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.
Developmental Educator

**Strengths**

*Strengths to share with others*

- Peer collaborative learning
- Informal classroom assessment
- High school/college bridge programs
- *Instructional technology*
- Affective domain needs of students
- Curriculum development
- Adapting instruction for diverse learning styles
Tinto’s Themes of Attrition

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

Tinto, Leaving College, 1993, p. 37-38
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.

Noel, Levitz, & Saluri, Increasing Student Retention, 1985
Hierarchy of Learning Improvement Programs

Level 1: Remedial Courses

Level 2: Learning Assistance for Individual Students

Level 3: Course-related Learning Services

Level 4: Comprehensive Learning Systems

Higher Potential for improved learning and instructional change

Lower potential
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/
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

Licensure Exam Prep
Learning Enrichment
Classroom Assessment
Faculty Development

Faculty Renewal
Distance Learning
Bridge Programs
Community Education

Peer Collaborative
Traditional D.E.
Metacognitive Learning
Traditional Tutoring
Student Retention
Research/Field Based

SI  VSI

Telecourses
Keimig’s Hierarchy
Mediated Learning
Seven Principles
Emerging Technologies

Critical Units of Instruction

Higher Degree of Mainstreaming of Developmental Education
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/
- SI.net discussion group
- NADE homepage 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