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Supplemental instruction programs: an effective way to increase student academic success?

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This paper explores the effect of supplemental instruction programs on student academic success. Combining study skills and techniques in peer-led interactive study sessions, supplemental instruction programs aim to equip students with more advanced learning tools. Advantages and disadvantages of supplemental instruction programs are presented. The paper concludes with an outline of some factors which should be considered prior to implementing supplemental instruction programs.

At the Indiana University-Bloomington (IUB) campus, between 8 and 10% of students fail to meet the academic requirement of maintaining a cumulative grade point average of 2.0 each semester (Moir and Beverstock, 1994). In response to the poor performance of students, IUB and other institutions have implemented supplemental instruction (SI) programs. The program identifies academic courses in which large numbers of students consistently receive low letter grades or withdraw from class. The intention of the SI program is to change the way students learn in order to increase their success.

The first SI programs were developed at the University of Missouri at Kansas City in 1973 by Dr. Deanna Martin (Widmar, 1994). An ancient Chinese proverb states "Tell me and I forget, show me and I remember, involve me and I understand". This proverb succinctly explains the concept of supplemental instruction. The goal of SI is not merely to raise the grades of students in problem courses, but rather to supply students in these courses with effective study skills, to enable them "to become more active, engaged and independent learners" (Zaritsky, 1994, p.2).

SI programs aim to increase student performance and retention by targeting traditionally difficult academic courses where high rates of D or F grades or withdrawals are consistently reported. All students enrolled in the problem classes are invited to participate in SI study sessions, which meet at regular times beginning the first week of the semester. Students receiving high letter grades in previous semesters are selected as SI leaders.

SI leaders attend all classes, take notes, and read all required materials to facilitate study sessions which match the material presented by the faculty teaching the course (Martin and Arendale, 1994). In addition to their prior knowledge of the course material, SI leaders attend a comprehensive training session prior to the semester and receive semester-long supervision provided by the SI supervisor. The SI supervisor is typically a student affairs administrator or academic advisor and is responsible for coordinating all aspects of the SI program.

SI sessions focus on combining basic study skills and study strategies. Study skills include note taking, preparing for exams, and effective textbook reading. Study strategies focus on methods of learning such as informal quizzes, the use of visual techniques to outline material, and lecture reviews (Martin and Arendale, 1992). During study sessions, informality and participation are encouraged. The SI leader serves as a group facilitator, rather than as an instructor. This participative model contrasts with the traditional, passive learning style of most lectures. These study sessions are often a more effective mode of teaching, because students' learning is enhanced when "active rather than passive strategies are used" (Astin, 1993, p.39).

Through the use of various study techniques and the reinforcement of good study skills, students attending SI programs have more academic success than their peers who do not attend SI sessions (Kenney, 1989). Kenney (1989) studied two sections of the same math class taught by the same professor. The study group attended SI sessions facilitated by a trained SI leader while the control group attended traditional review sessions facilitated by a teaching assistant. At the end of the semester the mean grade point average (GPA) for the control group was 2.51, but the SI group achieved a mean GPA of 2.95.

It should be stressed that SI is in no way a remedial program. The study sessions are open to all class participants, and the program focuses on traditionally difficult or high risk academic courses, rather than on students with academic problems (Zaritsky, 1994). Whereas remedial programs merely recap the material covered in lecture, the focus of SI sessions is somewhat different. SI sessions encourage students to "construct their own

knowledge" through interactive activities facilitated by the SI leader (Zaritsky, 1994, p.1).

Research by Martin and Arendale (1994) has highlighted the clear advantages provided by SI programs. Their research shows that over the last 10 years, SI programs have been implemented in 2875 college courses, and attendees have seen their grades increase by a half or full letter grade over those of non-attendees. These findings are supported by Zaritsky's (1994) study of a community college, which found that all the SI programs implemented therein showed increased passing rates and decreased failure rates.

In addition to the increase in grade point averages and passing rates, these programs may also have more subtle effects on their participants. SI programs encourage student involvement in out of class activities. The involvement of students in such peer groups can help to develop a sense of belonging to the institution, and may also lead to a higher likelihood of graduation (Astin, 1993). The Study Group on the Conditions of Excellence in American Higher Education (as cited in Kuh, Shuh, and Whitt, 1991), suggested that students who spend more time engaged in the learning process are more likely to persist in college.

Several advantages of SI programs have been discussed above. However, some disadvantages do exist. Administratively, SI programs require considerable coordination. Each SI peer leader must be carefully selected for their academic and interpersonal skills (Martin & Arendale, 1994), receive training prior to the semester, and be supervised weekly during the semester. An institution must have sufficient professional staff willing to make significant time commitments to the SI program in order for it to operate effectively.

A significant concern facing administrators wishing to implement SI programs lies in garnering faculty support for the program. SI leaders must work closely with faculty teaching the targeted course. SI leaders need to have a clear understanding of the syllabus, be aware of exam requirements, and may even work with faculty to move exams until after scheduled SI sessions to allow students to adequately prepare (Zaritsky, 1994).

Perhaps the biggest problem facing administrators wishing to implement SI programs lies in convincing students that committing time and energy to study sessions each week will pay off (Zaritsky, 1994). Because SI is not a remedial program designed for at-risk students, and attendance is not mandatory, many students who could benefit from the academic support offered through SI programs may not see the need to attend these sessions.

SI has been shown to be a valuable resource for increasing the academic success of participants (Zaritsky, 1994; Kenney, 1989). Although study skills and techniques offered to students in a non-remedial setting have been shown to increase grades and may subsequently impact retention (Astin, 1993), the administrative commitments of SI programs are many. Student leaders must be selected, trained, and guided throughout the semester; faculty support must be generated; programs have to be developed and evaluated; and the involvement of professional staff must be secured.

As has been indicated, there are considerable administrative factors involved with implementing supplemental instruction programs. The benefits of supplemental instruction, however, would seem to far outweigh these organizational costs. By equipping students with more refined learning skills, involving them in interactive learning situations, and giving them the tools to improve their own performance, research has proven that supplemental instruction is an effective, positive way to enhance student academic success.

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