

**Preparing Mathematics and Science Teachers  
City of Industry  
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President John Welty  
California State University, Fresno

**What we do know**

1. The teacher in the classroom makes a difference in student achievement.
2. The principal also makes a difference in student achievement.
3. Teachers make a difference in terms of whether students go on to college. This is especially true for first generation college students.
4. The alignment of educational systems and partnerships make a difference in educational success.

As we contemplate issues of math and science teacher recruitment, it is important to keep these four points in mind.

- School districts, local education agencies, community colleges, professional teacher organizations and universities must collaborate to create recruitment programs that are effective in attracting and holding outstanding math and science teacher candidates.

In creating new approaches to recruitment, both the universities and K-12 stakeholders must embrace new roles. They must function as interdependent systems in facing the difficult challenges of recruiting large numbers of new teachers in these fields.

In K-12 education, superintendents and school boards will need to develop incentives for high school students to choose math and science teaching as a career and return to their own communities.

The university and district should formalize the partners' duties and responsibilities so that they can create and deliver innovative pipeline

programs that will recruit and prepare future math and science teachers.

For example, districts could commit to hiring students who go to a CSU when they graduate. In addition, the district could consider scholarship support within the college

or

A modification of the Kalamazoo Plan could be implemented in which the community commits to financially supporting all math/science education majors

or

Internships could be funded as we have done at CSU Fresno from time to time

or

Districts could fund their juniors and seniors to tutor after school.

- Educational Leadership Programs

Recently, the CSU Task Force on Educational Leadership Programs made a major recommendation that educational leadership programs should prepare principals who are instructional leaders. Let me suggest that these programs should contain emphasis on math and science.

The new CSU independent doctorate program gives us an opportunity to prepare leaders in conjunction with districts and community colleges

It may be that some of our system's new programs that are developed should prepare math and science educational leaders.

The educational leadership programs have another important role. They prepare the leaders who will need to understand the beginning

teacher support new math and science teachers need in order that they are fully trained in the profession.

- We must have a collaborative and cooperative approach between our math, science and education programs. We are all too familiar with the wars which exist on our respective campuses.

Presidents and Provosts must take the lead in insisting that a new level of cooperation exists. The most important priority for our math/science initiatives are teacher education programs.

We will form a task group at CSU Fresno which will be given specific goals to accomplish and there will be consequences if these goals are not accomplished.

- Alignment of K-12, community colleges and university must be a priority, consistent with the President's Commission on Teacher Education.
- In the area of technology, teacher education programs need to leapfrog to become state of the art in technologies, as California has fallen behind the rest of the nation in use of computer technologies in K-12 education – and there is a need for this new generation of teachers to be equipped for teaching and learning that reflects the next generation.

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We have a great opportunity. We can't fail.