Brief History of Supplemental Instruction

The supplemental instruction model was first developed at the University of Missouri, Kansas City, in 1973 with the goal of identifying and supporting the most challenging courses for students. Because of its proven success, the supplemental instruction model has become popular in many universities and in a wide range of courses. The goal of supplemental instruction is to help students master course content while developing effective learning, critical thinking, and study strategies.

Supplemental Instruction has extended to over 800 colleges and universities around the world. As of January 2000, 700 institutions in the U.S. provided training to their faculty and staff for implementing supplemental instruction. Studies show that students who attend supplemental instruction sessions earn statistically higher final course grades than those students who do not attend-even among students who are under-prepared when they enter the course (Congos, Langsam, and Schoeps, 1997).

The Essential Elements of Supplemental Instruction

SI Targets Subjects Rather Than Students

While education has historically created academic improvement programs that follow the medical model of attempting to diagnose students who may have academic difficulty, the SI program serves classes where a large portion of students will experience academic difficulty. SI avoids a remedial stigma by focusing on classes rather than individual students. The SI program provides systemic change in the learning environment for all students enrolled in the targeted subject. While all students may not take advantage of the voluntary service, it attracts an equal proportion of students from differing ability and cultural groups. Participating students receive higher measures of academic achievement in comparison to their nonparticipating counterparts.

SI Sessions Are Peer Facilitated

The ideal SI leader is a student who has recently taken the class from the same instructor and received a high final subject grade. All SI leaders should be approved by the class professor for content competency. The SI leader neither re-lectures nor introduces new material, instead the SI leader's responsibility is to organize and add structure to the SI sessions. The responsibility for processing class material and answering questions generated by the students remains with the students. The primary function of the SI leader is to facilitate discussion among SI participants and model successful learning strategies at key moments in the SI sessions.

The SI Leader Serves as a Model Student

The SI leader functions as a "model student" of the discipline rather than an authority figure. SI leaders help students to formulate and answer their own questions. This process helps students develop a more sophisticated approach to learning while maintaining the focus on content mastery.

SI Sessions Integrate Content and Learning Skills

The SI sessions integrate the review of lecture notes, textbook readings, outside supplemental readings along with appropriate modeling of learning strategies. "How to learn" is embedded into SI sessions along with "what to learn." Through practice and mastery of effective learning strategies, students can adopt and transfer these strategies to other subjects and content areas. Collaborative learning strategies are used in SI sessions as a means of creating a more active learning environment for student participants.

The SI Leader Attends the Targeted Class Lectures

When the SI leader attends lecture sessions, the SI leader is knowledgeable about what is occurring in the class sessions and has an opportunity to model "good student" behavior in the subject. The SI leader's presence in the classroom also serves to market the SI program to students. Sometimes there is a scheduling incompatibility between the SI leader and the time that the targeted class meets. In these cases the SI leader meets at least once a week with the targeted class instructor to discuss the lecture content, textbook readings, homework assignments, and proposed SI session activities.

SI Leader Receives Training

The SI leader receives training prior to the beginning of the term. In-service training continues throughout the academic term. These training sessions include specific teaching/learning theory and strategies.

Top Ten Positive Outcomes and Benefits of Supplemental Instruction

- Students earn higher subject grades while they learn effective study skills.
- SI provides an opportunity for students to develop relationships with other students and staff, an important factor in retention.
- SI places the responsibility of learning with the students.
- SI helps to develop self confidence and independence in students.
- SI is proactive and participatory rather than reactive and passive.
- SI provides peer collaborative learning experiences which promote assimilation into the campus culture.
- SI improves communication skills.
- SI accommodates various learning styles.
- SI provides students with team work experiences.

- SI enjoys a non-remedial image while offering academic support to all students enrolled in historically difficult subjects.

Semester Schedule

First Week of Classes SI Leader

- Attends class
- Meets with instructor
- Gives introductory speech and invites class to SI group

Second through Fourteenth Week of Class

- Regularly scheduled SI groups
- Meet with instructor
- Attend classes

Fifteenth Week of Classes

- Last week of regularly scheduled SI groups

Sixteenth Week of Classes

- One review session per class to be arranged with SI Coordinator

Supplemental Instruction Leader Line of Communication

SI Coordinator	Faculty
Hiring and related paperwork	Course information i.e.-syllabus, book
Payroll	Instructor goals and expectations
Training	Information to cover in group
Evaluation and discipline	Questions about class material
Handling difficult students	Handling difficult students
Group and leader attendance	SI leader missing a session
Resources for group activities	
Facilities issues i.e.-room, video etc.	

Policies and Procedures

No Show Policy

<u>If for any reason you are unable to make a group session you must notify both the instructor and the Coordinator of Supplemental Instruction</u>. The phone number is

910-672-2007. If you know in advance that you will not be able to work please contact the SI Coordinator as soon as possible.

Class Cancelled

If for any reason class is cancelled the SI group will meet at the regularly scheduled time. If you change your group meeting time you must notify the instructor, students and the SI coordinator.

Mailboxes & Emails

You should check your SI mailbox at least once a week and check your email at least three times a week. This is the first line of communication and we will be putting important information in your mailbox. All paperwork will be delivered by mailbox.

Time Logs/Timesheets

The pay period starts on the 16th of the month and ends on the 15th of the month. All time logs are due every Friday. SI leaders are responsible for keeping their time log up to date in filed in the SI leader timesheet binder next to the mailboxes. All time sheets must be signed by the instructor or you will not be paid.

Student Check-In Procedures

All students attending SI must sign in at the front desk and sign out either at the front desk or at a computer by the door. If your group meets in a classroom outside of the Student Success Center then you will have to check the students in and out on the computer in the room. Here are the procedures for checking the students in and out.

Logging in a student for Supplemental Instruction sessions:

- Turn on the computer and log on.
- Open up AccuTrack.
- Enter student I.D. number into screen.
- Use mouse to click “Edit Sign-In Logs.”

- Use mouse to click on “Student.”
- Use mouse to click “Sign In.”
- Under “Lab” select “SI Resource Center.”
- Select “SI” under “Category.”
- Put in your name in the “Staff” dropdown.
- Click “SI” in “Service Type.”
- Edit the time
- Select the student’s name from the menu and move it to the right side.
- Click “Sign In.”

Registration and Positive Attendance

Students who are attending SI groups need to enroll in Tut 050/060 (Supervised Tutoring) in order for the Student Success Center to collect positive attendance. This is important as it helps make the program self-sustaining and justifies the continuation of the program. The SI leader is responsible for passing out the blue half sheet forms in the SI group. Each student needs to fill this form out once a semester. You must check each session so if someone new is in attendance he/she must fill out the form. Please make sure that they fill out the form completely and use the correct I.D. number. Turn these forms into the SI Coordinator mailbox after each group meeting with your name and class writing in pencil on the top sheet.

SI Attendance Sheet

You are required to fill out an SI attendance sheet after each SI session. It includes important information such as the number of students in attendance and the cooperative learning strategies and activities that you incorporated into the session. You may turn them into the SI Coordinator mailbox.

Cancelling an SI Group

A group will be cancelled when attendance is between 0 and 2 for two weeks straight. Before the group is cancelled the SI Leader will notify the SI Coordinator so that the students in the class can be reminded and encouraged to attend group.

General SI Group Tips

Develop Independent Learning

The ultimate goal of the Tutoring Program is to help students develop their own learning independence. SI leaders can foster this independence by helping students:

- Understand a syllabus
- Develop good communication with the instructor
- Plan strategically
- Prioritize study time
- Relate class goals to personal goals
- Become aware of and use college resources
- Understand and apply their personal talents and learning styles to academics
- Find creative ways to learn facts and concepts

Let students know early in the semester that SI sessions are designed to help students learn material, practice strategies for course work or study, and have fun connecting with the course in a smaller setting. In other works, SI sessions do not simply provide students answers to coursework, study guides, or exams. Students learn almost nothing when an answer is given to them. Let students know that SI is not a "quick fix" for the course, but a place where you can work together to improve their learning in the course.

Keep Each Session Task Focused and Come Prepared!

With the course instructor, develop a map of what is to be covered each week in the SI group. It is a good idea to meet with the instructor perhaps every couple of weeks to design or review these plans. Feel free to adjust your ideas (with the instructor's consent) to better meet student needs. The instructor can help make students aware of the plan for SI each week.

Staying on Task

It is always healthy to let students do a little but of "venting" about their reactions to a class. But, be cautious of letting free-form discussions of "class" take too much time from the SI session. Students can be persistent about co-opting the session time to talk about their own issues; the problem is that this kind of talk steals valuable time away from students who are there to get concrete help. Transition out of unconstructive chatting sessions by reminding students of the tasks you have for the session. ("OK, let's get on to working on a study guide for the exam…") Also, advise students to contact the instructor with any major concerns or suggestions.

Difficult Students

This doesn't happen often, but if you have a student in the SI sessions that is causing trouble on a regular basis, start by asking the student to meet with you after the session. Then, try to find out what is causing the problem and ask the student to stop the problematic behavior. If a student continues to spark difficulty, talk to the instructor and/or the SI Coordinator. You might consider asking the student to meet with the instructor and/or Coordinator before coming to another SI session.

Encouraging Participation

In order for participants to learn from each other, people have to participate. The first step in encouraging participation is to create a comfortable atmosphere.

- Set up ground rules
- Be aware of your personal body language: maintain a positive, open stance
- Show interest in what is being said, regardless of how you feel personally
- Look at the person speaking
- Use appropriate comments: "Thank you", "I appreciate you sharing"
  Sometimes the best way to foster participation is to allow silence. Often the impulse as a facilitator is to jump in when there is a pause. Silence can be valuable, however, in allowing time for participants to process information or collect their thoughts.
- Allow silence by slowly counting to 10 in your head before you say anything
- If people are not responding to the question, try to rephrase the question or give encouraging comments: "I know this is a tough question", "I know there are some interesting viewpoints represented here, and I's love to hear them"

Some people have a harder time opening up in large groups, so whenever possible provide a variety of presentation methods, such as small group discussions, mini lectures, dyads, etc.

Strategies for Different Learning Styles

Visual Learner

- Write on the white board
- Create handouts
- Use graphic organizers
- Have students write on white board or at their desks
- Create visual aids in groups i.e.-mind mapping chapters

Auditory Learner

- Work in small groups so everyone has a chance to talk
- Have students take turns reading the text out loud
- Have groups give oral presentations
- Have students explain concepts with a partner

Kinesthetic Learner

- Walk while reciting or memorizing & play academic games
- Take frequent one minute breaks to stretch & work in groups

Types of Supplemental Instruction

Writing Skills

Students are often required to write in the humanities courses. While the SI group is not a place for one-on-one tutoring there are strategies to help the group with their writing assignments. One strategy is to create a question, then ask students to brainstorm all the ideas and facts they know about the question. Students can put similar ideas together and state which facts support the ideas. The group can then write the first sentence or two of the proposed essay. Individuals can be encouraged to finish the practice essay on their own, and read them to each other.

Supplemental Instruction Sessions for the Humanities

In humanities classes there may not be much information written on the white board and in the textbooks there may be few illustrations or diagrams. This lack of visual presentation may be disconcerting for those used to having it. Because so many lectures in the humanities rely on words, SI sessions need to provide visual models. These visual models should help show how concepts are related to each other. Because the content of the humanities is particular, students must pay close attention to what is said, how it is said, and by whom it is said. Students new to the discipline may not pay sufficient attention to the author or a statement.

Supplemental Instruction Sessions for Problem Solving

A model of board work that facilitates a process understanding of problem-solving strategies is extremely helpful. It shows how four types of information are placed on the board as problem-solving is modeled in an SI session.

Prerequisites	Steps in Solution	Rules	Similar Problem

SI leaders use the board work model when students don't know how to solve a problem, student are stuck within a problem, or to check student understanding of how to solve each type of problem. This type of board work includes the following:

- Model prerequisite information so students see source of information
- Models that include verbal and written explanations
- Allow students to ask questions at any point
- Rules written in narrative form
- Students given opportunity to practice and check understanding
- Do not re-lecture or tell students how to solve problems
- Number each step

All Supplemental Instruction Sessions

<u>Structure</u>- At the beginning of the term you must provide structure. Don't expect to arrive with the intention of "answering questions". You may want to write an agenda of the session on the white board for each session.

<u>Syllabus</u>- Review the syllabus with the students early into the term. Take note o the homework assignments, exam dates, and grading policy. Announce that you are not allowed to work homework problems, but that problems similar to the homework will be discussed and worked on during the SI sessions.

Lecture Notes- During the first week talk about lecture notes. If possible, look around the room during the lecture to see how students are reacting to the material being presented. You may want to distribute copies of your lecture notes one time so that students can see your strategies for note taking. This can provide a basis for a discussion of note taking skills.

Textbook- Share your method of reading the text book with the students. Focus on the different parts of the chapters: sample problems, new symbols and vocabulary, discussion and homework problems.

Worksheets- Develop worksheets for use during the SI sessions which help generate discussion and focus on key concepts. Get instructor's approval.

Session Strategies

Lecture Review

- Students summarize most recent lecture and identify key words
- Three minutes to find support in lecture notes
- Students arrange terms from lecture into an outline
- Reinforce important information with incomplete handout
- Students at end of session summarize main ideas
- Students write one paragraph essay of lecture
- Formulate potential exam questions from lecture

Oral Reading of Notes

- SI leader reads notes first and take turns around the room
- Encourage students to know if something is left out or inconsistent
- Gently encourage but do not push to read-confidence will improve
- Finish reading, work with other students for answers, bring questions to class

Incomplete Outline

The incomplete outline is an excellent means of helping students recognize the main points and the organizational pattern of information given in lecture. It can also be used for textbook information.

- Point out main points leaving blanks
- Groups must work together using notes and book to fill out

Matrix

A matrix helps students organize information by showing its relationship to similar categories of information.

	Colonization		
	Religious	Economic	Political
Dutch			
English			

Visual Techniques

Some students learn well by creating visual study aids. Visual techniques help pull the ideas together in a clear, concise and organized manner. The best visual techniques do more than just on-dense notes; they help students understand the relationship between topics covered in various lectures and provide a "big picture". The website www.writedesignonline.com/organizers/index.html lists numerous graphic organizers and a brief description along with possible uses.

Vocabulary

- Use the terms yourself during the group session
- Before a test, create a handout and have students work together to circle key terms in their notes and create a list, then report to group
- Create a vocabulary matrix and have students work together to fill it in

Term	Meaning	Example-Notes	Example-Text	New Example

- Make vocabulary note cards for quick review

Time Lines

Make sure that the dates are truly important before using this procedure. Then, make a brief, very general timeline of events happening in the U.S. and/or world at approximately the same time as the dates presented. Give this general timeline to the group at the beginning of the session. Then, have the student draw a duplicate timeline directly below the one they have previously constructed. They should work in pairs to find key dates from the notes and textbook and place them on the new line. Discussion should follow.

Preparing for Exams

The dates of exams should be reviewed regularly so that students are reminded to start studying early. Discuss with the students the kinds of questions to expect on exams. Also explore the amount of emphasis that will be placed on the text, lecture and outside readings. Have students submit 3-5 questions. These questions can be assembled into a practice or review exam and returned to students for study. If appropriate, periodically offer practice essay questions. Ask student to outline the answer first. Initially, have the students use their book and lecture notes, but work toward a normal test situation.

Post Exam Survey

Following are some questions students might like to think about after taking an exam. Answers to these questions could help them to focus on effective exam preparation strategies. Helping students to self-discover their own pattern of errors will help them to self-correct.

- Which part of the exam was the easiest for you? Why?
- Which part of the exam was the most difficulty? Why?
- Which of the following activities did you complete prior to the exam?
  All required reading assignments, preparation and review of reading notes, review of lecture notes, self-testing of material to be covered by the exam, prediction of possible questions by you prior to the exam, study with friends, others.

- Which of the above did you find most helpful in preparing for the exam?
- How much time (in hours) did you spend preparing for the exam?
- Did you feel prepared when you walked into the exam? Why or why not?
- What changes might you make in the way you study for the next exam in this course?

Collaborative Learning Techniques

Group Discussion

A group discussion is a general discussion of an issue or topic by the group. Individual members are free to contribute or not contribute. Ideally, everyone is actively involved in the discussion and the discussion topic is of equal interest to all group members. When group discussion is successful, it may be difficult to determine who is actually leading the discussion.

Clusters

In clusters, group participants are divided into smaller groups for discussion. They may also be allowed to self-select the small group they want to be in. After discussion of the assigned topic and recording the important points of their discussion the cluster may report their findings to the large group. You may assign someone from each group to report back.

Turn to a Partner

Group members work with a partner on an assignment or discussion topic. This technique works best with group participants who have already been provided with enough background on a subject that they can immediately move to a discussion with their partner without previewing or reviewing concepts.

Assigned Discussion Leader

One person in the group is asked to present on a topic or review material for the group and then lead the discussion for the group. This person should not be the regular group leader. Allow time for the person leading the discussion to prepare for the discussion. This technique works best when everyone in the group is given an assignment to be the “expert” on.

Think/Pair/Share

Group members work on an assignment or project individually and then share their results with a partner. The goal of this technique is to allow participants time to think before they discuss. When doing a Think/Pair/Share, give participants a specific amount of time (5 minutes, 10 minutes) for the "think" portion.

Jigsaw

Jigsaws, when used properly, make the group as a whole dependent upon all of the subgroups. Each group provides a piece of the puzzle. Group members are broken into smaller groups. Each small group works on some aspect of the same problem, question, or issue. They then share their part of the puzzle with the large group. When using jigsaw, make sure you carefully define the limits of what each group will contribute to the topic that is being explored.

Group Survey

Each group member is surveyed to discover their position on an issue, problem or topic. This process insures that each member of the group is allowed to offer or state their point of view. A survey works best when opinions or views are briefly stated. Be sure to keep track of the results of the survey.

Three Step Interview

Develop a list of interview questions prior to the class session. Interview questions that are particularly effective ask a person about opinions or experiences related to course content. Students divide into groups of four, and quads subdivide into pairs A-Band C-D. Student A interviews B and student C interviews D for a predetermined time. The interviewer asks questions, listens, and proves for further information but does not evaluate or respond. Partners reverse roles and interview each other for the same amount of time. Students A and B introduce each other with synthesized summaries of their partner's interview responses to Students C and D. Students C and C do the same for Students A and B.

Talking Chips

This technique helps to ensure equitable contributions from everyone to the discussion. Form student groups. Give each student five tokens (cards, chips etc.). As students participate they surrender a token. When all members have contributed to the discussion and all tokens are down, ask students to retrieve and redistribute the chips so that the procedure can be repeated.