The Circle of Scholarship

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Icebreaker

• Find someone you don't know
• One person interview the other person
• Switch roles
• Find another group
• Take turns introducing your partner to the group
Exercise

- Write one answer on paper
- Pass to next person in group
- Continue passing until all ideas are exhausted
What are the potential benefits of the scholarship of pedagogy at RIT?
What are the potential detriments of the scholarship of pedagogy at RIT?
Background

- 23 Years in Industry
- 10 years as Adjunct Professor at Community College
As the Years Went On ...

- Loved teaching
- Disliked “Corporate America”
Took a Risk

• Changed Careers
• Moved to another state
• Left friends and family
• Three young children
My Feelings

• Seize opportunities when they arise

• Don’t be afraid to take risks

• If it feels right, do it

• Otherwise you’ll always wonder: “What if ...”
Opportunity

• Chosen to develop a two-course sequence

• Targeted for under-prepared students
Alternative Prog. Sequence

Traditional Sequence

IT 1  →  IT 2

IT 2A  →  IT 2B

IT 2  →  IT 3

Alternative Sequence
A
“Chance”
Conversation
Research

- Determined to help the at-risk students
- Searched the educational databases
My Path of Discovery

- Constructivism
- Cooperative learning
- Student-centered learning
- Active learning
What is Active Learning?
Exercise

• 1st person writes sentence
• Next person adds to or corrects statement(s)
• Continue until all members have answered
• Discuss the team’s answer
• Prepare to explain answer
Application of Research

- Lots of AL articles

- Very few targeted for intro programming courses

- Had to develop my own activities
Course Design

• Changed the way the course was taught

• Rewrote all the materials

• Created AL activities for every topic
New Focus

- Traditional Focus
  - Covering as many constructs as possible

- New Focus
  - Using constructs to develop conceptual knowledge
Active Learning

• Jumped in with both feet

• Some colleagues warned me not to take the risk

• It just felt right
Risks

• Is approach legitimate
• Student evaluations
• Promotion and tenure
• Colleagues' opinions
Course Results

• Increased retention by 9%
• Increased A,B,C grades by 14%
• All numbers are statistically significant
Personal Rewards

• Students loved the course

• Exceptional student evaluations

• Noisy classroom
New Teaching Metaphor

• Coach

• No longer “Sage on the Stage”
Dissemination

• 2003 SIGITE
• 2003 FITL
• Cited in President Simone’s “Category of One” white paper
The Next Year ...

• Faculty Learning Community

• Study future success of IT2A&B students

• Active learning research

• Teach next group in IT2A&B
The First Circle was Complete

- Researched teaching techniques
- Classroom experiment
- Dissemination of results
- Further research in AL
FLC Requirements

- Design a classroom experiment
- Attend the Lilly conference
- Readings from educational literature
Lilly Conference

- Met the leaders of the active learning movement
- Learned new techniques to apply in my classroom
Dissemination

- 2004 FLC Poster Session
- 2004 CCSCNE
- 2004 FITL
- 2004 Geneseo Conference
PLIG Grant

• Cohort students based on previous prog. experience

• Based on IT2A & B results
Another Circle Completed

- IT2A & B experiment
- Results analyzed
- PLIG grant received
- Cohort implementation
Preliminary Cohorting Results

• Benefited students with the most and no experience

• Modifying the cohorting scheme this year based on the results
Another Circle Begins ...
2004 CCSCNE Conference

• Attended a session given by the NSF UG Education Director

• Guided me to the correct grant
  – NSF CCLI Grant

• Approved this year
Another Circle Begins …
Further Dissemination

- 2004 Lilly Conference Presenter
- 2004 SIG ITE
- 2005 CCSCNE
- 2005 Frontiers in Education
Advice

• Research how others are teaching

• Adapt their discoveries to your classroom

• Disseminate the results

• Make contacts
Scholarship Benefits

• Ultimately it is the students that have benefited from my scholarship

• Which is why I teach