

UNIVERSITY OF WYOMING

June 9, 2003

Final Report on Pilot Program in Supplemental Instruction (SI) / 2002-2003

Brief Description of the Pilot Program in Supplemental Instruction (SI):

SI courses are targeted based on having historically high D/W/F rates. SI involves weekly, structured review sessions led by a student (SI Leader) who has successfully completed the course in the past. The SI model stresses active, collaborative learning and acquisition of study skills that target the supported course with the assumption that students can transfer these new skills to other courses.

Program Structure:

For each course supported, the SI Leader attends lectures and conducts multiple SI sessions each week at different days and times.

SI Supported Courses for 2002-2003:

Fall 2002: Biology 1010 (General Biology I) with a final enrollment of 149 students (offered for only one section),

Fall 2002: Anthropology 1200 (Cultural Anthropology) with a final enrollment of 167 students, and

Spring 2003: Biology 2020 (General Biology II) with a final enrollment of 301 students (offered to all sections).

Funding:

Funding for SI was provided as follows

\$ 5,000 A&S

\$ 4,000 SA

Evaluation:

Fall 2002, Biology 1010

SI was extraordinarily successful in terms of attendance and grade outcomes.

- a. Attendance exceeded capacity at times and a fourth SI session was added.
- b. Qualitatively, students who took advantage of the service reported high satisfaction with the SI sessions.
- c. Sixty-two students attended sessions and total attendance at all sessions was 286.
- d. On a quantitative basis, students who attended two or more sessions averaged 83% on their exams and students who attended one or no sessions averaged 68% on their exams. There is a positive correlation ($r=.33$, $p < .05$) between the number of sessions attended and grades on the exams. There is a strong correlation between ACT scores and average exam scores ($r=.53$ $p < .05$). However, the correlation between ACT scores

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and number of sessions attended, if any, is not significant indicating that academic ability is not a good predictor of how many review sessions students will attend and indicates to us that we are not serving primarily those students who tend to take advantage of opportunities to improve grades and understanding. Average ACT Score for attendees is 23.6 while average ACT Score for non-attendees is 22.8.

Fall 2002, Anthropology 1200

SI was helpful for students who attended, but because attendance rates were low it has not been cost effective to support this course.

- a. Students who took advantage of SI felt that it helped them; however attendance was very low given the high enrollment in this course and it's traditionally high D/W/F rate. It was felt that the reason it was difficult to convince students to attend was primarily because students felt this course would be easy and they wouldn't need additional assistance.
- b. Thirty-three students attended sessions and total attendance at all sessions was 91.
- c. On a quantitative basis, students who attended two or more sessions averaged 82% on their exams and students who attended one or no sessions averaged 75% on their exams. There is a positive correlation ($r=.16$, $p < .05$) between the number of sessions attended and grades on the exams for all students in the class.

Spring 2003, Biology 2020

SI was, again, helpful for students who attended, but attendance rates were lower than expected given the success of SI support for Biology 1010.

- a. SI was offered for BIOL 2020 because BIOL 1010 SI proved to be a success, BIOL 1010 is not offered in the Spring semester, and because support for SI among Biology instructors is strong.
- b. Forty-seven students attended sessions and total attendance at all sessions was 198.
- c. On a quantitative basis, students who attended two or more sessions averaged 74% on their exams compared to 69% for the other students. There is a positive correlation ($r=.29$, $p < .05$) between the number of sessions attended and the average score on all exams for those students who attended two or more sessions suggesting that those students who attended SI and averaged only 74% on exams would have done poorly in this course without SI support.

Recommendations for 2003-2004:

SI support of Biology 1010 resulted in the heaviest use of services and the strongest positive results (in terms of grades) for attendees. Positive outcomes in Biology 1010 are likely due, in part, to strong support for the program among Biology faculty. Support of courses such as Biology 1010 falls within a "classic" model of SI given that

- Course enrollment is high
- Enrollment is composed of, primarily, Freshmen and Sophomores
- Courses in math and the natural sciences tend to be viewed as difficult subject areas by many students
- The D/W/F rate for this and similar courses is high and
- The course fulfills a distribution requirement for UW students and enrollment is not necessarily composed of students who intend to major in the subject area.

In varying from a classic model in order to pilot SI services in ANTH 1200 and BIOL 2020, the Academic Services office hoped to build support and attendance among students in social sciences (and among social sciences faculty) and among students taking courses that require a prerequisite. Although SI was very useful in building skills and improving grades among students who attended, student disinterest and students' initial view of a course's difficulty level would need to be addressed in order to make support on these types of courses cost-effective.

It is recommended that BIOL 1010 again be supported as an SI course as well as at least one additional course (potentially CHEM 1020).

Long Term Recommendations:

Supplemental Instruction at the University of Wyoming needs to be moved from its perpetual "pilot" status to a sustained, ongoing program of the university. Funds for the SI program need to be committed, minimally, on a bi-annual basis and must include resources to support the administration of the program.

Commitment to Identifying and Supporting Core SI Staff

Long term expansion, improvement, and continued services in Supplemental Instruction are dependant on a core staff able to plan, administer, and evaluate the SI program. Because student involvement and student success in raising grades and learning new skills is largely dependant on the preparedness and professionalism of the student SI Leader, core staff should include individuals able to effectively identify, train, and supervise SI leaders.

Commitment to Stable Funding for the SI Program

Long term success of the SI program at UW will also require a stable commitment of institutional funds. Because successful SI programs are associated with significant increases in students' course grades, cumulative GPAs, and retention at the institutional level, there are many stakeholders in a stable and effective SI program. These entities include departments offering courses targeted by SI, departments that benefit from student success and commitment to pursuing math and sciences degrees, and the university as a whole.