Math: The Bridge to Success

Polk State College's

Quality Enhancement Plan

March 2015 Newsletter

Community-Based Learning

Polk State College's Quality Enhancement Plan focuses on learner-centered principles. There are many ways to structure a class using learner-centered principles. One learner-centered strategy is to incorporate service learning, also known as community-based learning.

"Service Learning programs are distinguished from other approaches to experiential education by their intention to equally benefit the provider and the recipient of the service as well as to ensure equal focus on both the service being provided and the learning that is occurring" (Furco, 1996, p. 12).

Some of the benefits of engaging in community-based learning include:

- Building positive relationships between students and faculty
- Enhancing student retention
- Improving specific student learning outcomes
- Developing collaborative interdisciplinary connections among faculty

Recently, a cohort from our College attended a Florida Campus Compact (FLCC) conference called "Introductory Engagement Institute 2015." Cohort participants included Laura Abercrombie, Lynn Chisholm, Anthony Cornett, Cheryl Garnett, Lance Russum, Gerene Thompson, Matina Wagner, and Natalie Whitcomb.

Polk State College's FLCC Work Group

If community-based learning is part of a course, students are able to use class time to plan, ask questions, discuss, and reflect on their service activities so that their learning is enhanced. According to Gerene Thompson, Associate Dean of Academic Affairs in Lakeland, "All service learning experiences are beneficial, but when students are engaged in service learning as part of a class, the experience is more than educational; it becomes transformative."

Professor Natalie Whitcomb has used community-based learning in her science classes for several years. In the photo to the right, she and her students admire the rain garden they created and maintain to support the City of Winter Haven Water Resource Management. Two other science faculty, Professors Anthony Cornett and Logan Randolph, use service learning to do habitat restoration.

Photo by Tom Hagerty

If you have questions about community-based learning, please ask one of the conference participants.

Furco, Andrew. (1996). Service-learning: A balanced approach to experiential education. *Expanding Boundaries: Service and Learning.* Washington DC: Corporation for National Service. p. 12.

Math Puzzle: What is significant about March 14, 2015, at 9:26 and 53 seconds?

Self-Assessment: How About a Rubric?

Bridge Building Thoughts by Kaye Betz

For many of us, self-assessment comes easily, and we may think that it should come easily for our students as well. However, many of our students do not come to college with the ability to assess the quality of their own work. As we help our students learn how to learn, one of the most important abilities we can help our students develop is learning how to assess the quality of their work. "Self-assessment is a process of formative assessment during which students reflect on the quality of their work, judge the degree to which it reflects explicitly stated goals or criteria, and revise accordingly" (Andrade & Valtcheva, 2009, p. 13).

One self-assessment tool is a rubric. Not only does a rubric enable students to understand what the instructor expects, but it also helps students determine if they have met the expectations, creating an opportunity to revise their work prior to turning in the assignment.

Much research has been conducted on the efficacy of rubrics, and the Internet contains an abundance of websites that have rubric examples. One such website is Carnegie Mellon's Eberly Center: http://www.cmu.edu/teaching/assessment/assesslearning/rubrics.html. If you decide to create a rubric for your class, remember that there's a rubric tool in PAL. See your instructional technologist if you would like help with the rubric tool.

Andrade, H. & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory into Practice,* 48(1), p. 13.

Teaching More Effectively

Members of the QEP Bridge Building community of practice were asked to reflect on the past four years of working toward learner-centered teaching and to create a list of basic pedagogical ideas, strategies, and practices that helped them become more effective instructors. From that list, the following framework was developed:

- **Teach learning skills along with content**
  - Teach students skills needed to be responsible for their own learning
- **Include various methods of formative assessment**
  - Continually monitor and modify the learning progress of students
- **Integrate technology**
  - Purposefully infuse technologies into teaching to engage students and create opportunities for learning
- **Engage students in the learning process**
  - Create student involvement in their own learning to develop meaningful conceptual understanding
- **Vary content delivery methods**
  - Structure course design and content delivery so that the focus is on student learning
- **Make connections with students, advising, TLCC, other faculty, and other areas of the College**
  - Create a supportive learning environment to promote academic tenacity

"In addition to teaching the subject matter, we can use the subject matter as a substrate for teaching students how to learn, which may ultimately be more valuable than the subject matter."

"Adding formative assessments to daily work informs both the student and the instructor of strengths and weaknesses that may need to be addressed."

"Various technologies can be used to demonstrate concepts, provide interactive learning both inside and outside the classroom, and allow for learning both during class and later."

"The QEP has motivated me to try to design lessons that are engaging, meaningful, and fun. I've developed more collaborative relationships with my students and colleagues."

"I'm more selective about what I include in the lecture portion to free up more time for in-class activities and student involvement."

"I've become aware of the benefits of student-to-student interaction in addition to instructor-to-student interaction."

Answer to math puzzle on previous page:
3.141592653 are the first few digits of pi.