Supplemental Instruction (SI)
Peer Assisted Study Sessions

Handbook for CSUF Faculty and Staff

SI Program website:  http://www.fullerton.edu/SI
Overview and History of Supplemental Instruction (SI)

Supplemental Instruction (SI) was first developed in 1973 at the University of Missouri at Kansas City by Dr. Deanna Martin. SI targets traditionally difficult, key gateway and bottleneck courses; those that have a large number of students receiving a grade of C-, D, F, or W. Supplemental Instruction focuses on student retention and the act of facilitating learning, which is accomplished in SI though the identification of the difficult course, placement of a SI Leader, and regularly scheduled peer-facilitated SI or study group sessions. The goal of SI is to create independent learners; and the SI leader, is the link between the actual class and SI session, where course readings, content, and material are brought together with effective learning strategies in a collaborative learning environment. Through SI, students gain the ability to synthesize ideas and formulate questions regarding course content and material, and ultimately take power over their own learning. Students of all academic and learning abilities and levels benefit from participating in SI sessions.

CSUF piloted its SI Program, adopted after the UMKC model, in 2007 in several Calculus and Introductory Biology courses for majors. By spring 2009, we expanded the SI Program at CSUF: 10 SI workshop sections were offered in the College of Natural Sciences and Mathematics; The University Learning Center (ULC), also supported courses with SI in the Colleges of Humanities and Social Sciences, and Engineering and Computer Science. The two SI programs continued to grow throughout fall 2009, as SI sessions/workshops increased to 35. Beginning fall 2010, the ULC and the Department of Mathematics began a dialogue about the two SI programs to find ways in which they could join forces to better meet the needs of the larger campus community. In 2013-2014, thanks to an ambitious CSU Chancellor’s Office program to improve student success (retention, graduation rates, closing the achievement gap) SI was institutionalized at CSUF as a recognized student success high impact practice.

The Supplemental Instruction Program at California State University, Fullerton is a campus-wide effort involving meaningful collaboration between faculty, staff, administrators, and students within and across colleges. In particular, there is a strong positive working relationship between Academic Affairs and Student Affairs. Currently, the SI Program at CSUF supports over 30 courses and over 224 sections across 4 Colleges. Departments that are supported by SI include: Accounting, Anthropology, Biology, Business Administration, Chemistry, Computer Science, Economics, Geology, History, ISDS, Math, Philosophy, Physics, Political Science, and Psychology.
**Purposes of SI**
- To reduce rates of attrition within targeted historically difficult courses.
- To improve student grades in targeted historically difficult courses.
- To increase the graduation rates of students.

**Goals and Objectives of SI**
*The goal of SI is to help students become independent learners. Objectives include:*
- Increasing the number of students earning letter grades of C or better in targeted historically difficult courses.
- Reducing letter grades below a C and withdrawals in targeted historically difficult courses.
- Increase re-enrollment and persistence of participating students.
- Ultimately, improving the graduation rates at CSUF.

*By encouraging regular attendance, SI aims to help students improve their class standing by one-half to one full letter grade. To accomplish this, SI helps students:*
- Understand and plan for the demand of college-level courses.
- Gain problem-solving experience through trial and error.
- Develop analytical and critical thinking skills.
- Become more actively involved in the course.
- Develop more effective study skills
- Understand *what to learn* and *how to learn.*
- Articulate their learning style(s)
- Develop transferable study skills

**Supplemental Instruction:**
Effectively and directly addresses CSUF’s Strategic Planning Goal No. 2:

- *To improve student persistence, increase graduation rates University wide, and narrow the achievement gap for underrepresented students.*
Key Elements of the SI Program

- The SI program targets traditionally difficult academic courses—those that have a high rate of C-, D, or F grades and withdrawals—and provides regularly scheduled, out-of-class, peer-facilitated sessions.

- SI does not identify high-risk students, but rather identifies historically difficult classes.

- Assistance begins the first week of the semester.

- SI sessions normally occur in classrooms near the course classroom instead of in a learning center.

- SI sessions are open to all students in the course, not just to those who are struggling.

- The SI leaders are the key people in the program. SI leaders are students who have demonstrated competence in the course.

- SI sessions are comprised of students of varying abilities, and no effort is made to segregate students based on academic ability. Since SI is introduced on the first day of classes and is open to all students in the class, SI is not viewed as remedial.

- SI leaders are trained. This training covers such topics as how students learn as well as instructional strategies aimed at strengthening student academic performance, data collection and management details.

- SI leaders attend all class sessions, take notes, read all assigned material, and conduct two to three 50-75 minute SI sessions each week. SI sessions integrate how-to-learn with what-to-learn.

- Students who attend SI sessions discover appropriate application of study strategies, e.g. note taking, graphic organization, questioning techniques, vocabulary acquisition, problem solving, and test preparation, as they review content material.

- Students have the opportunity to become actively involved in the course material as the SI leaders use the text, lecture notes, and supplementary readings as the vehicle for refining skills for learning.

- The SI Coordinator is responsible for identifying the targeted courses, gaining faculty support, selecting and training SI leaders, monitoring the quality of SI sessions, and evaluating the program.

- The SI leaders meet weekly as a group with their department SI Faculty Liaison throughout the semester for follow-up, development of skill sets, and problem-solving.

- SI participants earn higher course grades and withdraw less often than non-SI participants. Also, data demonstrate higher reenrollment and graduation rates for students who participate in SI.
The SI Family Tree

The key participants in the SI model at CSUF are: the SI Coordinator, SI Faculty Liaisons, faculty participants (whose classes are supported by SI), the SI Leaders, and the student participants.

**SI Coordinator**
The SI Coordinator possesses a strong understanding of the UMKC SI model, and provides leadership in developing, implementing, and promoting an exemplary and comprehensive SI Program at CSUF. Bringing together the divisions of Academic Affairs and Student Affairs, the SI Coordinator, works closely with administrators and Faculty Liaisons in various colleges across the campus to meet the needs of the greater campus community.

**Faculty Liaisons**
The SI Faculty Liaisons are selected from the existing pool of faculty SI participants who have proven successful in supporting the SI Program. SI Faculty Liaisons lead a group of SI Leaders that are department/college specific, and are the link between the SI Leaders and the SI Coordinator. Their leadership role is significant in that they assist the SI Coordinator with the hiring, training, mentoring, and evaluation of SI Leaders.

**Faculty Participants**
Faculty participants are the professors who teach courses that have been determined to be gateway or bottleneck courses; those courses that have a high percentage of non-pass grades. These professors support the SI Program, but having their course section(s) supported by SI. They work with the SI leader, Faculty Liaison, and SI Coordinator to ensure the success of the program and see students succeed.

**SI Leader**
SI sessions are led by a SI Leader who is an exceptional student and has already mastered the course material; the SI Leader has been trained to facilitate group sessions wherein students can meet to improve their understanding of course material, review and discuss important concepts, develop study strategies and prepare for exams. The SI Leader provides two or three 50-75 minute sessions a week during which course readings, content, and material are brought together with effective learning strategies in a collaborative learning environment. Through the process of leading SI sessions, SI Leaders gain content knowledge as well as communication and leadership skills.
CSUF SI Contact Information

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Research and Assessment

In each course, the final grades and passing rates of the SI participants are compared with those of non-participants. Moreover, the final course grades of the SI participants are further broken down by the number of SI sessions attended. In addition, a survey will be distributed asking respondents about their interaction and perspectives associated with the SI program. Respondents will be asked to identify themselves: students participating/not participating in SI, faculty participants (courses linked to SI), and SI leaders. Survey questions focus on three constructs: awareness/prior knowledge of the SI program, experience with the SI program, and beliefs about the SI program.

Data collected by the SI programs at CSUF, UMKC, and around the world, demonstrate that:

1. Students who participate in SI earn a half to full grade higher and withdraw less often than non-participants.
2. The more sessions a student attends, the higher the final course grade.

The academic scope of work centers on Supplemental Instruction as a high-impact practice. The impact of SI on student achievement at CSUF has been well-documented and shows the effect that a well-conceived and well-implemented program can have on student success in key gateway courses.

SI results at CSUF consistently indicated positive effects on all students, especially underrepresented minority (URM) students, with significant improvements in GPA and passing rates in gateway and bottleneck courses. For example, performance of students participating in SI was compared with that of non-participants in Calculus I (MATH 150A) and Evolution and Biodiversity (BIOL 171), two key STEM courses with traditionally high failure rates. In these two courses, students who participated in SI (n=943) had almost a 30% increase in success and a corresponding positive shift in GPA of more than 0.75 grade points compared to students who did not (n=692). Perhaps most important was narrowing of the “achievement gap” between URM (more than 40% of the students in Calculus I and Biology 171) and non-URM students in these courses. As shown in figure 2, differences in both the average course grade and the success rate between URM and non-URM students were much smaller for SI participants than for non-participants.
While Supplemental Instruction is widely viewed as a positive force in achieving the goals of national and state initiatives, questions have been raised in the research and local communities about whether the results are skewed by self-selection of the student participants. In the data presented above, there were no significant differences in academic predictor variables, such as incoming GPA or SAT/ACT score, between the treatment and control groups. This is a robust finding in the SI literature: while various factors may play a role in SI selection, there is strong evidence of “value-added” in terms of student achievement.
Frequently Asked Questions: Faculty and Staff

What Will I be Required to Do?
SI is not intended to create additional work for faculty. The faculty member is asked to recommend as potential SL leaders several undergraduate students who have recently been successful in the course. Upon selection of one of these students the faculty member is asked to support SI by maintaining a working relationship with the student leader throughout the semester.

You can support SI by granting time for occasional in-class announcements and be supportive of the program by encouraging students to take advantage of SI. Faculty should avoid the suggestion that only those who do poorly will benefit.

It is also recommended that faculty meet with their SI leader for at least 10-15 minutes a week, to discuss course content, upcoming exams, the progress of the SI sessions and participants, and any other additional questions or concerns that may come up.

Additionally, faculty members are asked to send the final course grades for the entire course section(s) at the end of the semester. Institutional approval has been given to collect this data and students' rights to privacy regarding this information will be fully protected. This information enables us to determine to what extent students who regularly attend the SI sessions are benefiting from the sessions. At the end of the semester, a full report will be provided to the faculty member. All SI Leaders are required to sign a confidentiality statement and understand and accept the responsibility to preserve the confidentiality of privileged information.

Can I visit an SI session?
SI sessions are instructor free zones. The dynamic of the SI session changes immediately, when an authority figure (such as the professor or an administrator) enters the classroom. The tone of the session, along with the behavior of the students alters and the focus shifts to the instructor and away from the SI leader and collaborative learning environment. Instructors who are curious about the content of sessions should contact the SI Coordinator or SI Faculty Liaison for their department.

What is the Role of the SI Leader?
The SI leaders are peer tutors who function as “processors” of course material. Their role is not to re-lecture, re-teach, “spoon feed,” or give students the answers, but rather they are trained to facilitate group sessions that follow class lectures. The professor first delivers course content and material; the SI leader then helps students process that information. SI leaders bring structure to the SI session and keep students on task. Moreover, they act as model students by exhibiting successful learning behavior and strategies. They attend class punctually and regularly, and are attentive and take notes while sitting in on class lectures. Prior to conducting SI sessions, SI leaders, themselves, must have taken and received high grades for the same courses. Additionally, they are required to undergo SI training at the beginning of and throughout the course of the semester, during which they gain an understanding of teaching and learning styles and strategies.
What Should I Expect for the SI Leader?
The SI leader will:
- Attend all class meetings
- Maintain a professional attitude about matters such as class standards, grades, and student complaints.
- Discourage students from attending SI as a substitute for class meetings.
- Share SI materials with the cooperating faculty member before use, if possible.
- Provide feedback to the cooperating faculty member if requested to do so.

The SI leader will not:
- Grade assignments, homework, exams, etc.
- Lecture or fill in as a substitute teacher for the instructor

Is SI a Remedial Program?
No. SI is not remedial for following reasons:
- SI targets high-risk courses rather than high-risk students.
- All students enrolled in SI-supported courses are invited and encouraged to attend – not just those who are struggling.
- SI starts with the first day of classes and continues to the end of the term.
- Studies show that students of all academic and learning abilities and levels benefit from participating in SI sessions and earn on average a half to full grade higher than those who do not participate.

Why was My Class Selected for SI?
SI targets historically difficult subjects. In other words, this subject contains content that students consider to be challenging. SI is designed to support faculty teaching and is assigned to a subject because of what is being taught, not because of the manner in which it is being taught.

What Should I Expect from the SI Program?
The ULC will:
- Place SI leaders only in courses with the approval of the cooperating faculty member.
- Train all SI leaders according to established guidelines and standards set forth by the University of Missouri, Kansas City.
- Monitor the activities and presentations of SI leaders for as long as necessary by attending class with them, helping plan sessions and supervising their performance.
- Provide supplies, training, in-service experiences and consultations for SI leaders.

What are Faculty Members Doing?
Here are some things that faculty members have done in the past to help encourage students to attend SI sessions:
- Including information on SI in their course syllabi
- Posting announcements on Titanium about SI sessions
- Adding their SI leaders to Titanium, so that they can connect with students
- Announcing SI results and encouraging students to attend sessions
SI Blurb for Syllabi

We recommend that SI faculty partners include a brief “blurb” on SI in their course syllabi. This is entirely optional, as we know that your syllabi may be already completed. I have included a brief description of SI that can be modified or simply cut and pasted. Again, this is purely optional.

To demonstrate your support of the SI program, and to encourage your students to attend SI sessions, we ask that SI faculty partners include a brief “blurb” on SI in their course syllabi. The following description of SI can be modified or simply cut and pasted:

Supplemental Instruction (SI)

Supplemental Instruction (SI) study sessions are offered for this course. SI sessions meet two to three times a week, throughout the semester. Supplemental Instruction is an academic assistance program which provides peer-led group study sessions to assist students in traditionally difficult courses.

SI sessions are led by a SI leader who has already mastered the course material and has been trained to facilitate group sessions where students can meet to improve their understanding of course material, review and discuss important concepts, develop study strategies and prepare for exams. SI is for everyone, and open to all students enrolled in this class; not just those students who are struggling. Attendance at SI sessions is free and voluntary. Students, who attend SI sessions weekly, typically earn higher final course and exam grades than students who do not participate in SI. Please bring your lecture notes, books, and questions with you.

SI study sessions for this class will meet at the following days/times: ______________________

SI location: ______________________

SI leader for this class: ______________________

For additional information on the SI Program at CSUF, please visit our website at: http://www.fullerton.edu/ulc/si
Key Dates:

The faculty part of our collaboration is critical to the SI Program’s success; we, therefore, ask for your support on the following items:

Week One:
- Allow your SI leader to make a brief 5-10 minute introductory announcement to the class.

Throughout the Semester:
- Allow your SI leader to make brief reminder announcements about the SI session meeting times and location (and write on whiteboard/chalkboard if space available).
- Encourage students to attend SI by making your own brief announcements, writing SI information on assignments, exams, etc. when handing back to students.
- Meet with your SI leader for at least 10-15 minutes a week, to discuss course content, upcoming exams, the progress of the SI sessions and participants, and any other additional questions or concerns that may come up.

Week 5:
- SI Faculty Brown Bag Session: New and returning SI faculty participants will be invited to gather with the SI Coordinator and Faculty Liaisons, to discuss progress of SI in their courses, share ideas, successes, and challenges, as well as ways to promote and build attendance.

Week 8:
- Provide list of names of students who you recommend to apply to the SI program for the upcoming semester to the SI Coordinator and SI Faculty Liaison for your department.

Week 10:
- SI Faculty Brown Bag Session: New and returning SI faculty participants will be invited to gather with the SI Coordinator and Faculty Liaisons, to discuss progress of SI in their courses, share ideas, successes, and challenges, as well as ways to promote and build attendance.

Week 13 or 14:
- Allow SI Leader to administer end-of-semester student surveys during class time (5-10 minutes).

End of Semester:
- Submit final course grades to SI Coordinator. Please note that this is extremely valuable information for our assessment of the program, particularly in regards to determining and comparing student learning outcomes between those students who elect to participate in SI vs. those who do not.
- Complete the online faculty SI survey.