with campus constituencies (especially the other vice presidents and deans), increasing rapport with donors, and dollar flow.
- Kit Mayberry, Acting Vice President for Student Retention, was appointed to Vice President for Academic Affairs, relieving Provost Stan McKenzie of some of his responsibilities while continuing her focus on student retention and Learning Communities.
- Mick Stadler was hired as the first Director of the RIT Incubator. He has impressive credentials and experience to lead this new initiative.

#### **Finance and Facilities**

As is typical, Finance and Facilities Management was busy and creative:

- Ground-breaking took place on the following projects:
  - Center for Bioscience Education and Technology (\$12.4 million).
  - Information Technology Collaboratory (\$7.8 million).
  - NTID Student Development Center (\$5.7 million).
- This year, we expect to launch the following construction projects:
  - College of Engineering Expansion (\$8.0 million).
  - College of Business Expansion (\$2.5 million).
  - CAST Engineering Technology Communication Center (\$8 million).
- An electronic payment system was devised to provide simulated credit card payment schedules for parents at no expense. An outsourced credit card payment plan was implemented for those parents still choosing this option. These combined efforts will increase revenue to the University by \$800,000 per year.
- Grant proposals were developed which resulted in RIT receiving \$230,000 of annual grant support applied to our university utility expenses.
- The construction of the Gordon Field House and Activity Center was completed. During this first year of operation, we held over 3,600 combined events and saw over 350 thousand uses of the various facilities inside the center. The facility usage of the Field House is summarized below:

	Per Week
Field House Arena	1,500
Aquatics Center	1,486
Fitness Center	<u>6,306</u>
<b>Total Number of Uses</b>	9,292

- The outstanding debt on the RIT Inn and Conference Center was refinanced, generating overall savings of \$1.2 million during the life of the bonds.
- The Racquet Club property was sold for development of a senior living community, bringing sales proceeds of \$700,000 to the University.
- New rental agreements with telecommunications companies were negotiated which generated \$61,000 per year in annual income.

# **Government and Community Relations**

Highlights from Government and Community Relations include:

- \$5.5 million in federal support for two key research programs, the Defense Modernization and Sustainment program in CIMS (\$4 million) and the Integrated Sensing Systems Initiative (\$1.5 million).
- Strong lobbying by RIT and others throughout the State resulted in restoration of tuition programs that will result in several millions of dollars for RIT, as well as a Capital Facilities Program that will yield \$4.2 million for RIT; this is a program I spearheaded for all of independent higher education several years ago when I served as Chairperson of the Commission on Independent Colleges and Universities.
- The State also will provide \$650,000 for CIMS and \$375,000 for other projects.
- The 175<sup>th</sup> Anniversary celebration was extremely successful. All segments of the RIT community were engaged as we captured the essence of RIT's legacy, where we are today, and where we are going. A DVD documentary captures all of this in exquisite fashion.
- External events hosted by RIT this year included the U.S. First Robotics Competition, Bausch and Lomb Annual Meeting, Excellus regional staff meeting, Chase Corporate Challenge (10,000 participants), Special Olympics Track & Field Competition, Xerox Evening of Recognition, Diabetes Walk, Youth Leadership Summit, Susan Bee

Challenge (part of the United Way's Women United program), and the second Annual Kodak Day.

- The RIT ROCS (Reach Out for Community Service) Day, in which more than 800 students, faculty, and staff volunteered at 39 community agencies in Rochester, Henrietta, Gates, and Victor, was initiated.
- 44,000 individuals attended some 50 events and programs that were handled through the special events team this year.
- The Liberty Hill Breakfast Series featured 20 speakers and topics for 665 guests. Over the years, there have been 256 breakfasts with 9,324 guests.

#### **Communications**

Highlights from Communications include:

- News placements: University News print and broadcast placements grew 14.6 percent in calendar year 2004 from the previous year to 8,700 placements. In particular:
  - *Democrat and Chronicle* placements were up 19.6 percent from the previous year.
  - Rochester Business Journal placements were up 31.8 percent from the previous year.
  - Coverage on local TV stations was up 75 percent.
  - Coverage in metro newspapers outside of Rochester grew 7 percent.
  - University News has a positive 5-year growth trend where it has nearly tripled overall placements.
- University News Homepage: Increasingly, more people are turning to the Internet for news. University News Service is developing strategies to ensure we continue to be well positioned in this medium. Here are some highlights regarding our Website presence:
  - UNS had nearly 470,000 visitors to its Website in 2004.
  - UNS had nearly 1.3 million page views in 2004.
  - UNS is averaging 56,000 visits per month in 2005, on pace to reach 672,000 visits this year.
  - UNS is on pace for 1.8 million page views in 2005.
  - The Sports Information site averages nearly 1,500 visits per day.
- The University Magazine: The magazine earned first place in the annual publications competition held by the Public Relations Society of America- Rochester

chapter. This is the second year we have taken top honors. The Memphis chapter of PRSA judged our work.

- The RIT Documentary: The documentary film "RIT 175: Rochester and its Institute" received acclaim across campus and exposure on WXXI-TV. Meanwhile, 1,000 DVDs are in the hands of RIT friends to further spread the story of RIT.
- By the People: RIT teamed again with WXXI, the *Democrat and Chronicle* and the MacNeil/Lehrer News Hour on the national "By the People" project. The 2004 project examined domestic and foreign policy as it related to the 2004 Presidential election. This collaboration with WXXI has led to many other opportunities for RIT, namely RIT experts being used on the "Need to Know" WXXI news magazine. The By the People Partnership will continue in 2005.
- **Sue Barnes column:** Sue Barnes, a professor of communication, with initiative by the RIT University News Service, was selected by the *Democrat and Chronicle* to be the columnist in Sunday's "Personal Technology" section. The "Personal Technology" page in the Sunday Business section also features RIT's Nick Francesco. So RIT will now have a major presence on the page, as well as on *Democrat &* Chronicle online.
- **Crisis Communications:** The UNS team includes seasoned media professionals. When a news emergency hits RIT, UNS works strategically to put the appropriate messages in place. Its work was recognized by CASE (Council for Advancement and Support of Education) when it earned a national Silver Medal for its handling of the Crossroads robbery.
- **PRISM Awards:** In 2004, UNS was presented with 2 awards from the Public Relations Society of America – Rochester chapter (the magazine and our Website). It has just been informed that it has won awards again for 2005.

# **Information and Technology Services**

ITS was extremely active on many fronts. It partnered with all sectors of the university to produce software and systems in support of the following (partial list) programs:

- Course Scheduling
- Grade Exclusion
- Events Calendar
- Co-op Evaluation
- Course Management
- Faculty Workload
- Security

- Early Alert
- Online Food/Tiger Bucks

**Unmet Course Needs** 

- Graduate Admissions
- Research Cluster
- Oracle Applications

#### Strategic Plan

Most importantly, the Board of Trustees approved the RIT Strategic Plan at its July 2004 meeting. I authored a Primer to the Strategic Plan to bring to life the more formal document. An Agenda for Action was then developed as the vehicle for implementing the Strategic Plan. The processes leading to the development of both the Strategic Plan and the Agenda for Action were simultaneously top down and bottom up, engaging all RIT constituencies (trustees, faculty, staff, students, and alumni).

#### YEAR AHEAD

# College of Business Dean's Search

College of Business Dean Tom Hopkins is returning to the faculty. I take this opportunity to thank Tom very much for stepping in seven years ago with just two week's notice – at the request of Provost McKenzie – to take on the mantle after a prior short-lived deanship. Tom's job was to heal a fractured college, bring about a sense of order and stability, focus on establishing a strong sense of professional scholarship, and – most importantly – fill over 20 open faculty positions with tenure or tenure-track outstanding senior and junior faculty. Tom did his job, and he did it his way – with candor, integrity, and professionalism. Along the way, many of the elements which are necessary for the positive future evolution of the College came into play. For all of these contributions we all owe a debt of appreciation to Dean Hopkins.

The search for Tom's successor is underway. We shall be enlarging the traditional pool of individuals with strong academic credentials to include senior executives from business who have significant academic experience in their backgrounds. College of Engineering Dean Harvey Palmer is chairing the search committee. I look forward to a vigorous and successful search.

# **Branding**

Our branding initiative is proceeding on schedule. The Committee was charged on January 21, 2005, and the request for proposal (RFP) was mailed on March 22, 2005. Eighteen proposals were received by May 1, 2005. All were then reviewed and rated by seven individuals with the ratings compiled and utilized to cut the field to the top seven proposals by May 27. After reference checks and phone calls to the principals of the seven firms, the list was narrowed to three finalists on June 3. The three finalists visited the campus for presentations and interviews during early June. The consultant selected is Art & Science Group, LLC. The firm is already at work, and you will be hearing more shortly.

The Branding Committee is co-chaired by Jim Miller, Senior Vice President, Enrollment Management and Career Services, and Phil Tyler, Associate Professor of Marketing, College of Business. Its members include: Mary-Beth Cooper, Vice President for Student Affairs; Bob Finnerty, Chief Communications Officer; Klaus Gueldenpfennig, RIT trustee; Frank Hutchins, RIT trustee; Tom Hubbard, RIT trustee; and Larry Matteson, RIT trustee

# **Continuing Efforts**

The endeavors, activities, and issues I have reported on – for last year and this year – by nature are not year-long-only issues. Rather, they extend over time. Accordingly, we shall work on implementing the Strategic Plan by continuing to engage the following challenges:

- Proceeding full steam ahead on the changes that have been underway at RIT for more than the past decade. Change is a long-term and sometimes tedious and angry process. It is noteworthy that this change has been accelerating year by year and, as far as I am concerned, we are still on the increasing slope of that change curve, increasing at an increasing rate.
- Never stop talking about and never stop emphasizing the central RIT tenet, which is "Student success". We continue to define student success as students coming to RIT, graduating from RIT, feeling terrific about their experience, and going on to lead outstanding careers and lives.
- Integrating applied research in the teaching of undergraduate students.
- Enhancing the diversity of students, faculty, and staff.
- Increasing student retention from its current level of approximately 60% to a Good-to-Great or *First in Class* level of 90%.
- Continuing to expand the development of alumni awareness, participation, and contribution.
- Beginning Division I hockey this coming year, with a view of retaining all that is praiseworthy about our Division III programs while avoiding what is problematic with many Division I programs.
- Continuing to prepare for an on-site evaluation in March 2007 by a Middle States review team as part of our 10-year re-accreditation process. A Middle States Self-Study Steering Committee was formed in December 2004 to lead the entire process, under the chairmanship of Tom Raco.

# TEACHING, SCHOLARSHIP, AND PRACTICE (TSP)

As in all of my opening-of-the-year Community Addresses, I like to introduce at least one topic that can be the basis of campus discussion and debate over the year. Sometimes the topics are philosophical in nature, and sometimes they are strategic. The topic today has elements of both. It is sparked this time, in particular, by deliberations that are underway with regard to the College of Business Dean search.

Specifically, I would like to address the opportunity to strike a special balance and integration among teaching, scholarship, and practice (TSP).

# **Teaching**

I have often said *teaching* is the most important thing we do as a university; that student *learning* is the most important outcome of our collective efforts. Accordingly, we have recruited and rewarded individuals who were dedicated to teaching, to the classroom, and to interactions with their students.

This philosophy and its execution are appropriate and exemplary given RIT's goals and purpose.

# **Scholarship**

In recent years, beginning with discussions introduced in these Community Addresses, the notion that teaching can be enhanced and enriched through scholarship has been advanced. Accordingly, we now expect all faculty to engage in one or more of four dimensions of scholarship:

- Discovery and creation of knowledge.
- Application of knowledge.
- Integration of knowledge.
- Dissemination of knowledge through new pedagogy.

Involving students in scholarship directly through the curriculum, or in projects and assignments outside of the curriculum proper, motivates and stimulates them to enhanced learning, and increases the effectiveness of the teaching process. This summer's most successful College of Science Symposium on Undergraduate Research is one exciting example.

In the past, I have commented on the innovative pedagogical research underway in the Golisano College of Computing and Information Sciences relating to the early Information Technology course sequence. Just a few days ago, there was tremendous news, again in the realm of pedagogical research, from the Gleason College of Engineering. Santosh Kurinec, Professor and Head of the Department of Microelectronic Engineering, just received a highly competitive three-year \$1 million grant from the National Science Foundation. The grant will support the development of a curriculum featuring a minor and concentration for students in non-MicroE science and engineering programs in the areas of nanotechnology and MEMS. It will focus on women and minorities as well as traditional students, and will integrate co-op, work-place, and community service activities in the learning process. The faculty implementation team cuts across academic disciplines. Companies such as Hewlett Packard, Microsoft, and Texas Instruments are partners.

The Provost and I have continually stressed the need for balance between teaching and scholarship. We optimize student learning and teaching effectiveness by striking the proper balance. For example, the teaching effort should not deny time and opportunity for scholarship. Scholarship effort should not denigrate attention to top-notch teaching.

#### **Practice**

I would like to introduce, at this time, another element – the third leg of a three-legged stool, if you will. That element is *practice*. Are our students as prepared as they could be for the profession and field they are entering and for the career path they will be following?

There is recent literature and discussion, with regard to schools of business in particular, which strongly argue that often the "scholarship" dimension primarily involves academians talking to academians, with little relevance to real issues facing business and the profession. It is argued that faculty need to bring more professional – in contrast to academic – experience to their students, to the curriculum, and to their scholarship.

For RIT, this should be a "no-brainer". It is like a "return to the future". RIT started out, 175 years ago, as a career-focused, teaching institution. It prepared students for entry-level jobs in fields where job openings existed. The faculty recruited, typically, had significant prior industry experience and took pride in their teaching. They were not trained in or recruited to engage in scholarship. Over time, as more faculty with strong academic credentials (and little or no professional credentials) were hired, they, too, were not expected or required to engage in scholarship. The teaching loads reflected that expectation.

In recent years, RIT faculty are being recruited with academic credentials that reflect our current expectation that they will be required to engage in scholarship, particularly in the discovery and applied dimensions. Again, it is well understood up front that outstanding teaching is also required. We have developed, so far in two of our colleges, the portfolio model where faculty can select a scholarship emphasis, a teaching emphasis, or a blended approach to their teaching and scholarship.

What I am suggesting now is that we do not neglect RIT's beginnings, which were rooted in practice, with faculty who came to teaching with many years of solid professional experience – in business, printing, the arts, and technology. I am proposing a "balanced" faculty portfolio which includes expertise in and commitment to teaching, scholarship, *and* practice (TSP), all three dimensions integrated in a cohesive fashion, with each dimension drawing strength from the other two.

The curriculum would be balanced:

- between theory and application and
  - between experienced-based and scholarly-based learning.

As this implies, there must be an effective integration in the curriculum among theory, scholarship, application, practice, and experience.

In this ideal model, all faculty will be excellent teachers. Some faculty will have greater interest, ability, and experience in scholarship or practice than other faculty. All faculty will have established credentials, experience, and expectations in all three dimensions.

Just as some of our existing faculty require more experience and training in scholarship, many of our new (and some existing) faculty will require more experience and training in practice. The RIT administration would be committed to providing the appropriate level of professional development over time. We are already doing this in teaching (under Lynn Wild's Teaching and Learning Services Center, for example) and in scholarship (under the Provost's Learning Innovation Grant and Professional Development Leave programs, for example).

We can do it in practice, for example, by establishing paid and unpaid faculty summer internships and sabbaticals with businesses and the professions; joint research, problem solving, consulting, and case studies with professionals in the field; and joint teaching and collaborative research with RIT faculty who already have professional experience.

We could consider recruiting "clinical" faculty from industry and the professions who currently hold senior positions but might wish to begin a second career in academia. They might or might not have the traditional academic credentials in terms of advanced degrees and publication, but they would have high-level, hands-on professional experience. They would have to buy into our model, working hard on their teaching competency and gaining the required scholarship competency. This is a model that works well in medical and law schools.

The end result would be students who learn from outstanding teachers through a curriculum that reflects relevant practice and the scholarship of new, applied, and integrated ideas. Our co-op program is a natural fit for this model. If this model is adopted across the colleges, because of our new flexible curriculum redesign, exciting minors, double majors, BS/MS programs, and joint masters degrees (e.g. MS/MBA, MFA/MBA) could be fashioned across our eight colleges. I know of no university which is better suited to establish such an educational model. I know of many which I believe could not do so if they tried.

Interestingly, in 1995, Weatherhead School of Management at Case Western Reserve University established an Executive Doctor of Management degree. It is aimed at "practicing executives" who wish to become "practicing scholars". The curriculum carries a strong research component. Case Western Reserve University is a select, prestigious university of 10,000 students, two-thirds of whom attend the graduate and professional schools.

What I am proposing for discussion at RIT relates primarily to our undergraduate program. I introduce the Case program only to make the point that, since a successful scholar-practitioner model has recently been introduced at the doctoral level, a teacher-scholar-practitioner (TSP) model for RIT has great promise. It would build on our history and tradition in teaching and practice, while synergistically incorporating our more recent

focus on scholarship. It could help us prepare our students for careers and life better than ever before.

As always, I welcome your reaction and comments.

#### **CONCLUSION**

I believe RIT has had a terrific year. I look forward with great anticipation to the year ahead. There is a lot to do and some of the hills to climb are steep.

The accomplishments to-date are the result of trustees, faculty, staff, and students (once again, we had outstanding leadership from our Student government) working together for the common purpose. Always, there have been questions raised and vigorous debates. At the end, we have moved together in positive directions.

I am most fortunate to have, in my view, the best presidential team (direct reports) anywhere; a totally supportive, engaged, and contributing Board of Trustees; and a group of faculty, staff, and students who are (most of the time) pure pleasure to work with. I have fun. I continue to be stimulated. I am grateful for the opportunity to be part of RIT and the wonderful Rochester community which hosts it.

Good luck. Let's have a great year together.