

# **Supplemental Instruction Services Via the Internet**

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**Supplemental Instruction**

# **Objectives for Overview Session**

- **Provide short review of SI fundamentals.**
- **Overview of Internet-based resources for enhanced learning.**
- **Identify key principals for effective distance academic support programs.**
- **Review several models of technology-based SI.**



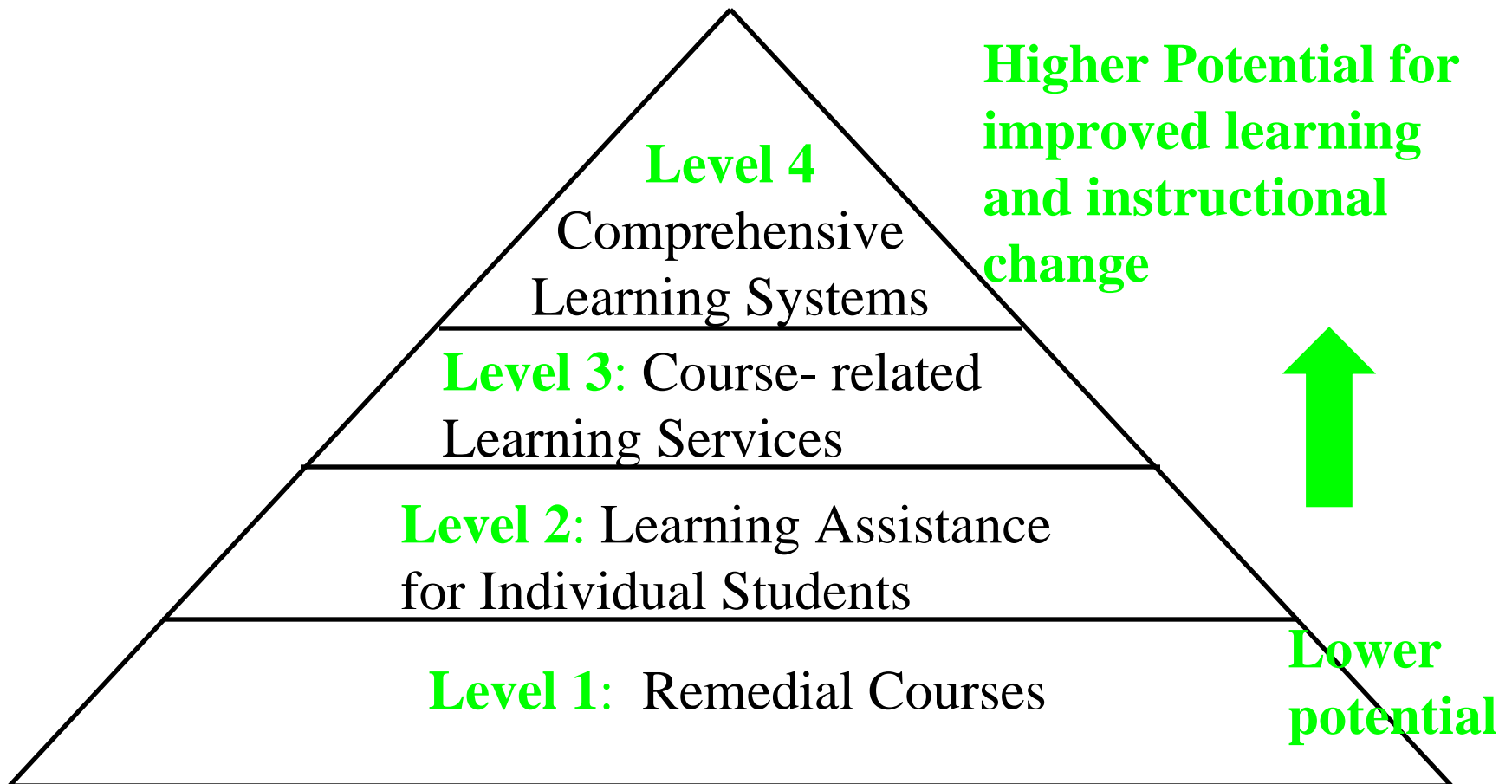
# Tinto's Themes of Attrition

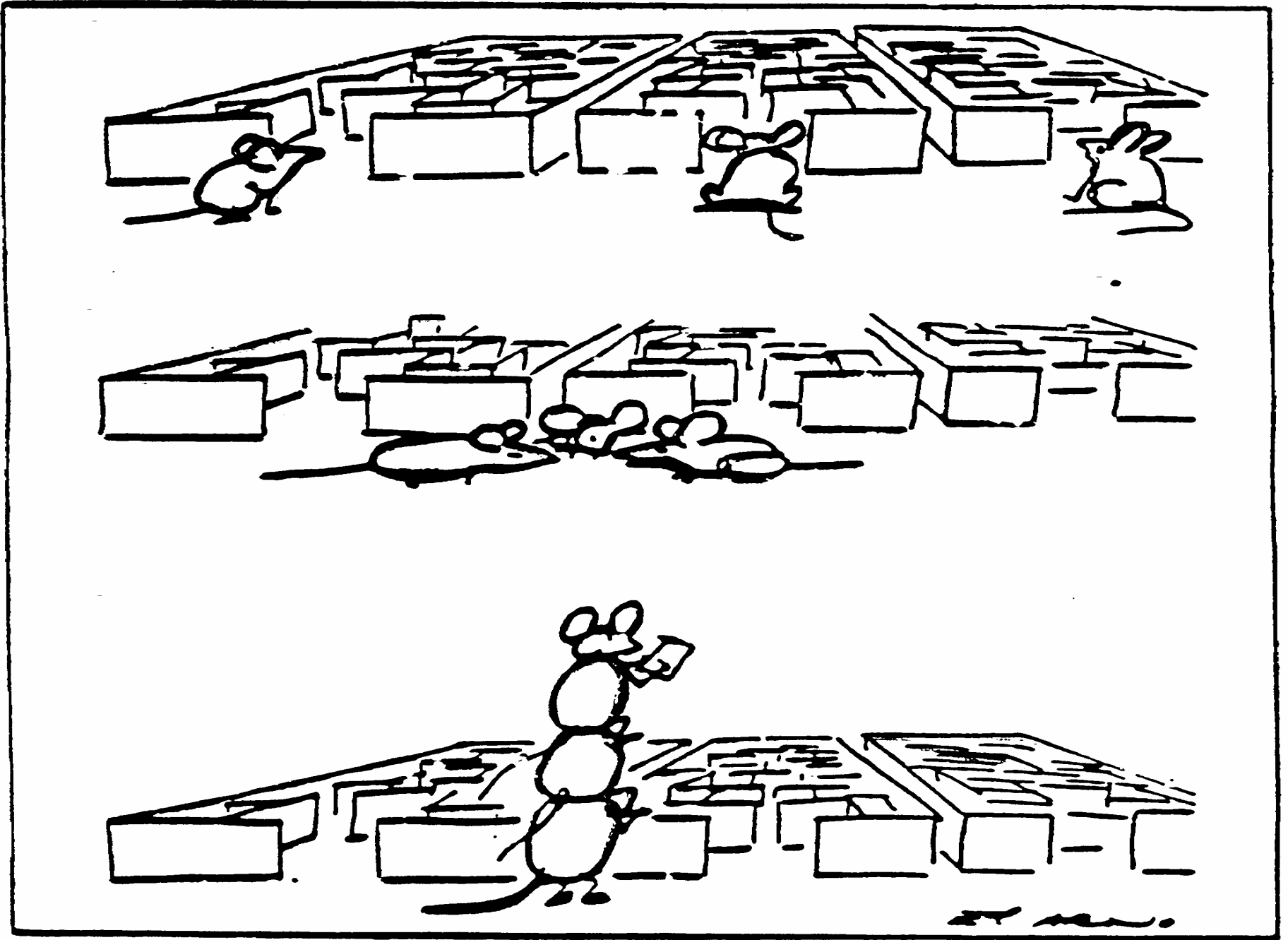
- **Adjustment problems**
- **Difficulty**
- **Incongruence**
- **Social isolation**
- **Personal finances**
- **Obligations to external communities** (e.g., family, friends)

# Frontloading Services

To make the first-year student connection, institutions must adopt the concept of "*front loading*", putting the strongest, most student-centered people, programs and services during the first year.

# *Hierarchy of Learning Improvement Programs*





# **Supplemental Instruction Student Academic Assistance Program**

- **Targets historically difficult academic courses**
- **Regularly scheduled, out-of-class sessions**
- **Student facilitated review sessions**
- **SI offered to all enrolled students**
- **Sessions are voluntary and anonymous**

# Goals of SI

- **Improve student performance**
- **Increase continued enrollment**
- **Improve learning skills**
  - ^ **Thinking /reasoning**
  - ^ **Responsibility**
  - ^ **Reflection**

# **SI Guidelines**

- **SI leader regularly attends the class**
- **SI leader is trained prior to the term**
- **Trained staff member supervises**
- **Faculty member must approve SI service for the class**
- **SI sessions are regularly conducted**
- **SI sessions integrate course content & learning strategies**
- **Program is appropriately evaluated**

# **In SI, Students Construct Own Knowledge Through a Process of**

- social  
interaction**
- exploration**
- application**

# **With the guidance of a SI leader...**

- students discuss course content**
- students clarify what they read and hear**
- students learn to analyze, criticize, question, and seek verification of ideas**
- students recognize that they perceive the world differently as a function of personal experiences**

# **SI Program Expansion Since 1973**

- **Created at the University of Missouri - KC in 1973 by Dr. Deanna C. Martin**
- **Faculty and staff from 875+ institutions have been attended workshops**
- **Expansion to 12 countries**
- **Estimate 250,000 students per academic term participate in SI at 400+ institutions worldwide**

[Http://www.umkc.edu/cad/si/](http://www.umkc.edu/cad/si/)

# **Benefits of SI Program**

- **SI Leaders**
- **Faculty Members**
- **SI Participants**

# SI Research Claims

Validated by the U.S. Department of Education

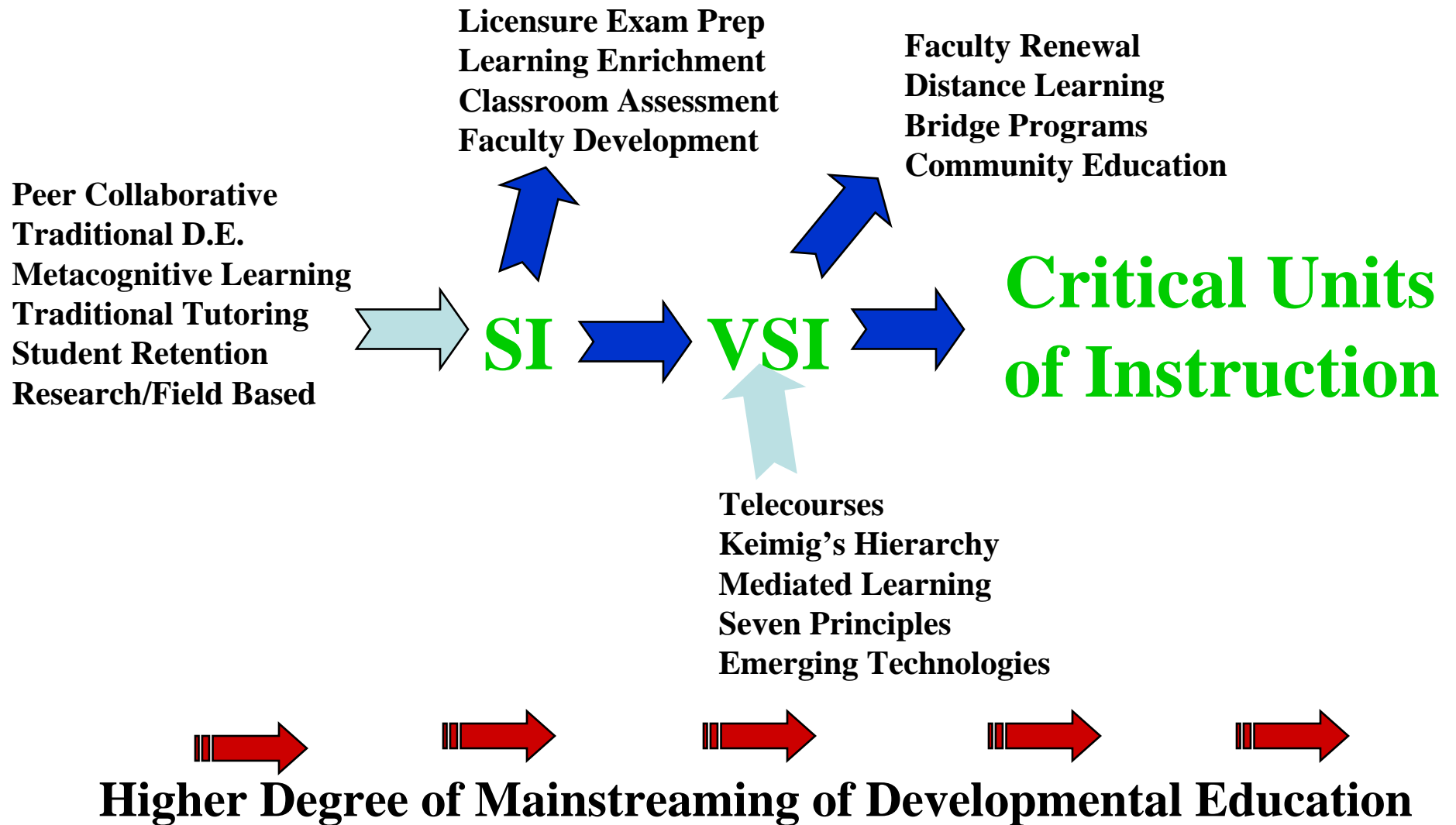
- **SI participants earn higher mean final course grades**
- **SI participants receive a lower rate of D, F or course withdrawals**
- **SI participants persist (reenroll and graduate) at higher rates**

These differences are statistically significant, despite ethnicity and prior academic achievement





# SI used in a Variety of Settings

- Undergraduate level
- Graduate level
- Professional schools [e.g., Medicine, Law, Pharmacy, Dentistry, Nursing]
- Secondary schools
- Test preparation programs [e.g., MCAT, USMLE]
- Distance learning programs

# Adaptations of SI



# Adaptations of SI

- **Licensure examination preparation**
- **Computer-based supplemental activities**  
- **Learning enrichment**
- **VSI** 
- **Faculty development** 
- **Critical units of instruction**
- **Distance learning support & enrichment**

# **Why Offer Internet-Based Support & Enrichment Services?**

- Serve distance learners
- Build “virtual” learning communities and extend the classroom walls
- Add instructional time beyond class hours
- Provide services when and where students want to access them
- Permit different role for class professor
- Provide flexibility to students on what areas to engage in supplemental learning activities

# **Lessons of SI to Retain with Internet-Based Activities**

- Students need to be actively involved.
- Group facilitator cannot dispense information for passive reception by others.
- Do research studies to examine student outcomes for comparison with others.
- Encourage everyone to participate regardless of previous academic success.
- Keep the process as simple as possible.

# Avenues for Internet Enrichment

- ***Basic Level:*** Provide Text, PowerPoint, and Video Materials
- ***Moderate Level:*** Host Conversation Groups
- ***Advanced Level:*** Create Comprehensive Course Delivery Packages

# **Basic Level Enrichment:**

## **Text, PowerPoint & Video Materials**

- Web homepages
  - Course syllabus
  - Handouts created by instructor
  - Links to other Internet resources
- Streaming video
  - Video clips and short lessons
- PowerPoint presentations

# Moderate Level Enrichment:

## Conversation Groups (1 of 2)

- *Off-Line Asynchronous Discussions*
  - One-on-one exchange of papers & comments
    - Student-Prof.; Student-Student; Grammar Hotline
  - Group Listserv Discussion
  - Group Web-based Discussion Board
- *On-Line Synchronous Discussions*
  - Chat Room (share text)
  - Video Conference (1 on 1; multiperson)

# Moderate Level Enrichment: Conversation Groups (2 of 2)

- Potential Features of Conversation Software
  - Audio and text conversation modes
  - View on screen the group text conversation and photos of on-line group members
  - Ability to print log of group conversation and of graphic whiteboard material
  - Graphic whiteboard for images/hand written notes
  - Collaborative browsing of web pages
  - Send and receive data files
  - Password protection and control of participants

# Advanced Level Enrichment: Comprehensive Packages (1 of 3)

- Potential Features of Package
  - Text material
    - course syllabus
    - class announcements
    - instructor homepage
  - Student information
    - email address
    - student homepage

# Advanced Level Enrichment: Comprehensive Packages (2 of 3)

## –Learning Links

- Web class discussion forum (“live” chat rooms & web-based discussion boards)
- Quizzes that are immediately scored by the computer
- Recommended Internet web links to related course material
- Availability of downloadable text files designated by the course instructor

# Advanced Level Enrichment: Comprehensive Packages (3 of 3)

- Lesson Builder. Allows instructor to “package” the following activities to follow course topics
  - text material
  - downloadable files
  - quizzes

# **Citrus College (Glendora, CA): SI with Internet Enrichment**

- One-on-one E-mail review of papers
- English group tutoring web discussion board
- On-line live chat tutor chat room at designated time each week. (On-line SI session in addition to weekly in-person)
- Web text handouts ( frequently asked questions & answers based on previous chat room and web discussion board, instructor made handouts, etc)

# University of Missouri System: “Virtual” SI Resources

- Web site with “Frequently Asked Questions and Answers” pages
  - Base FAQ answers on questions raised during E-mail questions and logs from live chat rooms
- Weekly contests with difficult math questions submitted by math team via E-mail
- Nightly “virtual SI sessions” between 9:00 p.m. and 1:00 a.m. [NetMeeting-based]
- Web site with handouts & links to other math sites

# Next Steps for Exploring Internet SI

- Talk with other IT users
- Build partnership with campus IT personnel
  - Learn from them, access their computer hardware, partner with them on expenses
- Read the literature & attend IT conferences
- Experiment with IT software packages
- Budget twice as much time as expected
- Be sure that it is worth the effort before starting

# **Additional Resources to Review about SI and Related-Issues**

- **SI homepage** [www.umkc.edu/cad/](http://www.umkc.edu/cad/)
- **Slnet discussion group**
- **NADE homepage** [www.umkc.edu/cad/nade/](http://www.umkc.edu/cad/nade/)
- **Professional Associations and Publications**
  - **ASCD Cooperative Learning Network**
  - **Collaboration in Undergraduate Education**
  - **Cooperative Learning & College Teaching Newsletter**
  - **Cooperative Learning Magazine**
  - **Nat Center Postsecondary Teaching, Learning, & Assessment**