Reading and Math Project (RMP) – Integrating Technology in the Classroom

Algebra and Reading

2011 Hawaii University International Conferences (HUIC)

Workshop Presentation

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Proposal

Abstract: The collaborative project is designed to demonstrate the effectiveness of students using critical thinking and analytical reasoning skills in both mathematics and reading. Reading in the content area and problem solving skills in mathematics will be discussed in this campus wide project that has had a lasting impact on faculty and staff over the past two years. Effective teaching strategies have been modeled and shared in campus-wide professional development workshop sessions.

Program Title: The Reading and Math Project (RMP) – Integrating Technology in the Classroom

Goal(s): To develop teaching/learning strategies that will enhance critical thinking and analytical reasoning skills through one-on-one consultation services and faculty workshops.

Objectives

1) Demonstrate an understanding of three strategies (techniques) for teaching content subjects.
2) Formulate/share ways to teach critical thinking skills for content texts.
3) Develop mathematical reasoning and problem solving capabilities.
4) Use Bloom's Taxonomy to model the various levels of questions and responses
5) Use effective technology tools to promote student learning

Activities

Participants completed working sessions in small groups on the Directed Reading-Thinking Activity; What We Know, What We Want to Know, What I Learned (KWL); and the SQ3R strategies.

1) Participants viewed, discussed, and evaluated a presentation titled "Critical Thinking: How to Evaluate and Draw Conclusions"

2) Participants completed the math activities: "Use Questioning to Elicit and Develop Students' Mathematical Thinking", "Characterizing the Cognitive Demands of Mathematical Tasks: A Task-Sorting Activity, and Thinker-Doer Paired Problem Solving: A Long-Term Teacher Development Activity
3) Participants developed a lesson centered around their chosen topic from their discipline.
4) Participants modeled and activity using Podcasting.

Broader Impact

Participant implemented at least two strategies and activities in their classroom during the fall and spring semesters. Participants shared strategies and lessons learned in a "QEP: Conference at Tougaloo College". A working model will also be shared at the HBCU Faculty Network Conferences and other regional and national conferences.

In an ongoing process of this proposal it is our intent to also achieve the following goals:

- Continue to utilize information literacy and technology to implement the math/reading component.
- To develop a program that incorporates the virtual concept of teaching/learning strategies.
- Increase the number of faculty utilizing technology in the teaching and learning process.
- Update equipment to meet the needs of the students, faculty and community that will allow them to be competitive in the 21st century.
- Continue to provide services that are as appropriate to the broader community in support of our mission.

Evaluation

- Formative and Summative Assessments

Pretest, posttest, surveys, faculty self- assessments, exams, learning modules, embedded curriculum test, and effective technology models

- Data was collected from the workshops. The results from the data collected and final reports weree dissimilated to the Office of Academic Affairs, Division Deans, Department Chairs, and faculty participants.

Teacher Quality Enhancement Purpose

1) Extend the understanding of the QEP Theme: "Analytical Reasoning and Critical Thinking"
2) To enhance the quality of instruction in each discipline by using various technology tools
3) Provide instructional strategies in a supportive environment for new faculty and staff in the content area
4) Develop tasks that engage students in thinking about the defining characteristics of important mathematical concepts that help students develop a deep understanding of core mathematical ideas that increase retention and transfer of knowledge to new situations.
6) Provide models that demonstrate collaboration using technology with faculty and staff