



News from the ...

Center for Learning Enhancement

Department of Developmental Studies
202 Pratt Hall
Indiana University of Pennsylvania
Indiana, PA 15705



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1997

Supplemental Instruction at IUP

2012

The Supplemental Instruction (SI) program started at IUP in fall 1997. Marking the 15-year anniversary, this issue is devoted to a summary of our SI program.

What is Supplemental Instruction (SI)?

SI is an international model of academic support and retention targeting introductory level high-risk courses — courses with 30% and higher D/F/W rates.

SI is based on principles of active, collaborative, self-directed learning. SI is *not* a remedial program; participation in weekly SI sessions is of benefit to **all** students enrolled in targeted course sections.

Which Courses are Targeted for SI?

SI primarily is offered for these courses:

- ◆ Designated high-risk because of difficult content.
- ◆ Lower-level science courses required for majors (“gateway courses”).
- ◆ A large section or multiple sections taught by the same instructor, resulting in enough participants.
- ◆ Supportive instructor who encourages all students to attend sessions (not just those performing poorly), and communicates with the SI leader.

What are SI Sessions?

Trained peer leaders assist students with *how to learn* difficult course content in structured, out-of-class sessions. Activities include reviewing notes, clarifying text material, discussing questions, completing worksheets, and preparing for exams.

Who are SI Leaders?

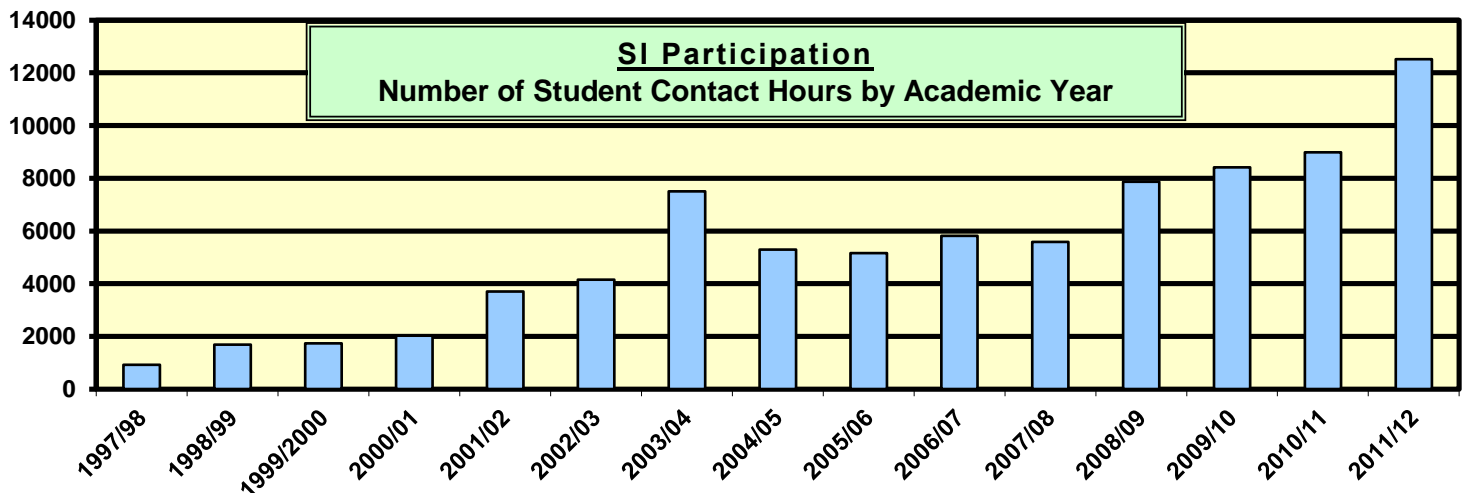
SI leaders are undergraduate students who excelled in the targeted course, earned high GPA's, received professor recommendations, and successfully completed a 1-credit training course (DVST 250 *Role of the Peer Educator: Theory, Practice and Assessment*). Further on-the-job training is provided via structured observations of sessions, as well as weekly staff meetings.

SI leaders are paid to attend classes and take notes for the course section. They then prepare for each session by planning strategies and activities and creating handouts and materials that reinforce how to learn course content. SI leaders help students think through questions and learn information more effectively; they are *not* considered teachers or experts in a subject.

What are the Results of SI at IUP?

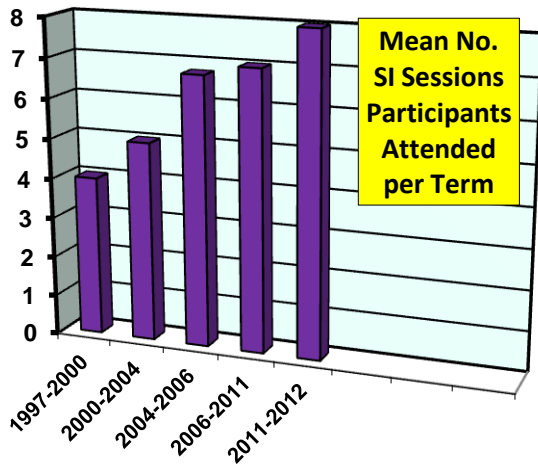
PARTICIPATION RATES OVER 15 YEARS

- ◆ **Student participation increased significantly**, from fewer than 1,000 student contact hours the first year to *more than 12,500 last year* (see chart below).
- ◆ **Total student contact hours for SI is 81,593** over the 15-year span of time.
- ◆ **Number of student participants increased** from approximately 200 students a year from 1997-2001, to *over 1,500 students in 2011-12*.

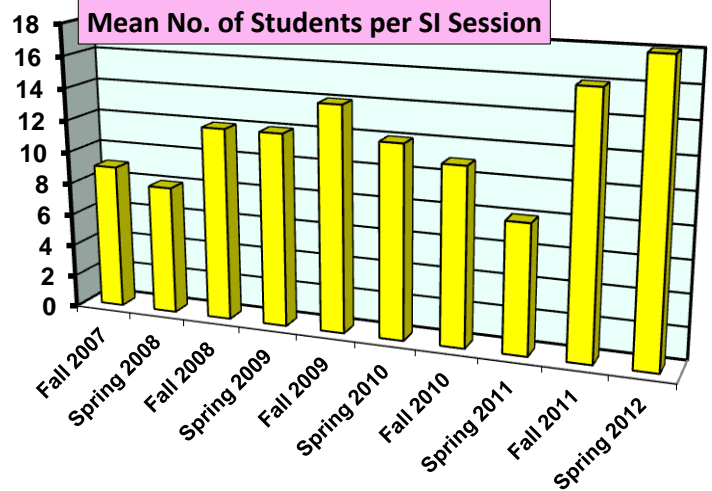


PARTICIPATION RATES (CONT'D.)

- ◆ **Number of sessions students attended increased from 4 to 8 per term.** (See chart below.)



- ◆ **Mean size of sessions increased from 8 students in 2007 to 18 in 2012.** (See chart below.)
Note: The recommended size is 8-10 students.



STUDENT PERFORMANCE OUTCOMES

Student performance outcomes over the 15-year span indicate the strong effect SI has on *improving final grades and reducing course failures and withdrawals.*

MEAN FINAL GRADES

- Students who attended SI one or more times during a term averaged **over half a letter grade higher** in the course than did non-participating students.
- This half-letter grade difference is significantly higher than the national mean difference of .29 for 4-year public universities.
- *Note:* Both groups of students, SI participants and non-participants, usually possess similar academic profiles prior to enrolling in the targeted courses.

OUTCOMES BY ATTENDANCE

In order to maximize the benefits of the structured, peer-to-peer learning sessions, students are urged to attend SI *regularly* throughout a term. Results from the previous six semesters illustrate the extra benefits for students attending *5 or more SI sessions* during a term. (See chart. →)

- Approx. **57%** of students attending SI come 5 or more times during the term.
- Approx. **24%** of the total class enrollment attend SI 5 or more times during the term.
- The mean final grade for students attending SI 5 or more times is *a third of a letter grade higher* than those attending 1 or more times.
- The rate of students earning a D, F, or W in the targeted course is significantly lower for students attending SI 5 or more times during the term.

'D/F/W' RATES

SI targets courses in which 30% or more of enrolled students earn Ds, Fs, or Withdraw. High D/F/W rates increase costs for students and for IUP since students repeat the courses (filling valuable seats), become increasingly frustrated and less satisfied, and are more likely to leave. As a result, IUP expends more money to recruit new students as replacements.

SI intervenes in this costly cycle via the peer-led sessions focusing on how to learn course content. A measure of the success of SI is a drop in the percentage of D/F/W's for historically difficult courses.

Over the 15 years of SI at IUP:

- SI participants averaged **24%** D/F/W's vs. **41%** for non-participants. This *17% difference* suggests the positive impact SI can have on students' success in courses with difficult content.
- SI participants' averages were *below the 30% cut-off* for high-risk courses.

<u>Averages per Term:</u> <u>Fall 2009 → Spring 2012</u>	<u># SI sessions attended</u>	
	1+	vs. 5+
Number of students attending	740	420
Percent of total class attending	43%	24%
Mean final course grade	2.29	2.62
D/F/W rates	22%	14%

Contact person:

Dr. Sally Lipsky, Coordinator of Peer Assistance, sal@iup.edu
Center for Learning Enhancement
Developmental Studies Department, Pratt Hall
Indiana University of Pennsylvania, Indiana, PA 15705
www.iup.edu/devstudies