Math: The Bridge to Success

Polk State College's

Quality Enhancement Plan

September 2013 Newsletter

Classroom Enhancement Grant

Sponsored by The Polk State College Foundation and administered by the QEP Implementation Team, each year one $1,000 grant is awarded to a faculty member to purchase materials for learner-centered activities in the classroom. During the first year, the grant was open only to mathematics faculty. Last year and this year, the grant is open to all faculty members who have three or more years of continuous regular full-time faculty status. To apply for the grant, go to the QEP web page www.polk.edu/qep and select "Classroom Enhancement Grant." Applications are due by October 8, 2013. The recipient will be announced in the next newsletter.

Note: The Polk State College Foundation has recently approved a two-year extension of the Classroom Enhancement Grant, so it will be offered again in 2014 and 2015 and will be expanded to all regular full-time faculty. Thank you Polk State College Foundation for supporting learner-centered teaching!

From the QEP Director:

Thank you for everyone's continued support of Polk State College's Quality Enhancement Plan. We have begun extending our efforts to help with the development of the First Year Experience. As part of our college-wide strategic plan, QEP principles are also being applied in other areas of the College.

Kaye Betz
QEP Director

Meet the Professors

Mathematics professors attend weekly Bridge Building sessions to discuss strategies and share learner-centered activities. The following professors are participating in the QEP this term:

Lakeland Professors:

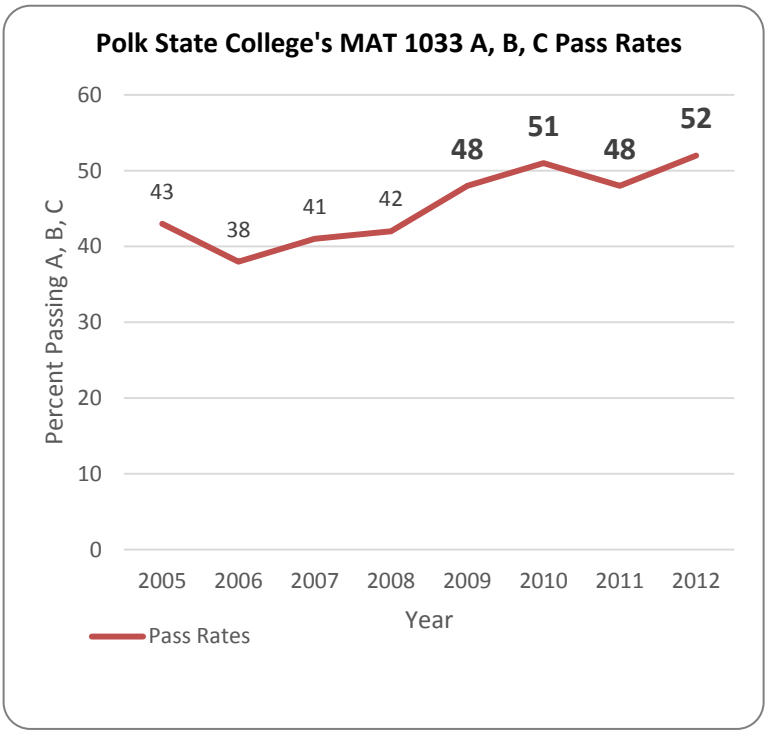
Anna Butler	Nerissa Felder	Mike Malone
Megan Cavanah	Steve Frye	Penny Morris
Marsha Copeland	Deborah Kindel	Jim Rhodes
Richard Decker	Richard Leedy	Carrie Toreky
Lorne Fairbairn		

Winter Haven and JDA Professors:

Larry Albright	Paul Pletcher
Roger Aleman	Gregory Toole
Steve Drier	Mostafa Zamani
Joyce Lee	

Pass Rates (C or higher) in Intermediate Algebra

The pass rate in Intermediate Algebra was one of the measures used in determining the need for our Quality Enhancement Plan to focus on Intermediate Algebra. You will notice from the graph that the pass rates in the course have improved since developing and implementing the QEP. Years 2005-2008 were Pre-QEP. Years 2009-2012 were the development and implementation periods of the QEP.



Syllabus Project

Over the past few terms, the mathematics faculty have been striving to improve their syllabi. Now, we would like student input. Student Government members on both campuses have offered to assist with this. The mathematics faculty are eager to receive feedback on clarity of assignments and policies and other ways the syllabi can be improved. Students reviewing the syllabi might write notes such as: “This paragraph isn’t clear.” “I’m not sure how the homework is graded.” “I like the fact that you introduced yourself.” “This makes me feel like you really care about how well I do in the class.” After the initial review of math syllabi, the feasibility of offering this opportunity in other departments will be determined. Of course, it would be on a volunteer basis and all identifying information would be blacked out.

Opportunities to Share

October Professional Development Workshops

How the Brain Learns: Implications for Teaching and Learning *Leslie Myers, Melissa Terlecki,* online seminar Tuesday, October 8, 2:00 – 3:00 p.m., LLC 2257	**Pecha Kucha: The Art of Efficient Presentation** *Lynda Wolverton, Courtlann Thomas, Carol Martinson, Anna Butler* Tuesday, October 15, 1:30 – 2:45 p.m., LAC 1243
Connecting Students and Content: Making it Personal *Kathy Nicklaus* Wednesday, October 16, 1:00 – 2:00 p.m., LAC 1243	**Effective Lectures** *Guest Speaker Kevin Yee* *University of South Florida* Tuesday, October 22, 2:00 – 3:00 p.m., LAC 1243

The Evolution of the Textbook: Using E-texts
Eric Crump
Week of October 14, Winter Haven
Presentation and discussion on alternatives to traditional textbooks, including online learning resources and e-texts.

E-mail Is Okay, But There Are Other Ways to Reach Your Students
Todd Thuma
Week of October 28, Winter Haven
Students might not be checking e-mail as often as you would like. How else can you reach them? There are a variety of ways from text messaging to social networking sites. This presentation will get you started on developing channels for helping you to alert students to deadlines and new information through multiple techniques without having to distribute the same message more than once.

Mathematics Faculty to Present at AMATYC Conference

Four mathematics faculty from Polk State College have been invited to present at the annual conference of the American Mathematical Association of Two-Year Colleges. Anna Butler, Richard Leedy, Penny Morris, and Jim Rhodes will present *Learner Centered Teaching: Take It to the Next Level.*

> Abstract: Learner-centered teaching purposefully creates an environment that engages students as active partners in their own learning processes through meaningful interaction with course content, the professor, and each other. This session offers new modes of curriculum delivery through dynamic activities. Take your teaching to the next level!

Empowerments for Student Learning

QEP Campus Liaisons Lynda Wolverton and Becky Pugh send teaching tips to adjunct faculty in the areas of College Success and Developmental Reading, Writing, and Math. The teaching tips are e-mailed twice a month to offer ideas on how to motivate or engage students. If you do not teach developmental classes, but are interested in receiving the tips, please e-mail Lynda or Becky to add your name to the address list.

Mathematics Faculty Challenge Themselves

In the midst of working on the QEP, mathematics faculty have embarked on a journey of making deeper connections with the mathematics they teach and giving their problem-solving skills a workout. Every couple of months, a group of mathematics faculty along with interested students and math tutors put their mathematical knowledge and skills to work solving challenging problems that are presented in the Mathematical Reflections journal. Known as Polyahedra, the Polk group of faculty, staff, and students solved several of the problems, and the solutions have been published. According to Mathematics Professor Li Zhou, "These solutions may use only knowledge of high school math, but they require great creativity and ingenuity to discover. Ingenuity is what makes math more fun!"

What is Struggling?

(Bridge Building Thoughts by Kaye Betz)

I have often heard instructors use the term “students who struggle” when referring to students who are not doing very well. But, is that really “struggling”? Can the term be used correctly when referring to a student who briefly attempts a problem, feels defeated, gives up, and then tries to emotionally cope with what the student thinks of as his or her own inability or perhaps the instructor not showing an exact problem for the student to mimic?

Jim Stigler, Professor of Psychology at UCLA, and Jin Li, Professor at Brown University, have compared education in Japan to that in the United States. They have observed that in Japan struggling is seen as an opportunity and having the strength to persist. Academic success is based on whether a student is willing to work and struggle. Tasks are designed to be slightly beyond students’ reach, and when students accomplish them, it’s pointed out to the students that the tasks were accomplished through hard work. The focus is on the process and the willingness of a student to persist rather than an innate ability.[1]

Instead of assuming that students have higher-level learning skills or allowing students to give up, perhaps we as instructors need to help students develop the skills with which to struggle with problems. Does the student know what to do when faced with a problem where the solution or method to proceed is not immediately obvious? In your course, what well-timed and well-constructed assistance can you provide so that the student gains a clearer understanding of the problem and can begin to struggle in a productive manner? As instructors, how can we help students move from the mindset of immediately deciding that they don’t have the ability to solve a problem to the mindset of developing and applying “struggling skills”?

[1] Spiegel, A. (2012, Nov. 12). Struggle for smarts? How Eastern and Western cultures tackle learning. *Shots: Health News from NPR*. Retrieved from http://www.npr.org/blogs/health/2012/11/12/164793058/struggle-for-smarts-how-eastern-and-western-cultures-tackle-learning