Integrating Academic Enrichment Beyond The Classroom

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First-year students are often enrolled in college with mathematical deficiencies. In order to assist the students in the transition from high school to college, additional academic enrichment must be provided to improve their mathematical abilities. An enrichment project was initiated by the Tuskegee University academic enrichment center for the 2011 summer session to assist with their mathematical skills. The overall outcome showed a significant impact on the pass rate for the students enrolled in Pre-calculus course.

The overall goal of the math enrichment project was to firstly, provide supplementary support to students with faculty assistance to enhance teaching and learning of math. Secondly, to design innovative enrichment activities that would develop the mathematical skills of the first year students. The aim was to improve their overall academic excellence as well as to facilitate their adaptation and adjustment to the college learning environment. Teaching efforts were supported through reinforcement of appropriate subject matters by utilizing math techniques to solve real world problems through the concepts of logical thinking, reasoning, demonstrating computation, applying appropriate mathematical theorems and integrating technology. The ultimate outcome was to increase the pass rate of first-year students, and also to increase students’ participation and understanding of math concepts.

Innovative supplementary instructions and tutorials were implemented during the seven-week period with internet and e-learning tools. Software such as ALEKS, MyMathLab and MyMathTest were used to enhance and support faculty teaching efforts. Other resources such as streaming videos from social media and conducting of math enrichment workshops were also executed to rebuild the students’ fundamental skills. These tools immensely helped the students to understand the course content and enabled them to complete homework, practice tests and quizzes successfully.

The overall performance of the students enrolled in Pre-Calculus during the 2011 summer session showed that utilization of innovative teaching and learning strategies tremendously impacted students’ grade performance within the course. Data showed that 62.12% of the students utilized extended math enrichment services and 68.85% of students enrolled pass.