

Some Useful References for Supplemental Instruction [SI] or Peer Assisted Study Sessions [PASS]

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Arendale, David [updated June 2005] Postsecondary Peer Cooperative Learning Programs: Annotated Bibliography

[Excerpt from Introduction] The six student peer learning programs included in this bibliography meet the following characteristics: (a) the program must have been implemented at the postsecondary or tertiary level, (b) the program has a clear set of systematic procedures for its implementation, (c) program evaluation studies have been conducted and are available for review, (d) the program intentionally embeds learning strategy practice along with review of the academic content material, (e) the program outcomes include both increased content knowledge with higher persistence rates, and (f) the program has been replicated at another institution with similar positive student outcomes. From a review of the professional literature six programs emerged: Accelerated Learning Groups (ALGs), Emerging Scholars Program (ESP), Peer-Led Team Learning (PLTL), Structured Learning Assistance (SLA), Supplemental Instruction (SI), and Video-based Supplemental Instruction (VSI). As will be described in the following narrative, some of the programs share common history and seek to improve upon previous practices. Other programs were developed independently.

Available from: <http://www.tc.umn.edu/~arend011/pubdir.htm>

Arendale, D R [2001] Effect of administrative placement and fidelity of implementation of the model on effectiveness of Supplemental Instruction programs. (Doctoral dissertation, University of Missouri-Kansas City, 2000).

Abstract: This research investigated variables that may influence effectiveness of the Supplemental Instruction learning assistance and enrichment program at the University of Missouri-Kansas City and other U.S. postsecondary institutions. Study number one analyzed variables related to academic performance of University of Missouri-Kansas City students (mean final course grades, rate of course withdrawal, and rate of persistence). Study number two investigated variables at 735 U.S. postsecondary institutions related to academic performance of students and satisfaction level with the campus Supplemental Instruction program. Independent variables included: administrative placement of the SI program unit (academic affairs, student affairs, or other), age of the SI program, fidelity of the program to SI program activity constructs (SI Supervisor involvement, SI Leader involvement, SI Leader training, institutional involvement), and four dependent variables (mean final course grades, mean percent of D and F final course grades and course withdrawals, mean percent of students who participate in the program, and satisfaction level with the program).

Study number one found positive correlation between higher academic achievement and persistence rates with the independent variables of SI attendance and measures of pre-collegiate academic achievement. The entire known population of 735 SI programs within the United States was selected for study number two. There were statistically significant positive correlations with three of the four program activity constructs (SI Supervisor Involvement, SI Leader Involvement, and SI Leader training) and the effectiveness of the program regarding improved student outcomes and higher satisfaction ratings by the campus administrators who supervised the program. There were no statistically significant differences between the different program administrative placement locations and the dependent variables. Implications from this research include identification of key activities within the program that should be observed to maximize program effectiveness for the institution and participating students.

Besides the two quantitative studies, an extensive review of the literature regarding the history of developmental education and learning assistance programs in the United States produced six discernable historical phases. Supplemental Instruction was placed within this social context in American history. The appendix includes an extensive annotated bibliography of 450 publications and other media types published by authors worldwide related to Supplemental Instruction.

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Ashwin, Paul, 'Peer Support: Relations between the context, process and outcomes for the students who are supported' in **Instructional Science**, 31: 159-173, 2003.

Abstract: In this paper an investigation of the outcomes of a Peer Support scheme for the students who are supported is reported. It was found that attendance at Peer Support sessions was positively and significantly correlated to academic performance. This relationship was found even when prior levels of academic performance were controlled for. However, it was also found that students who attended Peer Support sessions adopted less meaning orientated approaches to studying over the course of the academic year. It is argued that this is an indication that the quality of the learning of these students fell. Qualitative evidence suggests that this change in approach was in response to an increased awareness of the assessment demands of the course and that these students had become more strategically orientated in their approach to studying as a result of their attendance at Peer Support sessions. It is argued that these results suggest that the outcomes and operation of this Peer Support scheme were influenced by the context in which it operated. Two implications of these findings are discussed.

Congos, Dennis H and Schoeps, Nancy, 'Does Supplemental Instruction Really Work and What is it Anyway?' In **Studies in Higher Education** Volume 18, No 2, 1993, pp. 165-176.

Abstract Supplemental instruction (SI) has been in existence in the USA since the late 1970s but too many institutions still do not realize the range of academic benefits for students from this program. The researchers describe an SI program in the USA at the University of North Carolina at Charlotte from 1987 to 1990. They present inferential statistical data on the impact of this form of assistance on student academic performance as a measure of learning. The results indicate that students attending SI sessions earn higher final grade averages and receive fewer low grades and withdrawals than non-attendees. These favorable results are so in spite of the fact that SI attendees enter college with lower predicted academic potential and indicators of industriousness.

Mc Carthy, Andrew A; Smuts, Bridget and Cosser, Michael, 'Assessing the Effectiveness of Supplemental Instruction: a critique and a case study' in **Studies in Higher Education**, Vol. 22, No 2, 1997, pp. 221-231.

Abstract: Methods of assessing the effectiveness of Supplemental Instruction (SI) have neither satisfactorily nor conclusively demonstrated whether SI improves student performance in the university environment. Analysis which shows that students of all levels of preparedness attending SI perform better in the course than do their similarly prepared counterparts fails to account for other factors which may affect academic performance. This study points out deficiencies in existing research into the effectiveness of SI, suggests way of isolating the actual effect of SI on final student results, and posits, for future analytical work, a broadening of research methods to include non-statistical, qualitative forms of assessment. A case study of the effectiveness of SI in an engineering course at the University of the Witwatersrand, Johannesburg concludes the study.

Mc Gee, Joel Vick [2005] **Cognitive, Demographic and Motivational Factors As Indicators of Help-Seeking in Supplemental Instruction**. Ph D Dissertation, Texas A&M University, available from:

Abstract: The purpose of this study was to determine how cognitive, demographic, and motivational factors can be used to understand help-seeking behavior in college students. Specifically, the study examined engagement in Supplemental Instruction (SI) of undergraduate students at Texas A&M University. An additional purpose of the study was to determine the efficacy of SI. The sample for the study was 2,407 undergraduate students who were enrolled in eight randomly selected courses at Texas A&M University in the spring 2004 semester. Students enrolled in multiple course sections were eliminated from the study. The revised sample consisted of 2,297 students.

Data collected for all students in the sample included student demographic information, SI attendance and participation, and final course grades. Students were also requested to complete an on-line survey instrument containing a modified version of the Motivated Strategies for Learning Questionnaire (MSLQ) and questions related to parent education and household income. Ultimately, 1,003 students from the revised sample submitted surveys for a response rate of 43.7%. Based on attendance data and participation ratings, students were classified into three engagement groups for subsequent data analysis: high engagement, low engagement, and non-SI. The following were among the major findings from the study:

- Hispanic students were significantly more engaged in SI than their White peers.
- Engagement in SI was inversely related to grade level classification.
- SI participants had significantly lower mean SAT math and verbal scores than students who did not attend SI.

- The motivational variables as a set had a statistically significant relationship with SI engagement.
- Extrinsic motivation, organization, academic self-efficacy, control beliefs, help-seeking, and peer learning were the motivational scales which best predicted SI engagement.
- Students who were highly engaged in SI had significantly higher mean final course grades than either non participants or low engagement students even controlling for differences in SAT scores, cumulative grade point average, and motivation.

The study helps provide some insight into the dynamics of academic help-seeking. It also contributes to the growing body of evidence which shows that SI is an effective intervention for improving student success in traditionally difficult courses.

Available from:

<http://txspace.tamu.edu/bitstream/1969.1/2325/1/etd-tamu-2005A-EDAD-McGee.pdf>

Prebble, T; Hargraves, H; Leach, L; Naidoo, K; Suddaby, G and Zepke N, **Impact of Student Support Services and Academic Development Programmes on Student Outcomes in Undergraduate Tertiary Study: A Synthesis of the Research**
Report to the Ministry of Education: Massey University College of Education

Abstract: There are numerous factors contributing to successful study outcomes for undergraduate students. Only some of these factors are amenable to influence by the educational institutions themselves. This study has undertaken a synthesis of the research literature on two such factors: the impact of student support services and of academic staff development programmes respectively.

A synthesis was undertaken concerning the impact of academic development programmes on students' academic success and programme completion. The researchers found very few published studies that were able to draw a strong evidential link between such programmes and students' study outcomes. Instead, the relationship appears to be an indirect one: academic development programmes contribute to teachers' beliefs about teaching and their teaching practices; 'good teaching' contributes to successful study outcomes for students. The review concentrated on the evidence about the impact of academic development programmes on teaching behaviour and beliefs; the evidence linking teaching and learning has been thoroughly reviewed by others and was simply summarised in this study. The evidence is presented for each of the five principal forms of academic development in use: short courses; professional development within the work group; peer assessment and guidance; use of student evaluation of teaching; and intensive study programmes.

A second synthesis was undertaken of the research literature on the impact of student support services on student retention, persistence and achievement. The synthesis gave special attention to studies of students from diverse backgrounds. Thirteen action propositions were identified from the research. Ten of these offer ways of assimilating diverse students into existing institutional cultures. Three challenge institutions to change their policies and practices and adapt to the cultural capital brought by their diverse students.

Simpson, Michelle L; Hynd, Cynthia R, Nist, Sherrie L and Burrell, Karen I, 'College Academic Assistance Programs and Practices' in **Educational Psychology Review** Vol 9, No 1, pp. 39-87.

Abstract: Most public institutions offer some form of academic assistance to help their students adjust to the demands of college level learning tasks. Because these academic assistance efforts vary considerably, ranging from an emphasis on functional reading to an emphasis on strategic learning, it is important to describe these programs and their instructional methodologies and to review the pertinent research supporting them. After examining four critical issues confronting all academic assistance programs, the authors examined the goals, assessment procedures, salient features, and program evaluation methods of four prevalent program models: learning to learn courses, supplemental instruction, required programs for underprepared students, and integrated reading/writing courses. They concluded by outlining suggestions for future research and by listing specific questions that college students need to ask about the programs at their institutions.