TEST-UP: Talent Expansion in Science and Technology - An Urban Partnership

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Project Background

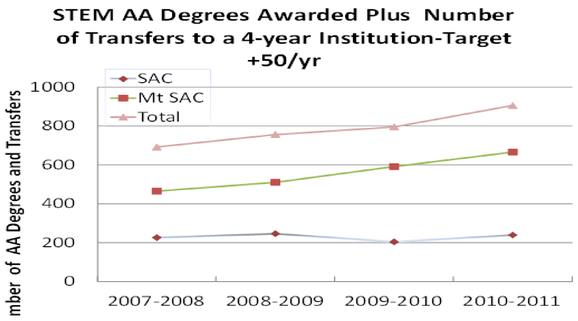
TEST: UP is a National Science Foundation (NSF) funded collaboration, initiated in fall 2008, among three large Hispanic Serving institutions (HSIs): California State University Fullerton (CSUF), Mt. San Antonio College (Mt. SAC) and Santa Ana College (SAC). CSUF is a four-year comprehensive university and Mt. SAC and SAC are two-year community colleges. All campuses are located within 20 miles of each other and have diverse student bodies with enrollments exceeding 27,000 students.

TEST: UP Goals

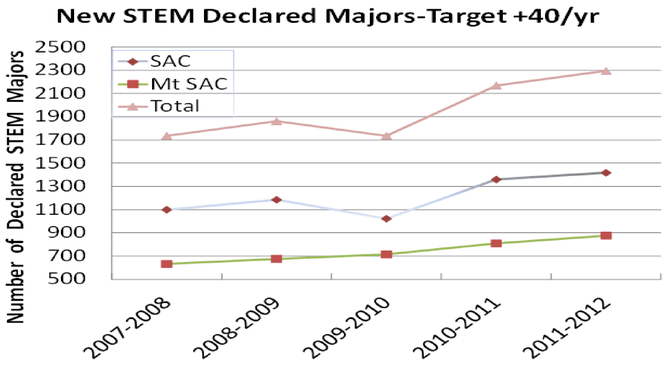
TEST: UP aims to recruit and retain more STEM majors at community colleges, increase the number of STEM transfer students to four-year universities and colleges, and to increase the numbers of STEM A.A. degrees and baccalaureates.

Progress to Goals

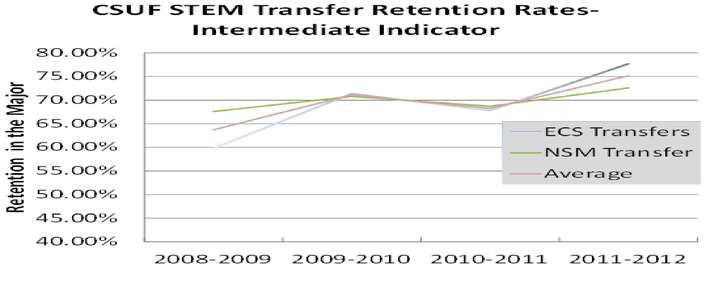
Increased the number of STEM AA degrees and transfers to a 4-yr



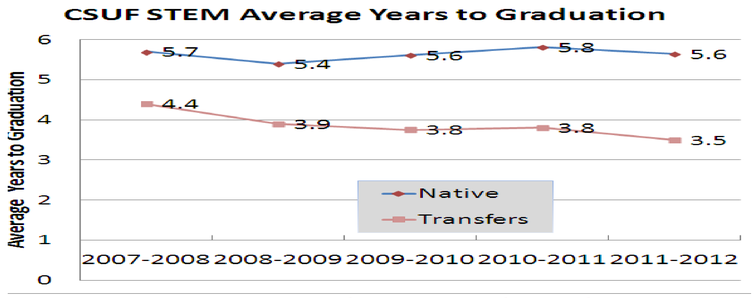
Increased STEM majors at CC's by 40+ per year



Improved retention rates at CSUF



Improved CSUF graduation rates for STEM transfers



Improving Advising and Guidance

- CSUF STEM Transfer Student Services has served 615 students of the incoming STEM Transfer population. The SAC STEM Counselor has advised 379 students and the Mt. SAC STEM Counselor has advised 207 students. These students created academic plans, applied for undergraduate research opportunities, scholarships ,and applied to transfer.
- CSUF Transfer Peer Advisors continue to advise incoming transfers. Students are informed about major requirements, undergraduate research opportunities, and major specific clubs.

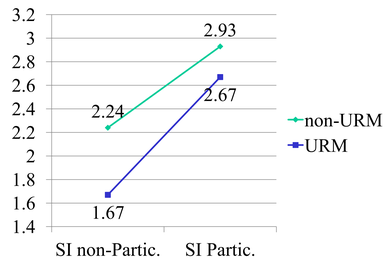
Improving Learning

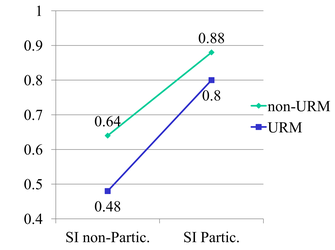
SI Leaders at CSUF

- SI Leaders mentor students on how to be successful STEM students. In addition SI Leaders are mentored by SI Faculty members who have encouraged them to join research and teaching focused programs.
- SI leaders participate in intensive training. This training includes best practices, study skills, and class management.

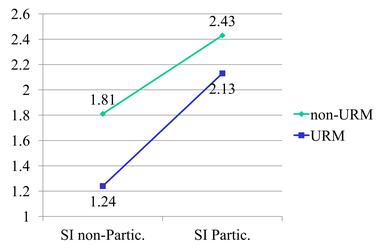
SI Impact Stars at all Partners and Helps to Close the Achievement Gap

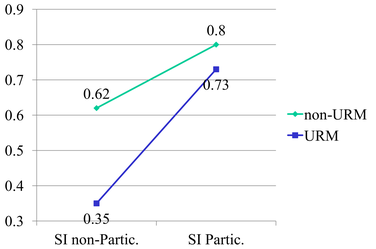
Effects of SI on BIOL171-Biodiversity and Evolution at CSUF
Passing rates and GPA for students who were participants vs. not-participants in SI were 83% vs. 57% and 2.82vs. 3.03 respectively.





Effects of SI on Mathematics 150A- Calculus I at CSUF
Passing rates and GPA for students who were participants vs. not-participants in SI were 74%vs 49% and 2.25 vs.1.50 respectively.





Effects of SI on Mathematics and Biology at SAC
Average retention rates for participants vs. not-participants in SI at SAC increased from 92%vs.79% in biology courses and from 85% vs.70% in math courses. Average grades ranged from 79% vs. 69% in biology courses and from 83%vs.78% in math courses.

Effects of SI on Mathematics and Biology at Mt. SAC
Mt. SAC experience also indicates very similar and consistent improvements in passing rates and GPA improvement with students attending at least 5 SI sessions in math and science.

Challenges

The principal challenge at CSUF has been securing stable institutional funding for the SI peer facilitators and faculty coordinators involved in offering the SI courses. Access to student data at the CC's continues to present a challenge. Community colleges often lack access to information needed to track students transfer progress, unless it is self-reported. CC counselors have broad responsibilities and are not just STEM-focused . CBA's delineate who can provide academic advice often excluding faculty.
Actions Taken: SI Program funding has been obtained on a semester by semester basis, largely through external grant and internal College support. Regular meetings with internal, external partners and NSF have been had to discuss to discuss the tracking problem recognized nationally as a problem. More productive interactive relationship on STEM needs achieved with CC counselors over time.