UM BUSH FACULTY DEVELOPMENT RENEWAL GRANT
“Enhancing Student Learning Through Innovative Teaching and Technology Strategies”

UM-Crookston: Promoting High Quality Collaborative Learning

The Student Learning Issue(s) To Be Addressed
At the cornerstone of reflective practice and the scholarship of teaching is the idea that educators continually examine what they do and the contexts in which they do it. Boyer (1990) states, “As a scholarly enterprise, teaching begins with what the teacher knows” (p. 23). At the Crookston campus of the University of Minnesota, faculty members will examine how instructional technologies and innovative teaching strategies can encourage cooperation and collaboration among students.

National studies and reports support our selection of the student learning issue to be addressed in this grant project. Encouragement of cooperation and collaboration among students and the incorporation of active learning are both identified as significant attributes of quality undergraduate education (Chickering and Gamson 1987 and 1999; Ewell, P., and Jones, D., 1996; Chickering and Erhmann, 1996). Alexander Astin’s (1993) large-scale statistical studies across hundreds of colleges and thousands of students investigated 22 measures of student learning outcomes. Student-student interactions and student-faculty interactions were two outcomes that significantly affected academic achievement and student satisfaction. Using a very different approach, Richard Light (1992) studied one college, Harvard University, intensively. He and his colleagues interviewed 570 undergraduate students at Harvard to find out what learning experiences in college they valued most. He concluded: “All the specific findings point to and illustrate one main idea. It is that students who get the most out of college, who grow the most academically, and who are happiest, organize their time to include interpersonal activities with faculty members, or with fellow students built around substantive, academic work” (Light, p. 6).

Parker Palmer (1997) reminds us that faculty and students each bring themselves to the teaching process. Therefore, one of our challenges in teaching is that we must find a way to connect with our students and how they perceive and react to the teaching and learning environment. We are learning that the factors that influence students’ learning are as varied and interconnected as the ways in which students learn. Research studies (Terenzini, Springer, Pascarella & Nora, 1995) have shown that critical thinking skills are promoted by out-of-class experiences perhaps as much as students’ classroom experiences. Baxter, Terenzini, and Hutchings (2003) have argued that essential learning outcomes for college students include critical, reflective thinking skills, the ability to gather data and to analyze and evaluate evidence. A variety of classroom and out-of-classroom experiences in which students engage in peer learning will be promoted in our investigations.

The selection of this student learning issue is also based on the UMC “Core Components”. At UMC “Core Components” are defined as dominant themes, transferable skills and abilities essential to an individual’s success in any occupation or life setting. The selection of student-student collaboration as our student learning issue to investigate supports our campus focus on a student’s development of teamwork skills, a UMC “Core Component”. With our small campus size we have a minimal number of faculty members in one discipline, so we have limited our focus to one student learning issue that is applicable to faculty in all disciplines.
Description of Project

INSTITUTIONAL GOAL #1: 
Align BUSH Faculty Development Grant efforts with current campus initiatives to keep student learning in the forefront.

Improving student achievement and retention is critical to the growth and maturity of our campus. Pascarella and Terenzini (1991) have called to our attention that various forms of student involvement have substantial effects on student retention and development. Intellectual and interpersonal activities in which students choose to engage in are both included in defining student involvement. Boyer (1990) states that “faculty who care about students and engage them in active learning” (p. 12), demonstrate a vision which strengthens a sense of community. Froh and Hawkes (1996) suggest that collaborative learning recognizes that both academic and interpersonal involvement is essential to student learning. Students’ active involvement in their own learning has extensive and strong research support. Cross (2000) reminds us that virtually all research findings regarding collaborative learning come to positive conclusions. Further, Cross (2000) states that “Students have to do the actual work of learning by actively making connections and organizing learning into meaningful concepts. When students are interacting with other students to clarify, explain, and understand, they are actively building their own minds” (p. 1). However, “Simply placing individuals in groups and telling them to work together does not in and of itself promote higher achievement and greater productivity” (Johnson, Johnson, and Smith, 1994, p. 317). Therefore, UMC needs to investigate which teaching strategies and/or technology tools promote quality collaborative learning in college students.

In 1993 UMC became the first “Laptop University.” The results of a Spring 2004 UMC Survey on “Faculty Use of and Desired Support for Information Technology” indicate the high percentage of faculty who value the following in terms of technology’s role in enhancing learning:

- 72% “Provides more opportunities for documentation of student learning”
- 80% “Allows students to more easily complete sample problems & simulations”
- 86% “Makes it easier to redesign and improve course modules”
- 89% “Increase course communications among faculty and students”

This data supports our scholarly investigation of enhancing student learning by examining how instructional technologies, as well as innovative teaching strategies, can encourage cooperation and collaboration among students. Stephen Ehrmann, Vice President of The TLT Group (Teaching, Learning, and Technology), and formerly Director of Flashlight with the American Association of Higher Education, has stated that “without asking hard questions about learning, technology remains an unguided missile” (1995, p. 7). On the TLT website, http://www.tltgroup.org/Seven/2_Stu-Stud_Cooperation.htm examples of how technology can enhance collaborative learning include, but are not limited to the following: group projects and assignments, peer editing of individual assignments, email correspondence, discussion of reading, course websites with discussion rooms or chat rooms, asynchronous discussion, sharing information electronically for group presentations etc.

This grant proposal has also been designed to help our campus document how faculty members are working to promote and assess student learning. The UMC campus will be intensely engaged in preparing our Self Study for the Higher Learning Commission during the 2004-2005 year.

INSTITUTIONAL GOAL #2: 
Foster a scholarly and collaborative approach to addressing student learning issues.

UMC PROGRAM ACTIVITIES (2):
1. Encourage collaboration and partnerships between faculty committed to the scholarship of teaching by establishing Faculty Learning Communities to investigate collaborative learning and other forms of active learning.
Extend and refine the model of our first three years of BUSH Faculty Cohort Teams. Faculty development literature continues to strengthen our use of cohort-based models. Recent cohort-based models are referred to as Faculty Learning Communities (a FIPSE initiative) and Communities of Practice (a National Learning Infrastructure Initiative.) At UMC we will continue to use a cohort-based model, however, during the implementation of our renewal grant program we will refer to our faculty participant groups as BUSH Faculty Learning Communities.

Eligibility for participation in BUSH Faculty Learning Communities would include: a) previous participation in Faculty Cohort Teams during the original (2001-2004) BUSH faculty development grant focused on “Enhancing Student Learning Through Innovative Teaching and Technology Strategies” and b) full-time faculty appointment with teaching responsibilities. This eligibility determination is based on extending work began during the original grant period (2001-2004).

BUSH funding provided professional development training for our participating faculty members in cooperative learning and case-based and problem-based approaches to enhancing student learning (Karl Smith), and classroom assessment techniques (Mimi Steadman and Douglas Eder). In addition, the forty-nine (49) faculty who volunteered to participate in Faculty Cohort Teams during the original grant period were engaged in reflective practice as they studied current literature regarding student learning, experienced a collaborative relationship working with colleagues across disciplines as members of independent Cohort Teams, and attempted to implement classroom assessment techniques in their courses.

Studying and using Classroom Assessment strategies will help us move to the next level of our scholarly investigation – Classroom Research. California State University, Northridge, a large, comprehensive university, implemented a Classroom Research program in the early 1990’s and found that their program benefited from a campus climate that supported innovation, an existing faculty development structure, begun with a small group of committed faculty who had already demonstrated interest, classroom assessment training, and faculty leadership that owned the process and determined its direction. (Berry, Filbeck, Rothstein-Fisch, & Saltman, 1991)

Members of BUSH Faculty Learning Communities will engage in the on-going systematic study of student-student collaboration. Documentation of their efforts as reflective practitioners will be summarized twice a year or per semester. Members of BUSH Faculty Learning Communities will be eligible to apply for the limited number of Classroom Research Partnership Grants.

2. Provide resources for teaching scholars to be awarded Classroom Research Partnership Grants.

K. Patricia Cross and Mimi Steadman (1996) have defined Classroom Research as the “ongoing and cumulative intellectual inquiry by classroom teachers into the nature of teaching and learning in their own classrooms. At its best, Classroom Research should benefit both teachers and students by actively engaging them in the collaborative study of learning as it takes place day by day in the particular context of their own classrooms. Teachers are learning how to become more effective teachers, and students are learning how to become more effective learners.” (p.2)

Improving education through the systematic study of teaching and learning is the goal of Classroom Research. Classroom Research is learner-centered, collaborative, context-specific, scholarly, and relevant. (Angelo and Cross, 1993; Cross and Steadman, 1996) It is an applied form of inquiry. In this “action-oriented” approach the research-practice gap disappears as the teacher and researcher are the same person(s) (Angelo, 1991)

Classroom Research differs from traditional research in that it uses students as collaborators, rather than as subjects. (Steadman, personal communication, June 3, 2004). Students benefit by gaining insight into their own learning as they become co-collaborators in a Classroom Research project. Classroom Research also does not require a strictly experimental design. Steadman reminds us that Classroom Research aims for depth and relevance. Steve Erhmann, Co-Director of TLT Group (Teaching, Learning, and Technology), suggested that this grant proposal might
show more of a “deep and narrow impact” (personal communication, June 3, 2004). The results may not effect large numbers of students, yet the results might be more dramatic (per student) and the affects of “activities” would probably be easier to observe. The value of Classroom Research for our campus with small class sizes and a career-oriented curriculum is that the outcome will be investigated cross-disciplines.

Members of BUSH Faculty Learning Communities will be eligible to apply for Classroom Research Partnership Grants. Grant funds would predominately be used to cover course releases and/or faculty summer stipends, limited student salaries, and general operating supplies. There are sufficient grant funds to fund approximately four (4) faculty members for Classroom Research Partnership Grants per year. This could be one (1) research study that four faculty members conduct in two or more disciplines OR two (2) research studies with two faculty members engaged in each study. For example, professors in Biology, Early Childhood Education, Horticulture, and Marketing might investigate the same researchable question OR two Computer Applications Professors might want to study the same researchable question.

Classroom Research Partners determine their research methodology and design. Generally, steps include identifying the student learning area (student-student collaboration/collaborative learning), narrowing the focus within the learning issue to investigate further, review existing literature for research and theory related to the learning issue, generating a researchable question, determining data collection methods, analyzing data, transforming raw data into useful information for instructional decisions, and dissemination of their knowledge to their colleagues on campus, in the discipline, and/or in the field of higher education.

Examples of two broader researchable questions we would target in at least two (2) research studies during the three (3) year grant period follow: 1) What kind of training and structure for peer learning groups results in higher quality of student products? and 2) What kind of training and structure for peer learning groups results in students’ perception of higher value?

Classroom Research scholars would further define these broader researchable questions based on their area of interest. For example, one study could focus on whether coaching as a teaching strategy improves or enhances the quality of student work for the majority of students. Another study could focus on the specificity or clarity of written directions provided to all partnered students. An in-depth investigation of the effect on students developing a deeper level of understanding of a specific course concept with the use of collaborative learning could become a classroom research study. A study of the usefulness, impact, or value of varied Group-Work Evaluation forms used to collect feedback on students’ reactions to cooperative learning and/or study groups would be another feasible Classroom Research project.

In summary, this project attempts to further our knowledge of how professors can provide high quality collaborative learning experiences for college students. Outcomes of this project will include:

- the development of faculty members as reflective practitioners committed to the scholarship of teaching;
- an increased understanding of what improves the quality of student collaboration in classes;
- the dissemination of our Classroom Research findings relative to principles of good practice promoting student collaboration.

INSTITUTIONAL GOAL #3:
Integrate the assessment of student learning and the evaluation of student learning initiatives into the campus mainstream.
Documentation of faculty efforts to assess the enhancement of student learning and the evaluation of the value of training events during the first two years of our original BUSH Enhancing Student Learning grant period were included in the University of Minnesota, Crookston campus Progress Report on Assessment of Student Learning submitted to the Higher Learning Commission, June 30, 2003. Examples of individual faculty plans, implementation procedures, and results of their intervention to assess student learning were included in the appendix of the campus report.

The Campus Coordinator will continue to provide evidence of faculty efforts and results to the Academic Affairs Office in an effort to integrate what participants have learned and accomplished as they have worked to positively impact student learning on this campus. For the BUSH Renewal grant, members of Faculty Learning Communities will be asked to share the results of their scholarly investigations with the Campus Coordinator to share with the Vice-Chancellor of Academic Affairs for documentation of faculty efforts to examine how instructional technologies and innovative teaching strategies can encourage cooperation and collaboration among students as a form of active learning. This evidence will be integrated within our Higher Learning Commission Self-Study for the University of Minnesota, Crookston campus.

Three-Year Time Line

“Transition Phase” (summer/fall 1994)

- Compilation of bibliography of all literature reviewed by the Campus Coordinator during the past three years in preparation for use by Faculty Cohort Teams and grant writing activities. Bibliography will be available electronically at our project website, as well as a paper copy.
- Faculty members who have participated in Faculty Cohort Teams during original grant period (2001-2003) will complete an simple application stating one objective they would hope to accomplish with participation in Faculty Learning Communities (renewal grant).
- Training in Classroom Research would be provided by Mimi Steadman, co-author with K. Patricia Cross of the text, Classroom Research: Implementing the Scholarship of Teaching. This training is in preparation for implementation of Classroom Research Partnership Grants. Only members of Faculty Learning Communities, who are the faculty eligible for the research grants, will be the recipients of the training. All Faculty Learning Communities participants will receive their personal copy of the textbook prior to the training.
- Share BUSH 2001-2004 Final Report and the BUSH Renewal Grant Proposal with five (5) new Department Heads and Academic Affairs Office in the summer and with faculty returning in the fall.

Year One, 2004-2005

- Request opportunity to meet with eligible faculty during the opening week schedule to provide an introduction to the BUSH Renewal Grant program and follow-up meeting late Sept. or early Oct.
- Discuss with our current BUSH Teaching & Learning Advisory Committee the inclusion of additional faculty members with broader representation with the new academic restructure on campus.
- Develop a faculty constructed application proposal for Classroom Research Partnership Grants.
- Initiate organizational meetings focused on integrating the grant program with other academic support needs and opportunities on campus. Academic Affairs Office, Instructional Technology Center, Department Heads, and the BUSH Teaching and Learning Advisory Committee.
- Faculty Learning Communities will begin their work, including monthly meetings.
- Awards for Classroom Research Partnership Grants by December 1st.
- Monthly UM Inter-Campus Coordinating Committee conference calls/meetings.

Year Two, 2005-2006 and Year Three, 2006-2007

- Continue supporting the work of Faculty Learning Communities and the award of Classroom Research Partnership Grants.
- Meetings with our BUSH Teaching & Learning Advisory Committee; monthly meetings/conference calls with UM Inter-Campus Coordinating Committee.
- Request academic support, monitor progress for all grant supported activities, documentation and interim reporting.
- Dissemination of findings.
People and Campus Units Involved
Professor Marilyn Grave authored the original and renewal BUSH grant for the Crookston campus and is the Campus Coordinator. A BUSH Teaching and Learning Advisory Committee has served during the original three-year program (Professors Stephen Davis, Larry Huus, Dan Lim, Ken Myers, Sharon Stewart, Lyle Westrom.) It is expected that membership will continue to evolve with faculty interests, priorities, and workload issues. Additional faculty members, representative of our new academic departments, will be added if this renewal grant is funded.

The Campus Coordinator for this project will continue to regularly share information and request support from the Vice-Chancellor for Academic Affairs Office. In the past month an Interim Associate Vice-Chancellor of Academic Affairs for Institutional Research and Development has been appointed to serve through the summer months and he has also had brief status updates.

Evaluation
Evaluation of the classroom research program will include at a minimum the following: 1) documentation of Faculty Learning Community members efforts to enhance student learning with the use of collaborative learning; 2) interviews with faculty members who were awarded Classroom Research Partnership Grants; 3) compilation and analysis of each funded classroom research project; and 4) a survey of student and faculty experiences, engagement, and satisfaction as co-participants in a research project.

Data collection methods include the following:
- Faculty reflection logs to measure accomplishments, challenges, lessons learned, and outcomes.
- Annual faculty surveys;
- Student surveys;
- Student outcome/achievement data on projects in semesters prior to grant implementation and continued tracking through the end of the grant;
- Successful versus non-successful grades in participating courses 3 semesters prior to grant implementation and 3 semesters during.

Campus coordinator reflection logs and surveys will also be used to track accomplishments, challenges, lessons learned and outcomes campus wide.

Dissemination and Assessment of Sustainability
Members of Faculty Learning Communities will share the results of their project with the Office of Academic Affairs for documentation of faculty efforts to assess student learning as we engage in the Higher Learning Commission Self-Study for the University of Minnesota, Crookston campus. In addition, faculty will share the results of their project through any of the following: campus-wide seminars, teaching and learning workshops, presentations at state, regional or national conferences, campus/institutional publications, or other professional publications. Publication submission to the Jossey-Bass Higher and Adult Education Series journal, New Directions for Teaching and Learning or New Directions for Higher Education would be strongly encouraged. The journals are indexed in College Student Personnel Abstracts, Contents Pages in Education, and Current Index to Journals in Education (ERIC).

Budget
The Crookston campus requests funding in the amount of $91,800 over a three year period. Grant funds will predominately cover academic salaries to provide course release or summer stipends to faculty members awarded the Classroom Research Partnership Grants. This plan takes into consideration the UMC campus faculty workload policy (12 credits per semester or 24 credits per year) which makes it challenging to engage in research projects.
*Works Cited*


