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# COURSE DEVELOPMENT GRANT REPORT

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DATE SUBMITTED: November 28, 2012

Title of Grant Award: Course Development Grant (Spring, 2011)

Project Goal: Develop a new course (ESTM512 *Research in STEM Education*) of a new program (*STEM Education*)

When Implemented (Quarter the course was taught): Spring, 2011

Brief Description of the Project (as described in the proposal)

“Research in STEM Education” is a new required course in the new STEM program in the Department of Science, Mathematics, and Technology Education in the College of Education. The students in the new STEM program started taking courses in the fall quarter 2010 and have not yet been exposed to a hybrid course. In ESTM512, the students will learn for the first time how to be online learners. The course will be a hybrid course in which students will meet every other week. When the class does not have face-to-face meetings, the students will learn course materials with the support of technology, the instructor, and the peers. Technology used to support student learning in the course includes Wiki and Skype in addition to the course management system Blackboard. CSUSB library resources, e.g. iGuide, will be integrated into the course. Instructional strategies that will be employed in the course include active learning and collaborative learning.

How the Project was Implemented (including how it differed from original plan)

The project was implemented as planned with some modifications. As intended, the course was delivered as a hybrid course. We had four face-to-face meetings. When the class did not meet, the students learned course materials and conducted course assignments/activities with the support of technology, the instructor, and the peers. Technology used to support student learning in the course included Wiki and Skype in addition to the course management system Blackboard. Instructional strategies such as active learning and collaborative learning were employed in the course as intended as well.

Two ideas were not implemented as planned: (1) developing course materials in iGuide, and (2) collaborating with department faculty to design a course assignment. They were not implemented because, the course, *ESTM512 Research in STEM Education*, being a new course in our new *STEM Education* program, the department faculty had different views on what the course should focus on and how the course should be delivered. As a result, I could only partially implement my plan and had to involve department faculty’s input in the course when it was delivered.

Results of the Project

The course was successfully delivered following the proposal as much as possible and at the same time involving department faculty's input.

Additional Comments (Lessons Learned, Insights, Future Plans, etc.)

*STEM Education*, the new program, consisted of students from our four old programs (Science Education, Mathematics Education, Instructional Technology, and Career Technology Education). Although students in the course were in the same department, I learned that students' ability of successfully taking a hybrid course was varied. Students who were not in the Instructional Technology concentration needed additional assistance in taking the hybrid course.

The *STEM Education* program only lasts for 2 years (2010-2012) and is now on-hiatus. I hope that we could offer the program and the course in the near future, and I look forward to apply what I learned from ESTM512 in Spring 2011 to the future ESTM512 course.