

Fostering Multicultural Education with a Learning Assistance Model That Works: Supplemental Instruction

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February 14, 1993

College Students Face Campus Culture Problems

Through all the institution's process and products, multicultural education stresses respect for and understanding of cultural diversity and individual uniqueness. Multicultural education is not a supplementary area, rather, it is a process and philosophy with ideas that are broad and integrative. However, some see that patterns of resegregation have returned to some elementary and secondary schools since academic ability groupings often result in separation of students by race and class (Edwards, 1991). It is difficult to promote multicultural education if the students are separated.

Supplemental Instruction (SI) is a collaborative learning strategy that can help facilitate multicultural education as well as assist students in developing learning strategies that they can use to earn higher grades and persist longer in college.

College Students Face Academic Difficulty

A recent study reveals that the first year to sophomore dropout rate is 45.2 percent for post-secondary institutions with open admission policies (ACT, 1992). Supplemental Instruction (SI) addresses attrition by providing academic support in courses that are high risk for students. Rather than attempting to identify "high risk students" which still has proven to be a difficult science, SI identifies courses that are high risk due to a high percentage of D and F final course grades and withdrawals. Examples of these types of courses included general education requirements or gatekeeper classes, critical introductory courses that must be passed to enter a program of study. These courses can form a significant hurdle to any student, despite their academic preparation or previous academic success.

Development of Supplemental Instruction

Supplemental Instruction was initiated in 1974 by Deanna C. Martin, Ph.D., at the University of Missouri-Kansas City. SI was first used in courses in the Schools of Medicine and Dentistry. Though the students enrolled in these UMKC health science schools had a previous history of good academic performance, many were having academic difficulty and some were dropping out of school. Clearly the problem did not reside with the academic preparation of the students since nearly all were high school academic honor students. Instead, the problem was difficulty in specific courses. The University supported the expansion of SI throughout the institution's College of Arts and Sciences in succeeding years. Presently SI is offered in about 45 classes each year.

To our knowledge, the features of SI that were innovative to assistance programs when SI was initiated in the mid-1970's are as follows: high risk courses are identified instead of high risk students and everyone in those courses is offered assistance;

student participation in small group SI sessions is voluntary; and evaluation of SI goes beyond student and faculty satisfaction surveys and includes actual rates of institutional change. SI looks at attrition from the institutional (macro) rather than the individual (micro) level.

Role of Collaborative Learning in Multicultural Education

In recent years the professional literature has been considering effective multicultural education strategies. Some have advocated for a carefully planned infusion of content material that includes the contributions from other cultures (Brown, 1991; Hilliard, 1991; Miller, 1990). Another approach is to focus on creating a learning environment that allows for cultural differences to emerge naturally. Students would be encouraged to share aspects of their culture naturally as a part of the lesson rather than being the central focus (Claxton, 1990; Dash, 1990).

In a simplistic way, these two approaches represent content and process strategies. And frequently, both are desperately needed. Collaborative learning, and SI in particular, can serve as one of several strategies in multicultural education. In addition, some researchers suggest that collaborative learning is a more helpful learning environment for students of color since many prefer field-sensitive learning environments (Knott, 1991; Nieto, 1992; Sandberg, 1990). The intimacy of the small group with high levels of participation is needed for students to come to grips with the multiplicity of realities that different cultures create (Morris, 1990).

All students enrolled in the targeted course are encouraged to participate in SI; therefore, SI groups are composed of students of varying academic abilities and differing ethnicities. No effort is made to segregate students based on academic ability. Since SI is introduced on the first day of class and is open to all students in the class, SI is not viewed as remedial. UMKC research suggests that the rate of participation in SI is the same for students in both the highest and lowest ACT composite score quartiles and that both higher and lower ability students benefit within the same group.

The key people in the program are the SI leaders. They are presented as students of the subject. An ideal SI leader would be a student who has previously taken the course that they are now assigned. As such, they present an appropriate model of thinking, organization, and mastery of the discipline. SI leaders are deemed competent in the content area by the instructor of a targeted course. Most SI programs pay the SI leaders a stipend. At UMKC they earn around \$800 per course.

SI leaders attend all class sessions, take notes, read all assigned material, and conduct three 50-minute SI sessions each week. The 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, and test preparation, as they review content material. Students have the opportunity to become actively involved with the course material as the SI leaders use the text, supplementary readings, and lecture notes as the vehicle for learning how to study.

Results and Outcomes for Students and/or The Institution

The effectiveness of the SI program was validated by the U.S. Department of Education in 1981 as an Exemplary Educational Program. Each academic term careful records are maintained on the UMKC student performance with the SI program.

Reports are also received from the 180 other programs across the U.S. Consistently, the following outcomes occur:

1. Reduced Attrition Rates.

Rates of unsuccessful enrollments (percentage of D and F grades) in targeted courses are significantly lower than they were before the addition of SI. In addition, the rates of course withdrawals for SI participants are about half the rate for non-participating students.

2. Improved Academic Performance.

Evaluation data show that the average course grade of the SI group is between one-half and a full letter grade higher than the average course grades of students not participating in SI. These performance differences are still evident when the SI group is compared to a motivational control group - those students who wanted to attend but were unable to participate due to scheduling conflicts. (Conflicts were identified as other classes or work.)

Differences in performance patterns between SI and non-SI students are also apparent despite the students predicted academic ability. Compared within their peer groups, SI is as effective for students scoring in the bottom quartile on ACT/SAT tests as it is for students scoring in the top quartile. Minority students also display equal success with other students who participated in SI.

For purposes of this article, the following research study is shared. This study examined the utilization and effectiveness of SI services for students of differing ethnicities. A sample of thirteen institutions was selected for analysis. The study was partially funded by the National Association for Developmental Education and was coordinated by May Garland. Institutions were selected since: they had many SI's in place; had sufficiently rigorous data collection procedures; had transmitted their data to us in a timely fashion; they represented a cross section of institutions (three two-year public, four four-year private and six four-year public).

Data permit the following observations. Students in each of the Non-Caucasian ethnicities used SI services at equal or higher rates than Caucasian students (Table 1). Regardless of quartile ranking (Table 2), Non-Caucasian SI-participating students earned higher grades than their non-participating counterparts ($p < .01$). Non-Caucasian SI-participating students (Table 2) received a lower percentage of D and F final course grades and withdrawals ($p < .05$) than their non-participating counterparts.

3. Increased Reenrollment/Persistence Toward Graduation.

Students who participated in SI reenrolled at UMKC at a rate ten percentage points higher than non-participating students. This difference held true whether the students had scored in either the top or bottom quartile of college entrance test.

4. Cost-effective Model That Can Be Replicated.

Studies from UMKC and other institutions suggest that due to increased retention and graduation rates, the cost of the SI program is far less than the additional income generated through retained students. To date, the SI program has been implemented at over 300 other colleges and universities. SI has also been implemented in several other educational environments. SI was implemented in a pilot program at an ethnically-diverse inner city high school in Kansas City, Missouri. Several test preparation programs for the medical profession (e.g., Medical College Admissions Test, National Board Examinations) use SI to enhance their programs.

Conclusion

It is noteworthy that SI services appear to meet the needs of students with a wide range of previous levels of academic achievement and ethnicities within the college courses, thus reducing the necessity for the institution to provide additional and separate tutorial and academic support programs. Collaborative learning programs can be an effective way to foster multicultural education in a low-key, but powerful manner. In closing I would like to share a quotation from Vincent Tinto that summarizes my feelings. "One way of integrating all students is to make sure our learning communities are open communities. We must make sure that classrooms do not disenfranchise or isolate students by their structure or by their content. We have to be concerned about the classroom experience as a liberating, integrative experience for all, not just some, students (Tinto in Spann, 1990, p. 22).

References

- American College Testing Program. (1992). ACT institutional data file, 1992. Iowa City, IA: American College Testing Program, Inc.
- Brown, C. (1991, Spring). "Increasing minority access to college: Seven efforts for success," *NASPA Journal*, 28(3), 224-230.
- Claxton, C.S. (1990). "Learning styles, minority students and effective education," *Journal of Developmental Education*, 14(1), 6-8.
- Dash, R. (Ed.). (1990). *Preparing teachers for diverse student populations*. Far West Laboratory for Educational Research and Development.
- Edwards, H. (1991, Fall). "Democratic pluralism: Placing African-American student-athletes in the context of a new agenda for higher education," *NACADA Journal*, 11(2), 28-109.
- Hilliard, A.G. (December 1991/January 1992). "Why we must pluralize the curriculum," *Educational Leadership*, 49(4), 12-16.
- Knott, E.S. (1991, Winter). "Working with culturally diverse learners," *Journal of Developmental Education*, 15(2), 14-16, 18.
- Miller, C.A. (1990, Spring). "Minority student achievement: A comprehensive perspective," *Journal of Developmental Education*, 13(3), 6-8, 10-11.
- Morris, M. (1990, Spring/Summer). "A multicultural society needs a multicultural education," *The Academic Workplace*, 1(2), 3-4.
- Nieto, S. (1992). *Affirming diversity: The sociopolitical context of multicultural education*. New York: Longman.

Sandberg, K.E. (1990). "Affective and cognitive features of collaborative learning,"
Review of Research in Developmental Education, 6(4), 1-4.

Spann, N.G. (1990, September). "Student retention: An interview with Vincent Tinto,"
Journal of Developmental Education, 14(1), 18-20, 22, 24.

Table 1: Participation in SI By Differing Ethnicities:
1987 (N=13 Institutions; 2,410 SI Participants)

Caucasian	African American	Hispanic	Asian/Pacific	Native American
33.8%	42.0%	50.9%	33.3%	42.9%

Table 2: Effectiveness of SI With Differing Ethnicity and Levels of Previous Academic Achievement: Spring and Fall 1987
(N=13 Institutions)

Group Composition	Percent D,F, & Withdrawals		Mean Final Course Grade	
	SI	Non-SI	SI	Non-SI
All Minority	36%*	43%*	2.02**	1.55**
Lowest Quartile, Minority	Not collected	Not collected	1.87**	1.35**
Highest Quartile, Minority	Not collected	Not collected	2.64**	1.97**

*Level of significance of difference: 0.05 using chi-square test. **Level of significance of difference: 0.01 using independent test.