



TLC Highlights The Year at a Glance

Conferences & Presentations

- *Strengthening Student Success: What Counts*, co-sponsored by the Research and Planning Group of California, California Partnership for Achieving Student Success, and the California Assessment Institute — San Diego
- *Increasing Student Access & Equity in Community Colleges*, Campus Change Network — Sonoma
- American Mathematical Association of Two-Year Colleges Conference — San Diego
- American Association of Community Colleges Annual Conference — San Diego
- Annual Bio-Medical Research Conference for Minority Students — 2005 Atlanta, 2006 Anaheim
- *Louis Stokes California Alliance for Minority Participation in Science, Engineering, and Math Student Conference* — UC Irvine
- *Society for the Advancement of Chicanos and Native Americans in Science*, National Conference — 2005 Denver, 2006 Tampa
- Future Teachers Conference — Santa Monica College
- Miami Dade College: *Creating a Culture of Success in Math and Science*
- National Science Foundation Directors Meeting — Washington, DC
- *Opening Doors Second Annual Conference* — Pasadena

Retreats, Workshops, Presentations

- Summer 2006 Faculty Institutes:
 - *Culturally Relevant and Responsive Instruction*, co-sponsored by PCC and Mt. St. Mary's College
 - *Introduction to the Inquiry-Based Teaching and Learning Process*, co-sponsored by PCC and UC Riverside
 - *West Ed's Strategic Literacy Initiative Reading Apprenticeship Institute*, Oakland
- Annual Lake Arrowhead Faculty Retreat, co-sponsored by PCC and College of the Desert
- Faculty Inquiry Groups : Math 402, 125, 131; English 400/Writing Center
- Saturday workshop for full-time and adjunct Math 402 faculty
- Campus-wide presentations on Student Learning Outcomes: Math 402 and Math 131
- High School Outreach, "Pasadena Days": Muir, Marshall Fundamental, Pasadena, Rosemead, Arroyo, and El Monte High Schools

New TLC Programs

- Career Pathways: Art and Design
- Math Path
- Summer Math Jam
- Summer Art Jam

TLC News

The Teaching & Learning Communities Program at PCC

Fall 2006

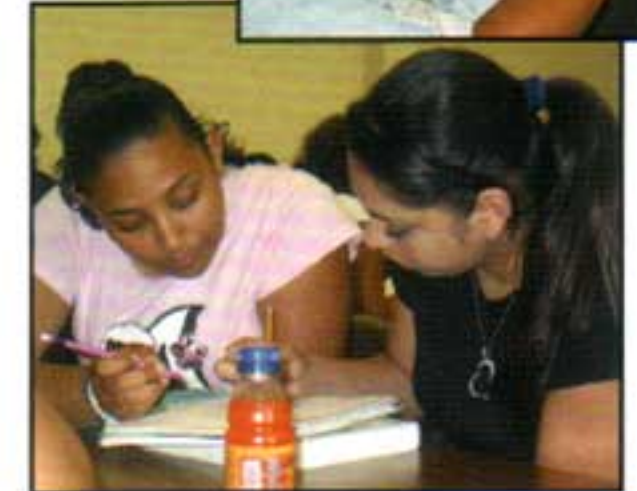
TLC Develops New Summer Jams

MATH JAM

College is hard, and college math is really hard. So doesn't it make sense to give new college students an orientation and math workshops to help them get ready for their first semester at PCC? That's the thinking behind the TLC's Irvine Foundation grant, Math Jam. In Summer 2006 TLC staff bet that the math boost, intro to college, and counseling support would result in increased retention and success rates for basic skills students. And based on the initial evaluation findings, we hit the jackpot! An impressive 89% of the students completed the Jam, and 59% of them jumped to the next math level.

For two weeks in August, math instructor Jay Cho, counselor Evangelina Quintanar, and six tutors worked with 64 new PCC students. They developed interactive problems, games, drills, and activities to help the new students feel comfortable with math and to give them effective study strategies. All the "jammers" retook the math placement test at the end of the program to make sure they were properly placed. Jay observed, "Some students don't take the placement test seriously. Others haven't had math in a while and just need to review basic concepts. We want to make sure they are at the right level."

This fall the Math Jam students continue with a series of support interventions called LifeLines. If the students work with their assigned tutor, meet with their math instructor and counselor, and pass their fall math class, they will be eligible for a free textbook for their spring math class.



More Jamming

This summer a group of creative high school students participated in Art Jam, a 4-session art camp designed to introduce them to PCC's excellent art and design programs. Each Friday in July, a PCC art instructor taught an art class in his or her field: ceramics, drawing & painting, photo-digital, and jewelry.

Art Jam was funded by the TLC's Title V Cooperative grant, and its goal was to introduce young students to our outstanding art programs, faculty, and facilities. Based on the survey conducted at the end of the camp, Art Jam was a great success.

One future artist stated, "If PCC could

continue Art Jam for more high school students, then definitely go for it! It was great, and now I found the school I want to attend after high school."



For more information, please contact Lynn Wright at ext. 3047.

Basic Skills: What Works?

Dr. Wei-I Wang (former IPRO research analyst)

Ms. Bianca Montrosse (Claremont Graduate University evaluator)

The Teaching and Learning Center (TLC) has spent six years developing, implementing, and evaluating innovative programs specifically designed for basic skills students. Research conducted by Institutional Planning and Research Office (IPRO) analysts and Claremont Graduate University evaluators reveals that intensive programs that 1) require English and math, 2) move students through a sequence of classes as a cohort, and 3) offer tutoring, counseling, and community-building positively influence the retention and persistence rates of basic skills students. **Researchers have concluded that .XL, the TLC's summer bridge/first-year experience program, incorporates all of these components and has succeeded in helping basic skills students stay in school and succeed.**

MAJOR FINDING

The more intense and sustained the interventions, the greater the chance that the students will stay at the college and succeed.

A typical student arrives at PCC in need of basic skills preparation.

- **63% of first-time students will enroll in a basic skills course within 6 years.** The real number of students needing basic skills instruction is probably greater than 75% for several reasons, including the fact that many students drop out of college before enrolling in a basic skills course.
- **73% of the students who enroll in English in their first academic year enroll in basic skills English.**
- **71% of the students who enroll in math in their first academic year enroll in basic skills math.**

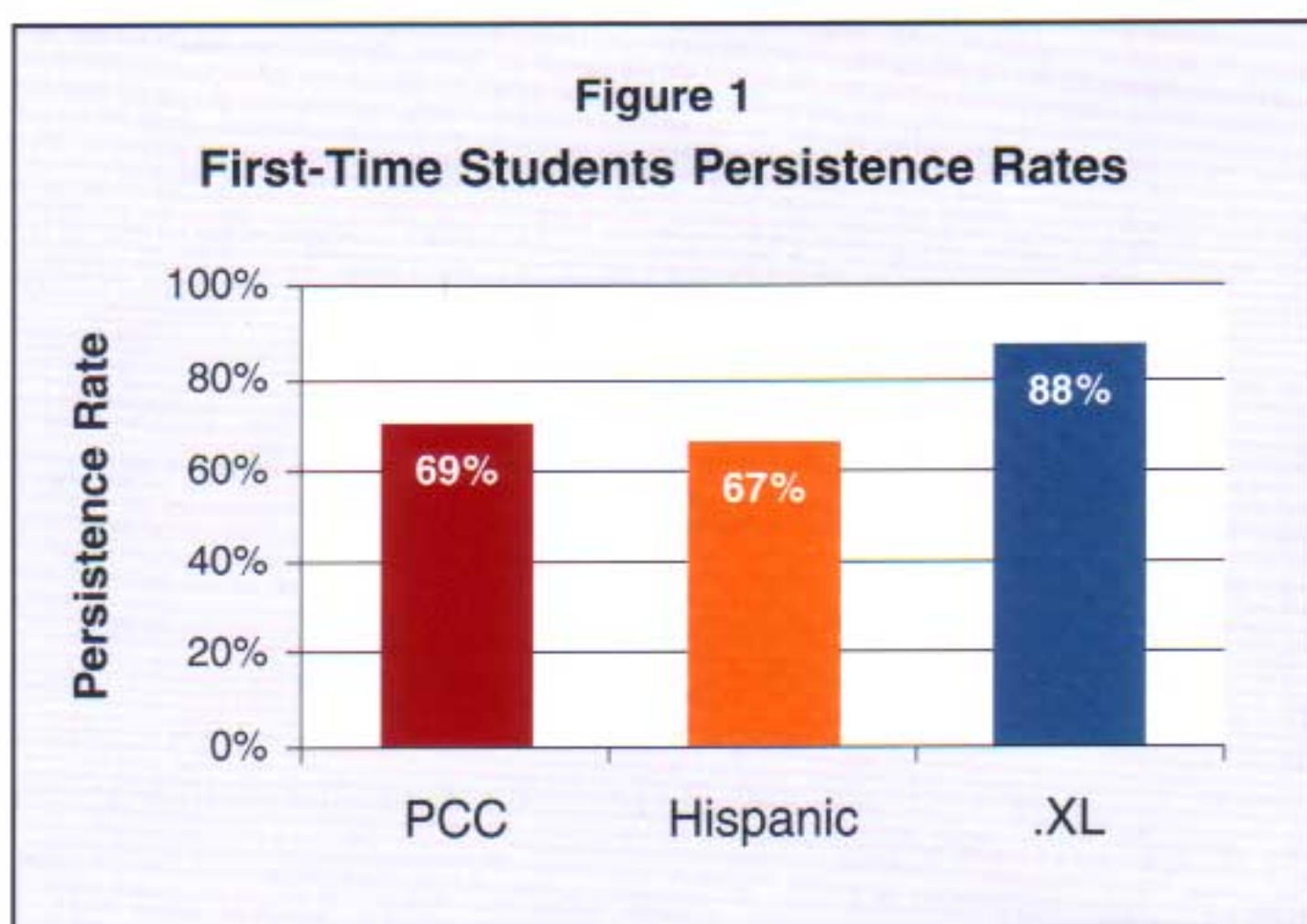
Despite the large number of basic skills students, few programs on campus address their needs.

The TLC's .XL Program

Every summer the .XL Program staff recruit young, under-prepared students from Pasadena-area high schools. **88% of .XL students are under 20 years of age; the five .XL cohorts range from 65 to 88% Hispanic.**

- Hispanic students represent 30% of the entire PCC student body but 45.3% of the basic skills population.
- After African-Americans, Hispanics have the poorest success rate among all ethnic groups.
- Students under the age of 20 have the lowest success rates of all age groups at the college.

Major Research Findings



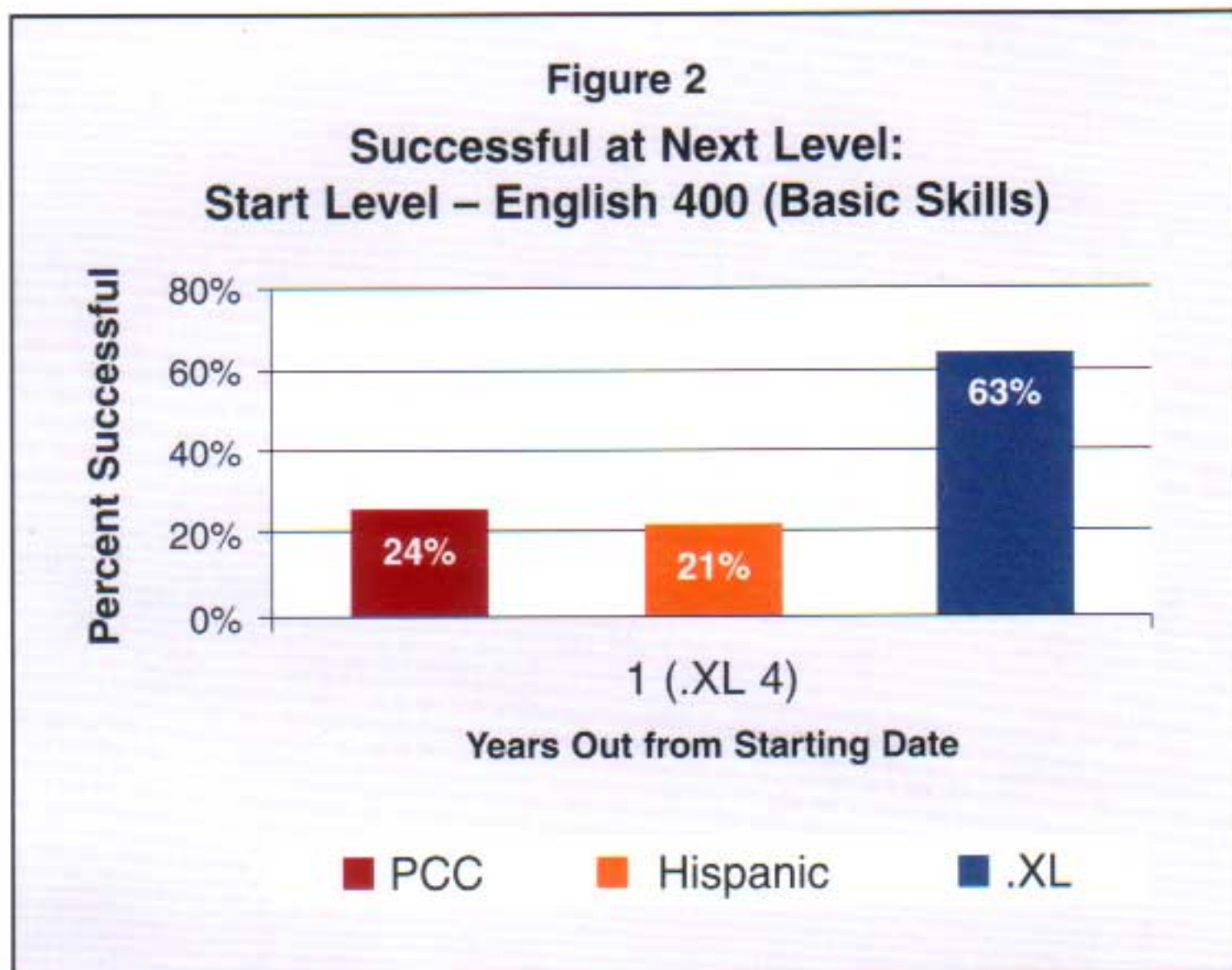
1. .XL Students Persist

The Fall to Spring persistence rate of .XL students is 88%. The average persistence rate for all first-time PCC students is 69% and for Hispanics it is 67%. Refer to Figure 1.

- **Fall enrollment in English and/or math increases persistence rates of first-time college students.**

Persistence Rates

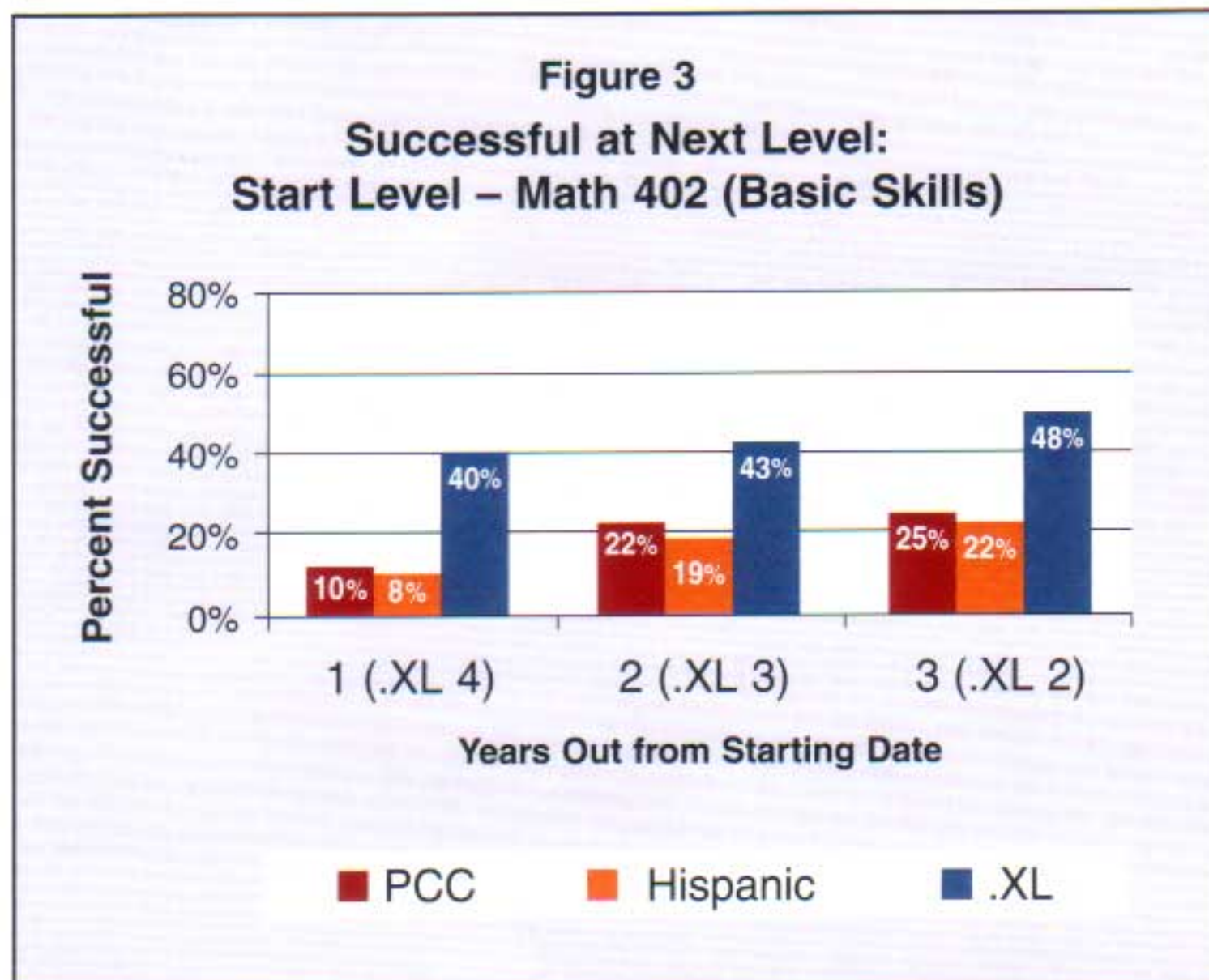
- Not enrolled in English or math — 56%
- Enrolled in English only — 83%
- Enrolled in math only — 84%
- Enrolled in English and math — 87%
- **53% of first-time students in Fall 2004 did not enroll in English or math, despite the importance of doing so.** After their first academic year, 38% of these students still had not enrolled in these core courses.
- **74% of the seats in basic skills courses were taken by continuing students in Fall 2004, leaving only 26% for first-time students.**



2. .XL Students Succeed Over Time

The .XL Program increases the odds of students succeeding in the next higher-level English or math course. Figures 2 and 3 show the number of English 400 and Math 402 students who succeeded in the next higher course (English 100 and Math 125). “Years out from starting date” refers to the number of years needed to succeed in the next higher course from the students’ first year at PCC.

- **Basic skills English:** .XL4 students significantly outperform their PCC counterparts by 63% to 24% in the number of students who succeeded in the next higher level of English. (Refer to Figure 2.)
- **Basic skills math:** All three .XL cohorts (.XL 2, 3, and 4) significantly surpass their Hispanic and PCC counterparts. 40% of .XL4 students succeeded in Math 125 (Beginning Algebra) within one academic year, which is remarkable since only 30% of all students starting in Math 402 succeed in the next level, Math 125, after 6 years. (Refer to Figure 3.)
- **The odds of a basic skills student’s succeeding in a transfer-level course are low.** 41% of basic skills English students will succeed in a transfer-level course within six years, and only 27% of them will ever succeed in transfer-level English.
- 21% of basic skills math students will succeed in a transfer-level course within six years, and only 10% of them will ever succeed in transfer-level math.



Conclusions

The TLC has found a data-supported method to help basic skills students succeed. Based on our findings, researchers recommend that PCC...

- advise all new students to enroll in English and math during their first semester
- increase the number of basic skills sections so all new students will be guaranteed a seat
- develop cohorts of students who will move through a sequence of classes together with the same instructor
- provide intensive tutoring, counseling, and other community-building strategies to support students and their instructors



.XL

Understanding How Others Learn

Another staff development course. Another week of interesting and helpful ideas that are too much work to actually implement in the classroom. Right? Wrong!

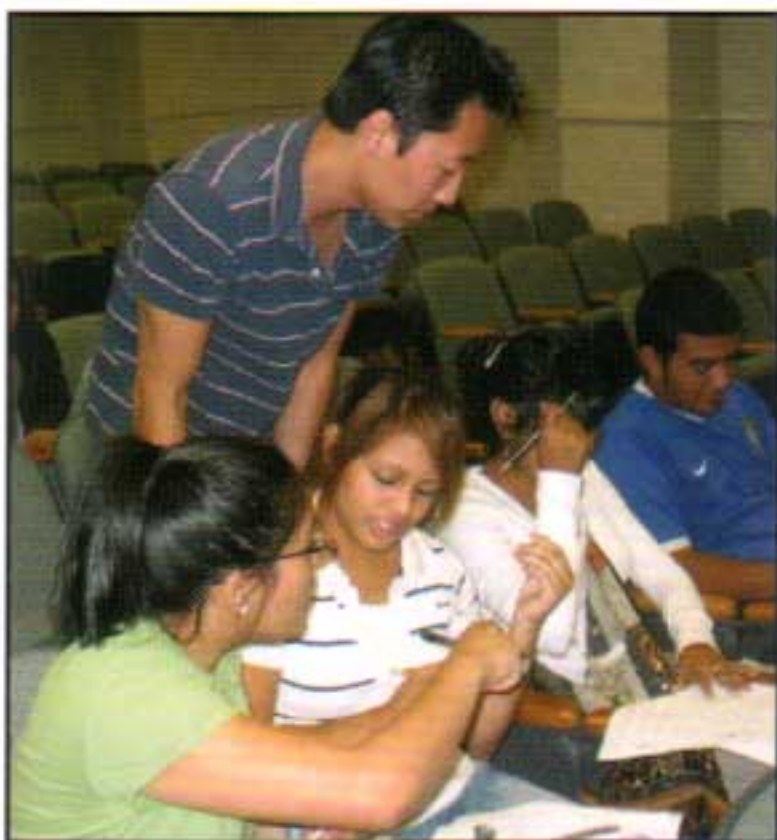
For a week in August Sue Brown and Deena Capparelli, Art; Rita Gonzales and Stephanie Hood, Speech; Carrie Mortensen, Math; Davis Uranga, Political Science; Shelagh Rose, Languages; and Silvia Villanueva, Lynn Wright, and Amy Ulmer, English, attended an intensive UC Riverside Extension course to learn about Multiple Intelligences and how to integrate MI theory into their instruction.

The course, team taught by UC Riverside's Dr. Sue Teele and PCC's David McCabe, was based on Howard Gardner's theories about different intelligences: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, intrapersonal, and interpersonal. The instructors learned how to customize their lessons to their students' particular learning styles and had the opportunity to develop lesson plans that they can use in their classes.

All the participants agreed that the MI workshop was transformative. Shelagh Rose said, "Now, in addition to explaining ideas verbally or in writing, I also attempt to use graphs, pictures, and even simple math to demonstrate grammar and writing concepts."



How Jay Got His Groove Back and Made Prealgebra Meaningful



Who knew Jay had lost his groove? Well, he did, but now it's back, thanks in large part to a faculty inquiry group that he and his colleagues formed to address the challenges faced by prealgebra instructors and their students.

With funds from the TLC's Hewlett/Carnegie grant, Jay and several of his math colleagues identified essential prealgebra concepts, developed SLOs and a rubric, revised and piloted curriculum, researched, evaluated — gasp! — and documented the group's work online.

One tool that Jay developed during the inquiry process was the innovative *think aloud* — a videotape of his students saying out loud what was going on in their heads as they attempted to solve a math problem. Jay feels that the think aloud is an incredibly valuable tool for instructors. "I made huge assumptions about what my students understood and how they solved problems. The think alouds I did with my Math 402 students helped me identify very specific areas where they struggle."

Jay's website has gone public and is now being used by faculty development staff and prealgebra instructors throughout the state. You can see the whole shebang by visiting the Carnegie Foundation website at <http://www.carnegiefoundation.org/>. And Jay? He's back to being groovy.

Students Get a Full Dose of Algebra

Twelve units of math in one semester sound like a good idea? Apparently a whole lot of students seemed to think so as the TLC kicked off MathPath, its intensive math-only program this fall. The TLC was overflowing with students anxious to enroll in a full load of math classes and receive structured support from math instructors Jay Cho and Carrie Mortensen, counselor Evangelina Quintanar, and a team of TLC tutors. By the end of the semester, the students will not only have completed both elementary and intermediate algebra (Math 125 and 131) but will also enter their next math course (we hope) with confidence and enthusiasm about their educational future.

MathPath is a component of the National Science Foundation-funded MaS Program; its goal is to strengthen students' math skills and get them interested in science. MaS director Professor Ann Davis points out, "MathPath students are getting their hands dirty using math in the real world. They're having a lot of fun both in and out of the classroom and receive support to succeed and move on in their chosen field. I want them to get excited about math, but I also want them to think about a career in science, technology, engineering or math."

More MaS projects are on the way. If you would like to find out more about MaS or MathPath, contact Ann Davis at ext. 7053.

What's Coming Up in the TLC

- **MaS** — Blocks of classes for students majoring in science, technology, engineering, or math
- **.XL** — recruitment for Cohort 6
- **Math Jam** — recruitment for Cohort 2
- **Faculty development** — more math and English inquiry groups!



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