



*The Alliance for Regional Collaboration to Heighten Educational Success (ARCHES) is a voluntary confederation of collaboratives focused on improving student outcomes and closing the achievement gap through collective action among schools, community colleges, baccalaureate-granting colleges and universities, business, and community and family-centered organizations.*

## **AURORA PROJECT**

### **History**

The Aurora Project is the community college component of the University of California's Science and Mathematics Initiative. The Aurora Project's main goal is to motivate and support community college students who have the potential to pursue careers as secondary teachers of science and mathematics. The Project has two interrelated goals:

- Increase the number of highly qualified secondary school mathematics and science teachers; and,
- Diversify the racial-ethnic composition of the teaching pool, especially in these disciplines.

In order to achieve these goals, the Aurora Project began by linking the two community colleges -- Foothill and De Anza -- in the Collaborative for Higher Education (established in 2000 in Santa Clara County in order to "leverage its collective talent and resources to address California's changing demands for education, workforce development, real-world training opportunities and lifelong learning") with the Copernicus Project in Riverside County that identifies, recruits, and prepares science and mathematics teachers. The Aurora Project partners realized that, in order to diversify the mathematics and science teaching pool, a strong and active engagement with the community colleges was necessary because they educate over 75 percent of the state's African-American and Latino students who attend college. Furthermore, many community college students express a desire to contribute to their communities after completing their education; teaching mathematics or science is a way to make that contribution.

Among regional collaboratives, the Aurora Project is unique in the following respects:

- Initially, two regions of the state and ten community colleges were engaged; over time, the Aurora Project has become statewide and has expanded to twenty-eight community colleges;
- The involvement of the scientific business community is integral and has been a major source for funding student scholarship stipends and community college seminar courses; and,
- The Aurora Project focuses directly on a singular group of students and delivers intensive services to them in order to achieve a specific goal in contrast with most collaboratives whose intended reach is large, albeit indirect, and often at the policy level.

### **Membership**

Members include school districts and schools within the participating community college regions; 28 community colleges; San Jose State University directly and several other California State University campuses indirectly; the University of California Office of the President and campuses of the University of California; Agilent Technologies Foundation; College Access Foundation of California; Noyce Foundation; Symantec Foundation; and, UCSC/NASA Ames.

### **Demographics**

Because of the Aurora Project's statewide nature, regional demographics is a moot issue, except to note that the community colleges participating in the Aurora Project have significant numbers of African-American and Latino students from which to draw participants, including the community colleges of Evergreen Valley, Merced, Modesto, Riverside, San Bernardino, and San Jose City. Percentages of African-American and Latino students from these campuses participating in the Aurora Project often are as high as 75 percent.

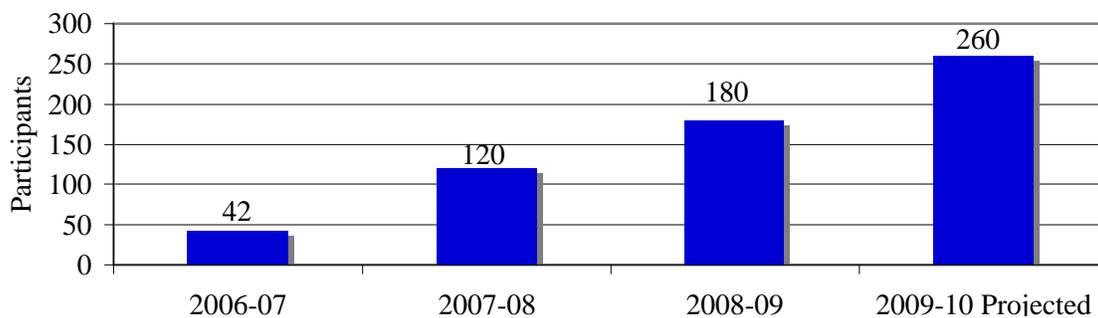
## Impact

In 2006, the Aurora Project received an ARCHES-ENLACE grant framed by three goals:

- Support six students at each of 10 community colleges to transfer to a baccalaureate-granting institution in order to pursue to become a science or mathematics teacher;
- Offer these Aurora Project students appropriate training at the community college -- seminar-type courses, small classroom instruction, school field experiences, and a mentorship -- in order for them to succeed when they transfer; and,
- Provide scholarship stipends to the Aurora Project students.

Display 1 presents the growth in numbers of Aurora Project students since its inception. Additionally, a projection for 2009-10 is included in which colleges new to this Project will begin to implement their actual instructional program -- a process that often takes a year or more.

Display 1  
Actual and Projected Participants in the Aurora Project, 2006-07 to 2009-10



- The number of Project students has increased, or is expected to grow, by approximately 40 to 80 students per year depending upon the number of new participating community colleges.
- Based on an original estimate of six students per community college, the number of students at the 28 campuses participating in this Project in 2009-10 would be 168. However, the projected number for that year is 260, or 55 percent more students than originally estimated.

In addition to the growth in the number of participating students, indicators of the effectiveness of the Aurora Project are:

- Seminar-type courses at several of the original community college campuses are now being given each quarter or semester; enrollments in these courses have, or are likely to, triple.
- A large proportion of students who enrolled in the first seminar-type course and field experience continued to take the next sequential seminar-type course and field experience.
- Several community colleges are creating academic paths for prospective future secondary teachers of science and mathematics.
- Several initial funding agencies have renewed financial support for the Aurora Project and other organizations have been willing to support the Project.

However, because of the time lapse between initial entry and matriculation to a public university, limited information is available on numbers of Aurora Project students who actually transferred in order to pursue a teaching career -- a summative measure of this Project's effectiveness.

## Future Initiatives

- Expand this Project to the 50-60 community colleges who transfer the largest number of Science, Technology, Engineering, and Mathematics (STEM) majors to baccalaureate-granting institutions,
- Encourage and support a reasonable proportion of STEM majors to become secondary science and mathematics teachers.