Cañada College Division of Science and Technology

CALSTEP Briefs

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How do Math Jam Participants Perform in Subsequent Courses?

The Math Jam program at Cañada College has two primary purposes:
1) To assist students to improve their math placement test results.
2) To prepare students for their next math course.

This brief examines the later.

The Sample

Data on student retention and success was collected for all students who enrolled in a Math course in the Fall of 2010 and the Fall of 2011 at Cañada College.

Methodology

Comparisons were made between the retention and success rates of students who participated in Math Jam in 2010 and 2011 and those students who did not participate in Math Jam.

Findings

Students who participated in the 2010 and 2011 Math Jams had higher rates of retention and success than their peers.

- Among students who enrolled in a Math class at Cañada College in the Fall of 2010, the rate of retention (completing the course) was higher for students who participated in the 2010 Math Jam than for their peers who had not. However, the difference in retention rates was not statistically significant.*

- Among students who enrolled in a Math class at Cañada College in the Fall of 2010, the rate of success (passing the course) was higher for students who participated in the 2010 Math Jam than for their peers who had not. The difference in success rates was statistically significant.*

- Among students who enrolled in a Math class at Cañada College in the Fall of 2011, the rate of retention was higher for students who participated in the 2011 Math Jam than for their peers who had not. The difference in retention rates was statistically significant.*

- Among students who enrolled in a Math class at Cañada College in the Fall of 2011, the rate of success was higher for students who participated in the 2011 Math Jam than for their peers who had not. The difference in success rates was statistically significant.*

* Statistical significance at the .05 level

Student Performance in Fall 2010 Math Courses

	n	Retention	Success
2010 Math Jam Participants	67	79%	66%
Not 2010 Math Jam Participants	1649	74%	51%
	1716	*p=.348* (Difference is not statistically significant at .05 level)	*p=.017* (Difference is statistically significant at .05 level)

	n	Retention	Success
2010 Math Jam Participants - Hispanic	36	78%	61%
Not 2010 Math Jam Participants - Hispanic	655	71%	42%
	691	*p=.401* (Difference is not statistically significant at .05 level)	*p=.025* (Difference is statistically significant at .05 level)

Student Performance in Fall 2011 Math Courses

	n	Retention	Success
2011 Math Jam Participants	56	93%	77%
Not 2011 Math Jam Participants	1692	77%	53%
	1748	*p=.005* (Difference is statistically significant at .05 level)	*p<.001* (Difference is statistically significant at .05 level)

	n	Retention	Success
2011 Math Jam Participants - Hispanic	31	94%	74%
Not 2011 Math Jam Participants - Hispanic	629	75%	47%
	660	*p=.017* (Difference is statistically significant at .05 level)	*p=.003* (Difference is statistically significant at .05 level)

Discussion

Among students who enrolled in a Math class at Cañada College in the Fall of 2010 and the Fall of 2011, students who participated in Math Jam program had higher rates of retention and success in their subsequent math course than their peers. Also, among Hispanic students who enrolled in a Math class at Cañada College in the Fall of 2010 and the Fall of 2011, students who participated in Math Jam had higher rates of retention and success in their subsequent math course than their peers. These results support the program's efficacy in accomplishing one of its primary goals, to prepare students for their next math course.

Limitations

Caution should be used when drawing conclusions from this data . Although the results indicated a positive relationship between student participation in Math Jam and increased retention and success in subsequent math courses, it would be premature to conclude that participation in Math Jam caused the increases.

About CALSTEP

The "California Alliance for the Long-term Strengthening of Transfer Engineering Programs" (CALSTEP) is sponsored by the US Department of Education through the Hispanic-Serving Institution Science, Technology, Engineering, and Mathematics (HSI-STEM) program. The CALSTEP project promotes an understanding and appreciation of STEM careers through outreach activities for middle school, high school, and community college students. It addresses the main barriers to the retention and success of students in Science, Technology, Engineering, and Mathematics (STEM) through a combination of intensive preparation for college-level work, multiple entry points and accelerated pathways for students into STEM education, and previously proven academic support strategies.

CALSTEP Contacts

Project Director- Danni Redding Lapuz
(650) 306-3321 - reddinglapuzd@smccd.edu

Assistant Project Director - Anna Comacho
(650) 306-3474 - camachoa@smccd.edu

Retention Specialist - Chris Woo
(650) 306-3463 - wooc@smccd.edu

Physics Instructional Aide - Courtney Hadsell
(650) 306-3467 - hadsellc@smccd.edu

CALSTEP Principal Investigator -
Dr. Amelito Enriquez
(650) 306-3261 - enriquez@smccd.edu

For more information on this brief contact
CALSTEP Researcher - Brandon Price
(650) 306-3198 - priceb@smccd.edu