QEP First Year Annual Report

Fall 2011 Wallace Community College (WCC) initiated the implementation of its Quality Enhancement Plan (QEP). This plan involved the redesign of all developmental mathematics courses. Over the 2011-2012 academic year, the redesign was piloted on the Sparks Campus beginning with MTH 091, Developmental Algebra I, fall semester and incorporating MTH 092, Developmental Algebra II, spring semester.

Research of other redesigned programs expressed that resistance to change may not affect, or may negatively affect, success rates at first, but that over time success rates would begin to increase. Considering the results of fall and spring were lower than expected (see table), the instructors spent a great deal of time trying to figure out how to help students adjust to the emporium model of instruction.

During the first semester of implementation it was noticed some students were frustrated because they had to make an 80% on their module exam to move forward, while in the past, and in other classes, 70% was passing. The reason for establishing a passing grade at 80% was because the math faculty had noticed those students receiving an average 70-79 in traditional courses were not truly prepared for subsequent courses. After fall semester, it was determined by those working day-to-day with the redesigned MTH 091 classes that a 70% in the redesigned course was not the same as a 70% in the traditional courses. Due to the repetitive remediation of the topics not mastered, a student scoring between 70%-79% was truly prepared to move forward. Therefore, in an attempt to ease student frustration, it was decided to drop the passing percentage to 74% for spring semester.

The change resulted in some students progressing through the material quicker than before. However, the success rate did not increase. When it was realized that the success rate was not affected, instructors, along with the math lab director, began to look for ways to increase rates. After looking at the data for fall and spring, there seemed to be a direct correlation between the amount of time spent working in the ALEKS program and student success. Additionally, to determine why students did not seem to respond to the redesigned courses, students were questioned. They were asked why they were not putting in the time required to be successful. Some students simply stated a resistance to change and they did not want to do that much work. Many students stated since other classes had grades calculated by an average of graded assignments throughout the semester, and this class did not, their other assignments took priority. Although benchmarks were put in place for completing the material, and clearly stated, students indicated they would put math off, and come back to it after their other assignments were completed. This put them behind, and they often became discouraged to the point they did not think they could catch up. In summary, it was discovered that many students were not successful due to lack of time management.

At this point instructors turned their attention to determining how to motivate students to make these classes a priority and assist them with their time management skills. It was determined the module benchmarks set at the beginning of the semester were not sufficient, and that more intermediate benchmarks were needed. Additionally, it was determined that points had to be awarded for achieving benchmarks to encourage students to give the course the same priority as other classes. These ideas led to the creation of daily assignment sheets. The daily assignment sheet would be individualized for each student. It was decided, in order to successfully complete one module, and move to the next, 80 points must be earned. There are two ways to do this:

1) earn 80 points or more (score 80-100%) on a module exam, or
2) earn 70-79 points (or score 70-79%) on a module exam and earn enough points through the daily assignments to total 80 points or more.

Although success rates for the first year of implementation were not as expected, there is great potential in the redesign. Students who worked through the redesigned courses have a 100% success rate in subsequent courses. Even more impressive is that all students have earned an A in subsequent courses. Some students have even taken the placement test and tested out of the next course, MTH 100, and into MTH 112.

In addition, spring semester students going into the redesigned MTH 092 were analyzed. Some students came out of the redesigned MTH 091, while others were from a traditional MTH 091 or from an unsuccessful attempt in a traditional MTH 092. Each student going into a redesigned course had to take an initial assessment to determine where they were within that course. The scores on this initial assessment provided a wealth of information about the amount of material being truly learned under the different methods of instruction. Those students entering from a course taught using the traditional method scored from 23-54%, while those entering from a redesigned course scored from 74-88%. The difference in percentage points is enlightening.

These examples validate the technology package (ALEKS) and the system being used. The students who embrace this change learn and retain more information than students in traditional classes. The struggle at this point is to find ways to encourage students to embrace this new method of instruction so they can reach their highest potential.