

# Effects of Supplemental Instruction on Performance

## Purpose

To evaluate the effectiveness of Supplemental Instruction (SI), the success rate of students who were enrolled in sections offering SI in spring 2009 was analyzed. This initial cohort included 2,005 students as shown in the table below.

Table 1

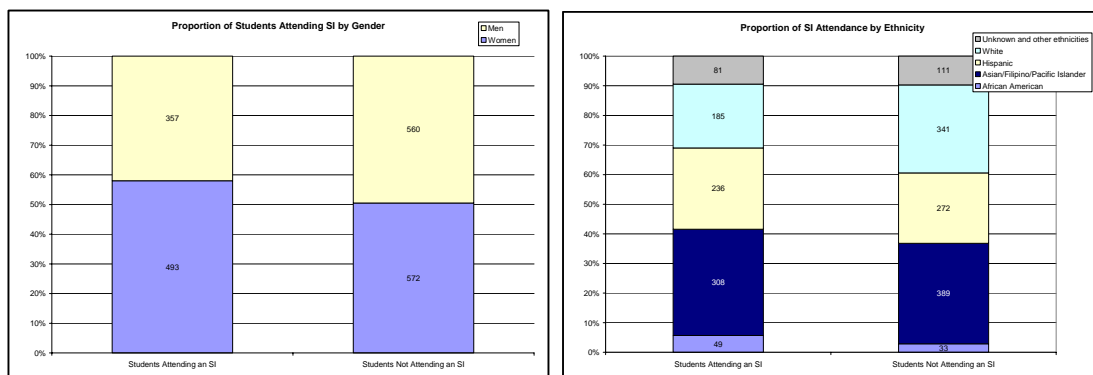
Courses with an SI Component	Number of Students Attending an SI	Number of Students Not Attending an SI
ACCT 101	9	25
BIOL 111, 210, 220, 231, 241	246	304
CHEM 107, 111A, 111B	51	31
ENGL 100	15	42
GEOG 102	27	2
HIST 201	6	29
MATH 015, 020, 030, 040, 120, 141, 142, 150A, 150B, 250A	395	643
PHYS 201, 202, 210, 211, 221, 222	73	41
RADT 142, 146	37	29
<b>Total</b>	<b>859</b>	<b>1,146</b>

This report will evaluate the effectiveness of SI by answering the following research questions:

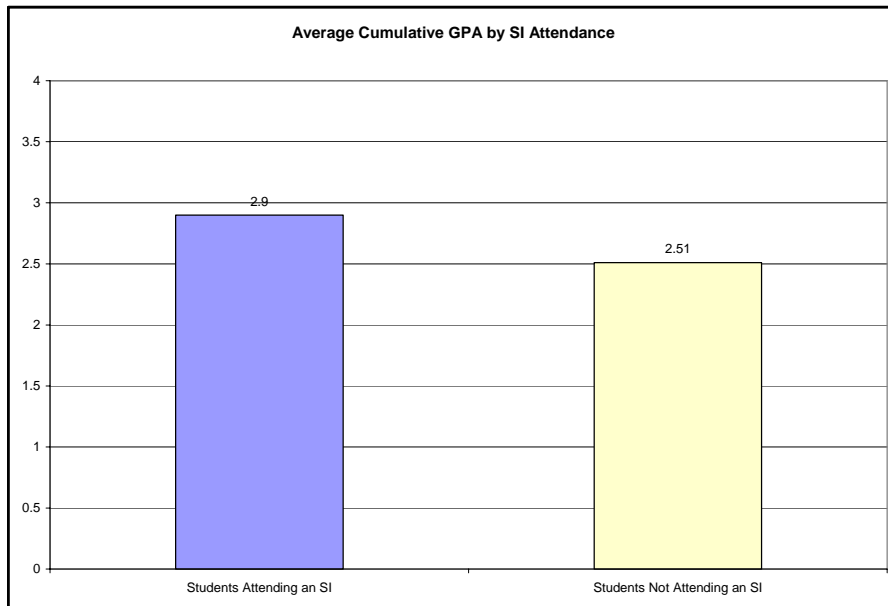
1. *Is success influenced by attending an SI session?*
2. *Is success influenced by SI participant status?*
3. *Is success influenced by the number of hours of SI attended?*

## Demographic Information

The two charts below show the number and proportions of students participating in at least one SI session from these SI-available course sections by gender and ethnicity.



The average cumulative GPA was higher for students who attended an SI session compared to students from the same sections who did not attend an SI session, as shown in the following chart.



## Research Questions

Success rates were compared for different levels of SI participation. All analyses, as shown in Table 2, indicated that those who attended more hours of SI were more likely to be successful. This is illustrated graphically in the chart.

**1. *Is success influenced by attending an SI session?***

Yes. Students who attended an SI session had higher success rates than students in the same sections who did not attend an SI session.

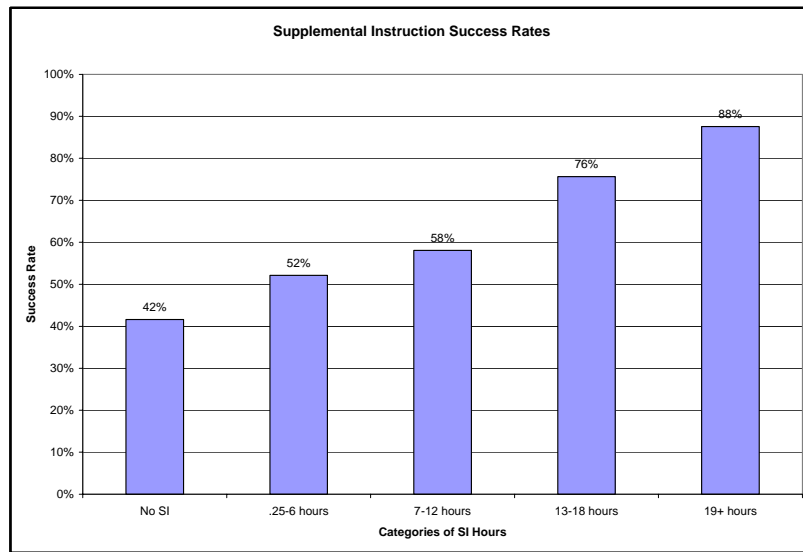
**2. *Is success influenced by SI participant status?***

Yes. Students who attended 12 or more hours of SI (SI participants) had higher success rates than did either those who attended SI for fewer than 12 hours and those who did not attend any SI.

**3. *Is success influenced by the number of hours of SI attended?***

Yes. Students who attended more hours of SI were more likely to be successful than students who attended fewer hours of SI.

Table 2		Total Number of Students	Success Rate	Statistically Different?
SI Attendance	Attending at least an SI session	859	65%	Yes
	Did not attend an SI session	1,146	42%	
SI Participant	Did not attend an SI session	1,146	42%	Yes
	Attended <12 hours of SI	525	54%	
	Attended 12+ hours of SI	334	83%	
SI Hour Categories	No SI	1,146	42%	Yes
	.25-6 hours	376	52%	
	7-12 hours	155	58%	
	12-18 hours	119	76%	
	19+ hours	209	88%	



### **Course Performance Controlling for Cumulative GPA and Cumulative Units Attempted**

As requested by the Learning Resource Center Special Projects Director, the usefulness of SI was also investigated while cumulative GPA and cumulative units attempted were taken into account. This allows for a more unbiased look at the effectiveness of SI by statistically removing the variance in these success rates that is likely a result of general academic success and the number of courses attempted in the district. In all analyses, success rates were still positively influenced by attending SI (whether measured as SI status, SI participant, or SI hours) even when cumulative GPA and cumulative units attempted were also included.

### **Conclusion**

In all measures and categorizations, SI indicators were positive related to performance indicators. SI is a beneficial program, although further research should explore which students are most served by this program.