

THE KEY

The biggest and longest lasting reform of undergraduate education will come when individual faculty or small groups adopt the view of themselves as reformers within their immediate spheres of influence...

K. Patricia Cross, 1989

THE KEY

The biggest and longest lasting reform of undergraduate education will come when individual faculty or small groups adopt the view of themselves as reformers within their immediate spheres of influence, the classes they teach everyday.

K. Patricia Cross, 1989

Rochester Institute of Technology

**A university that defines itself
through undergraduate
teaching...**

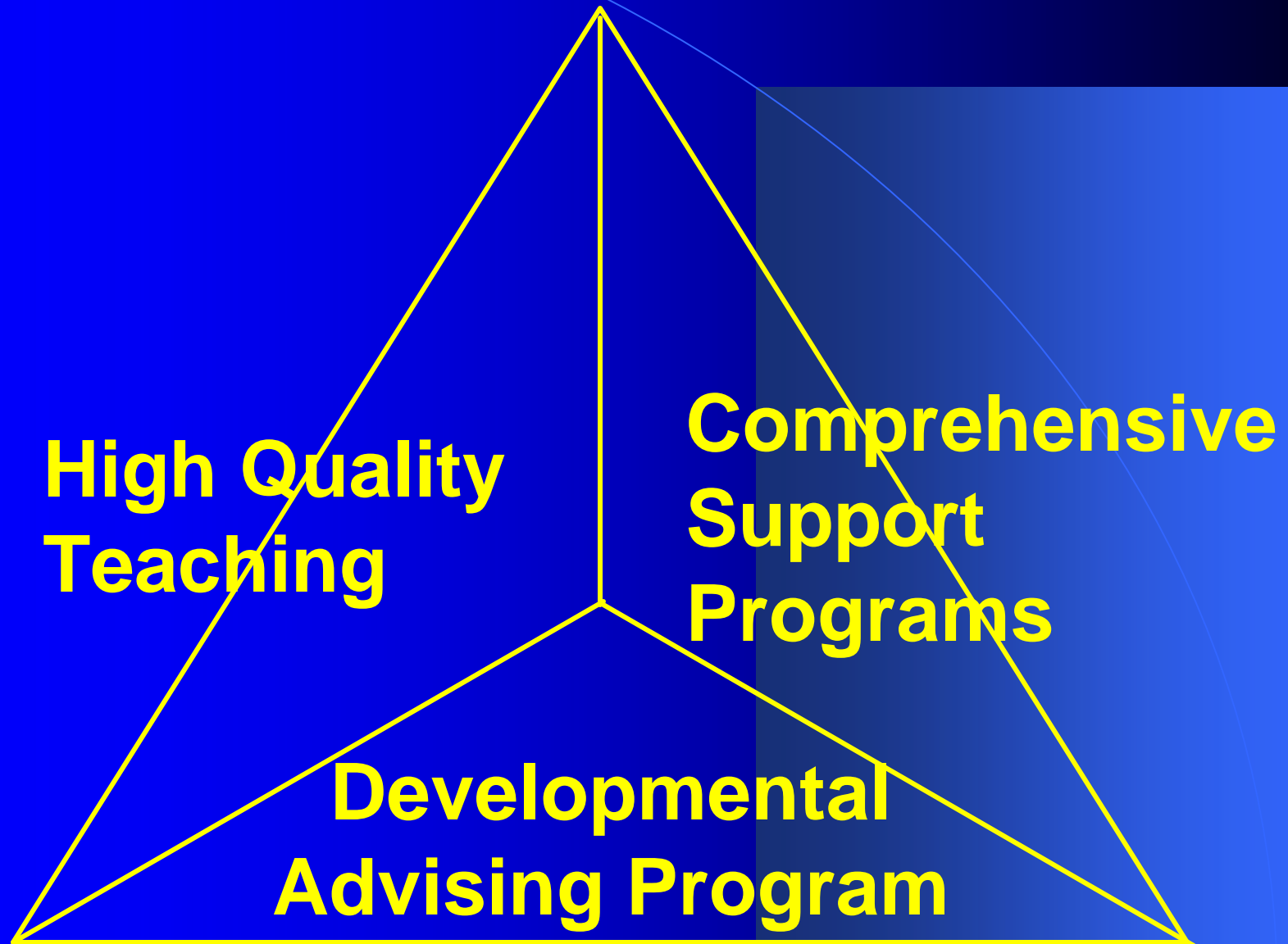
**Our mission incorporates
teaching excellence, learning
effectiveness, and overall
student growth and
development.**

RIT Strategic Plan, 1994

The “successful student” is well integrated into the university community, making steady progress toward a degree, and enjoying positive relationships with faculty in a supportive learning environment.

Report of the RIT Retention Task Force, 2000

TRIAD FOR STUDENT SUCCESS



Overall, an institution committed to student success in all its various forms will see retention and graduation rates climb as a consequence of that executed commitment.

RIT Retention Task Force Report, 2000

**60 % of students will leave
their first institution of
enrollment.**

**45% of students who enroll
will never earn a degree.**

Vincent Tinto

***Leaving College: Rethinking the Causes
and Cures of Student Attrition, 1993***

National Graduation Rates

| | |
|--|-------|
| MA/ 1 st Professional Private | 54.8% |
|--|-------|

| | |
|-------------------------------------|------|
| Highly Selective MA (1220-1380 SAT) | 75.7 |
|-------------------------------------|------|

| | |
|------------------------------|------|
| Selective MA (1030-1220 SAT) | 61.8 |
|------------------------------|------|

| | |
|-----------------------------------|-----|
| Rochester Institute of Technology | 58% |
|-----------------------------------|-----|

Source: ACT, 1999; RIT Retention Task Force, 2000

Class of 1995 RIT Graduation Rates College of Science

**Students with D,F,W grades
in first year 52%**

Students without D,F, Ws 96%

Source: Kit Mayberry

Fall 2000 Entering Students

458 Students did not return for Fall 2001

400 students received D, F, W in first term of enrollment (87% of total)

162 of leavers had GPAs ≥ 2.0

Source: Kit Mayberry

Departure rates for Students Receiving D, F, Ws

| | |
|----------------------|------------|
| CAST | 95% |
| CIAS | 84 |
| CLA (w/o GLA) | 87 |
| COB | 75 |
| COE | 91 |
| COS | 72 |
| GCCIS | 93 |

D, F, or W grades [in the first year] are the single greatest indicator of student attrition....

**Kit Mayberry, Opening Remarks
RIT FITL, November 2002**

The most significant factor predicting attrition of students in sciences were low grades in first year science courses.

Strenta et al.

Choosing and Leaving Science in Highly Selective Institutions, 1993

The crucial experiences affecting students' decisions to persist often occur during the first year of study, when they must complete challenging “gateway” courses.

**Gainen and Willemssen
*Fostering Success in Quantitative
Gateway Courses, 1995***

Courses such as physics, chemistry, biology and calculus, and accounting, economics, and statistics “can open the gates or block the way for students interested in scientific, technical, and professional careers.”

Gainen and Willemssen, 1995

Talking About Leaving

Students with 650+ SATs

40% leave engineering

50% leave biological sciences

60% leave mathematics

Why undergraduates leave the sciences
E. Seymour & N. Hewitt, 1997

Why students leave college

- Psychological factors
- Social or Environmental factors

What about us??

- Organizational factors

Institutional

Individual

**What happens to students
after they enroll frequently
has a more powerful impact
on whether they stay and
achieve their goals or leave.**

Tinto 1987, 1993

Black Students Rates of Degree Completion by Ability Quartile

(Test Scores and high school grades)

| | Completers | Departers |
|------------------|------------|-----------|
| Lowest quartile | 17.2 | 70.2 |
| Second quartile | 29.2 | 52.2 |
| Third quartile | 35.1 | 54.8 |
| Highest quartile | 26.2 | 61.3 |

Source: *Undergraduate completion and persistence at four-year colleges and universities: Detailed findings.*

National Institute of Independent Colleges and Universities, 1990

Black Students Rates of Degree Completion by Ability Quartile

(Test Scores and high school grades)

| | Completers | Departers |
|------------------|------------|-----------|
| Lowest quartile | 17.2 | 70.2 |
| Second quartile | 29.2 | 52.2 |
| Third quartile | 35.1 | 54.8 |
| Highest quartile | 26.2 | 61.3 |

Source: *Undergraduate completion and persistence at four-year colleges and universities: Detailed findings.*

National Institute of Independent Colleges and Universities, 1990

Quality interaction with faculty seems to be more important than any other single college factor in determining minority student persistence.

**Levin and Levin
University of Wisconsin
1991**

Institutions which consciously reach out to establish personal bonds among students, faculty, and staff, and which emphasize frequent and rewarding contacts outside the classroom are those which most successfully retain students. Such interaction is the single strongest predictor of student persistence.

Vincent Tinto, Syracuse
Leaving College: Rethinking the Causes and Cures of Student Attrition, 1993

Perhaps the greatest
inequity on our nation's
campuses is the *unequal*
ability students have to get
others interested in them.

Professor Robert Keegan
Harvard University
The Evolving Self, 1983

Unless students are younger versions of the [faculty] itself, many otherwise intelligent, curious, and ambitious young people have every reason to conclude that there is no place for *them*....

Sheila Tobias
They're Not Dumb, They're Different:
Stalking the Second Tier
1994

Betty Siegel, President Kennesaw State University (GA)

- We build beautiful campuses,
- We hire distinguished faculty,
- We develop challenging curricula,
- Then the “wrong” students show up!

Ann Lynch's *Moving In, Moving Through, and Moving On* provides a conceptual framework for organizing programs and services for students.

**Arthur Chickering. George Mason University
"Empowering Lifelong Development"
NACADA Journal, Fall 1994**

Students need support as they make three critical transitions:

- **Moving into college**
- **Moving through college**
- **Moving on from college**

Helping students move into college is far and away the most important task for academic advisors.

Professor Arthur Chickering, 1994

**The beginning is the most
important part of the
work....**

Plato

Many students who leave college do so as the result of experiences they have during the first six weeks.

Astin, Tinto, Cowart

**Ask entering students
what they fear most about
going to college and they
will probably say
dropping out.**

Lee Upcraft

Orienting Students to College, 1984.

Students are afraid: afraid of failing, of not understanding, of having their ignorance exposed or their prejudices challenged, of looking foolish in front of their peers....

**When my students' fears mix
with mine, fear multiplies
geometrically--and education
is paralyzed.**

Parker Palmer, 1998

The freshman year is taking a real toll on students' physical and mental health. Colleges are paying more attention to what happens in the transformative first-year.

“Your First Year of College”

**Policy Center on the First-year of College
Chronicle of Higher Education, 2/1/02**

Recent studies confirm a sharp rise in the number of students with depression and other psychological problems.

Some see the rise in mental health problems as a sign that college has become more stressful...

**“Prozac Campus”
Chronicle of Higher Education 2/14/03**

We cannot completely protect our students from stress, nor would we want to if we could; the abilities to manage stress, to budget time, and to make priorities are important components of student success.

Report of the RIT Retention Task Force, 2000

A number of conditions will have to come to exist if our campus community is to become increasingly student-centered and oriented toward student success.

Report of the RIT Retention Task Force, 2000

Conditions for Reaching Target Graduation Rates

Condition One:

Knowing our students

- Who they are
- What motivates them
- Their values
- What they worry about
- How they learn

RIT student self-ratings

In the highest 10% as compared with the average person of her/his age

| | <u>RIT</u> | <u>National average</u> |
|-----------------------------|------------|-------------------------|
| Academic ability | 78% | 69.5% |
| Mathematical ability | 63 | 45 |
| Emotional health | 45 | 54 |

2002 CIRP First-Year Survey

52.8% reported A/A- as their average high school grade.

98% earned a B average or higher.

64.5% expect to earn at least a B average at RIT.

2001 CIRP First-Year Survey

Fall 2002 Entering class

89%ile

**Mean high school
class rank**

1202

Mean SAT score

Source: RIT Office of Admissions

Commitment to Goals

RIT First Year Students

- **7%** agree “chances are good” that they will change major
- **6.7%** agree “chances are good” they will change career choice

Highly selective 4 year

- **15%** likely to change major
- **16.4%** likely to change career choice

Very Important Reasons for deciding to go to college

RIT First Year Students

- 77% “to be able to get a better job”
- 74% “be able to make more money”
- 73% “get training for a specific career”

Highly selective 4 year

- 66% “to be able to get a better job”
- 59% “be able to make more money”
- 61% “get training for a specific career”

Highest Degree Planned

Master's or Doctoral Degree 72%

4-year highly selective 65%

2002 CIRP Survey

Expectations for faculty interaction

RIT First Year Students

28.3% expect to communicate regularly with their professors

20% asked a teacher for advice after class in high school

Highly selective 4 year

45.7% expect to communicate regularly with their professors

27% asked teacher for advice

RIT Students

- **Achieved high grades in high schools**
- **Have had little experience with failure**
- **High degree of commitment to chosen majors and expected careers**
- **Clear expectations about opportunities their college educations will provide.**
- **Little expectation of interacting with faculty outside of class**

Commitment to Goals

RIT First Year Students

- **7%** agree “chances are good” that they will change major
- **6.7%** agree “chances are good” they will change career choice

Highly selective 4 year

- **15%** likely to change major
- **16.4%** likely to change career choice

**S/he who has a why can
bear any how.**

***Man's Search for Meaning*
Viktor Frankl**

Graduation rates are twice as high among students who are committed to specific career goals as they are among students who are uncertain of their futures.

Abel, 1966

**Of all the attributes studied,
personal commitment to an
academic or an occupational goal
is the single most important
determinant of persistence in
college.**

Cope and Hannah, 1975

When the choice [of major] really fits, it has great motivational force; it releases energy and enthusiasm and can power a wide range of significant learning and personal development.

Chickering, 1994

**And when the choice of
major doesn't “fit” or
changes...?**

The identity and sense of self-worth of many students is related to their experiences of having done well and pursuing high status majors and careers about which they feel confident and competent.

Students have realistic career understanding.

**Strongly agree
agree**

11%

(2/18)

Neutral

33%

(6/18)

**Disagree
strongly disagree**

50%

(9/18)

Survey of RIT Faculty 2002

Challenging assumptions

Providing options, alternatives

How do we engage students in discussions of their goals, interests, values, aptitudes, and limitations?

What campus resources are available to assist students in exploration of their goals in relation to careers, academic programs, etc.?

What alternatives can be provided to students who fail “gateway” courses in their planned major and career field?

- **Discuss goals, interests, background**
- **Identify factors contributing to failure**
- **Develop plans to bridge “blanks and gaps”**
- **Identify related or alternative majors**
- **Others??**

**50 to 75 % of students
change their majors *at least*
once before graduation.**

Supporting a Change of Major

- Acknowledging—a dream has been deferred; listen--nonjudgmental support
- Easing nonevent stress—providing options and alternatives
- Refocusing—letting go, linking past and future choices
- Reshaping—new dreams and fresh visions.

Steele & McDonald, 2000

52.8% reported A/A- as their average high school grade.

98% earned a B average or higher.

64.5% expect to earn at least a B average at RIT.

2001 CIRP First-Year Survey

Students have a realistic understanding of the demands of courses....

| | | |
|--------------------------|------------|----------------|
| Strongly agree | 11% | (2/18) |
| agree | | |
| Neutral | 22% | (4/18) |
| Disagree | | |
| strongly disagree | 66% | (12/18) |

Survey of RIT Faculty, 2002

Do students understand what is required to be successful in college?

Students feel that they are here merely to learn facts and figures and that everything should work for them the first time.

Survey of RIT Faculty 2002

Do students understand what is required to be successful?

How many hours did you study during a typical week in your last year of high school?

13.8%

67.9%

38.8%

More than 10 hours

Five hours or less

Less than two hours a week!!

2001 RIT Freshman Survey

Today's average high school graduate completes high school with better than a "B" average and yet reads below the eighth grade level.

**College Responses to Low Achieving Students.
Roueche, Baker and Roueche. 1984.**

Grade inflation got started in the late 60s and early 70s...The grades faculty give now deserve to be a scandal.

**Professor Harvey Mansfield
Harvard University, 2001**

Grades A and B are sometimes given too readily--Grade A for work of not very high merit and grade B for work not above mediocre...

One of the chief obstacles to raising standards is the readiness with which students gain passable grades for sham work....

Report of the Committee on Raising the Standard, Harvard University

1894

Harvard Committee Works to Restore the Honor of the B Plus

**New York Times
April 21, 2002**

**Worries about grade
inflation perpetuate a
tendency to confuse quality
with difficulty.**

**Alfie Kohn,
The Dangerous Myth of Grade Inflation
Chronicle of Higher Education, 2002**

Moving beyond grades to learning

Our best leverage is helping students to recognize that their long run payoffs come not from good grades but from learning that lasts.

Chickering, 1994

Moving beyond grades to learning

**When you get out in the world,
nobody is going to ask what grade
you got in Freshman Comp.
They'll only expect that you can
write....**

A major part of working with first year students is helping them understand that they're not in high school anymore....

**Sam Gorovitz, Professor of Philosophy
Former Director, First Year Programs
Syracuse University**

Do students understand what is required to be successful in college?

Entering students, in particular, seem to underestimate the requirements of courses and the amount of work required to achieve better grades.

Survey of Faculty 2002

**Most students are never taught
how to study. We call it the
“hidden curriculum.”**

**Marcy Fallon
University of Maryland, 2002**

Preparing for a “big test”

- Say a prayer—that’s what I do.
- Eat lots of peanut butter or other “brain foods.”
- Listen to Enya the night before a test.

University of Utah
Chronicle of Higher Education
December 6, 2002

What they remembered

How long do you study??

Until you know it.

**Gina McCray, Account Executive
Rhino Records**

Six ways to foster good study habits

- **Require study skills and time management as part of orientation program.**
- **Involve faculty in recruitment activities**
- **Increase reward for teaching and faculty involvement with students beyond classroom**
- **Create learning communities where students work together and develop connection to their academic work.**
- **Help students distinguish grades from learning.**

Chronicle of Higher Education, 12/6/02

Six ways to foster good study habits

- **Require study skills and time management as part of orientation program.**
- **Involve faculty in recruitment activities**
- **Increase reward for teaching and faculty involvement with students beyond classroom**
- **Create learning communities where students work together and develop connection to their academic work.**
- **Help students distinguish grades from learning.**

Chronicle of Higher Education, 12/6/02

The institution's job is not just to help students make it through college, but to aid them in charting life's harder courses....

Chronicle of Higher Education, 10/11/01

***Life lessons* students didn't
learn in high school but
should learn in college....**

Role of failure

Those students who do well in my class aren't afraid to fail. If they read a problem and don't instantly know how to do it, they don't quit or feel embarrassed. They understand that they're not failing the course because of a failed experiment.

**Faculty Viewpoint
Understanding University Success, 2003**

**Students need to understand that
process is important not just
getting the answer—or the grade.**

**Faculty Viewpoint
Understanding University Success, 2003**

Role of Criticism

Students need to be willing to receive a critique of their work without perceiving it as an attack on their integrity, intelligence or creativity...

A good refutation of your work is not a personal attack; it does not mean that you are talentless or a bad person.

**Faculty Viewpoint
Understanding University Success, 2003**

Dispositional Barriers

- **Undermining attributions**
- **Ego involvement**
- **Reluctance to seek assistance**

K. Patricia Cross

**It is not so much the event
of failure that disrupts
performance and
persistence, it is the
meaning of failure.**

**Martin Covington
The Will to Learn, 1998**

Academic Achievement Attributions

- Ability
- Time and Effort
- Task Difficulty
- Luck

Bernard Weiner
*Achievement Motivation and
Attribution Theory, 1974*

Achievement behavior can be understood best in terms of students' attempts to maintain positive self images. Expendng effort is scary, because a combination of effort and failure implies low ability.

**Martin Covington
Making the Grade, 1992**

Ability or Effort?

By the time students reach high school, they generally believe that ability is a relatively fixed, unchangeable capacity.

British Journal of
Developmental Psychology
1983

Shift attributions...

**from ability to background
and preparation**

Students and ours!!

Dispositional Barriers

- **Undermining attributions**
- **Ego involvement**
- **Reluctance to seek assistance**

K. Patricia Cross

Much of what can go wrong with achievement—e.g., irrational goal setting, overweening anxiety—is the product of *ego involvement* brought on by *normative comparisons to others*.

Nichols, 1978, 1984

Educators should arrange their classes so that falling short of one's goals can be interpreted in ways that promote the will to learn.

Covington, 1992

EGO INVOLVEMENT

- Undermining negative beliefs about lack of ability (shame/doubt)
- Interpreting task difficulty as too high/hard (helpless/hopeless)
- Comparing self to an idealized reference group (peers, classmates, siblings)

CHANGE/REFRAME TO TASK INVOLVEMENT

Reframe ability to consider background/level of preparation

Alter explanations for failure from low ability to inadequate effort and/or ineffective strategies

Present strategy as a resource not a capacity

0 – 100% Competence Advising Method

- **Review student's academic record and learning history, looking for strengths and weaknesses.**
- **Help student to define personal, educational, and career goals and skills needed to achieve these goals.**
- **Assess the student's skill level in areas identified as essential to achievement**

(0-100%)

Brown & Rivas, 1994

0 – 100% Competence Advising Method

- **Establish competency level student will seek to achieve (0-100%).**
- **Identify curricular, co-curricular, experiential, and community learning experiences (strategies) that will enable student to develop skills.**
- **Review and evaluate progress toward goal achievement and skills development.**

Brown & Rivas, 1994

Dispositional Barriers

- **Undermining attributions**
- **Ego involvement**
- **Reluctance to seek assistance**

K. Patricia Cross

Expectations for faculty interaction

RIT First Year Students

28.3% expect to communicate regularly with their professors.

20% asked a teacher for advice after class in high school

Highly selective 4 year

45.7% expect to communicate regularly with their professors.

27% asked teacher for advice

There appears to be a correlation between informal contact with faculty and both student confidence and student persistence.

Sax, 1994; Pascarella, 1980

**20% of RIT students
indicate that they asked a
teacher for advice after
class.**

2002 RIT First-Year Survey

Failure to establish personal relationships with faculty represents a major loss to women and all students whose high school teachers gave them considerable personal attention and who fostered their potential.

Seymour and Hewitt, 1997

Transforming Students Through Validation

- **Success appears to be contingent on whether [faculty, staff] can validate students in an academic or interpersonal way.**
- **Even the most non-traditional students can be transformed into powerful learners through in- and out-of-class academic or interpersonal validation.**




Dr. Laura Rendon, 1994

When students are not prepared to meet the demands of college or a specific educational program, they can be described as being *at-risk*.

Nancy Spann et al., 1994

Intervention programs that depend on student-initiated contacts tend not to be used advantageously by at-risk students.

At-risk students have difficulty:

-  **Recognizing that a problem exists**
-  **Asking for help once they realize that they have a problem**
-  **Asking for help in time for the assistance to be of benefit**

Professors Mary E. Levin and Joel R. Levin
University of Wisconsin - Madison

Academic services may be available, but if we wait for students to come for assistance, attrition may be the result. Students inexperienced in the ways of college—and certainly most first-year students—need to be reached out to with intrusive programs and services.

Levitz and Noel, 1989

Intrusive Advising

Intrusive advising does not mean “hand holding” or parenting. Rather, it does mean active concern with the students academic preparation and a willingness to assist them explore programs and service to improve their skills and motivate them to complete their program.

The key to student success should be a supportive learning community.

Students need to know that faculty care about their success, which includes their physical and mental well-being as well as success in their coursework.

Report of the RIT Retention Task Force, 2000

Some things we can say...

- Your major doesn't determine your success.
- Why did you choose this path anyway?
- Failure can be an important part of learning.
- Failing at a task doesn't make you a failure.
- Your academic past doesn't always equal your academic future.

Some things we can say...

- Learning isn't about grades it's about developing the ability to think and solve the problems of life.
- Working harder won't always bring success; learn to work smarter.
- Making it on the journey is sometimes easier when you travel with others.
- Faculty usually want you to succeed and will help you do so, esp. when you ask.

Every single recommendation represents a departure from previous Institute practice...if we are to reach our goal of 75% graduation, we will not be the same university we are today...

**We will be a *learning* university
dedicated to the fullest
success of our students.**

Report of the RIT Retention Task Force, 2000

Institutions don't change...

**Institutional/organizational
change happens only when
individuals take the initiative to
create change in their areas of
responsibility.**

**Peter Senge, MIT Center for
Organizational Learning**

**We have to be the change
we want to see happen.**

M. Gandhi

THE KEY

The biggest and longest lasting reform of undergraduate education will come when individual faculty or small groups adopt the view of themselves as reformers within their immediate spheres of influence, the classes they teach everyday.

K. Patricia Cross, 1989

What Do We Say to Students Who Fail?

Thomas Brown

tom@tbrownassociates.com