

Viewpoints: New approach to remedial math challenged

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Community colleges are struggling to address a huge problem: remedial mathematics. In fall 2009, 143,587 California community college students enrolled in remedial math to become eligible for college math, but only 18 percent went on to complete a college math course within three years.

Given these results, policymakers are questioning the use of scarce public dollars to "pay for the same education twice." If students didn't learn algebra in high school, why are we paying for it again in college? Are these students even cut out for college?

Here's the good news: A growing number of community colleges have developed an innovative new approach for students who are under-prepared for college math. It is less expensive than the traditional curriculum and significantly more effective. The innovation has been spotlighted by several national organizations focused on college completion.

Now the bad news: The approach may be killed before the year is out.

At least 16 California community colleges are offering a new pathway for students in majors that are not algebra-intensive. Instead of spending up to four semesters reviewing arithmetic and algebra, students in the new pathways might spend just one semester in a prerequisite course tailored to statistics.

The logic is simple: Different majors require different math preparation. An engineering student needs extensive algebra to be successful in a higher-level calculus course, while an English major needs very little algebra to be successful in statistics. If a student arrives underprepared for college-level work, shouldn't remediation focus on the math that students actually need in their chosen pathway, rather than simply repeating their prior schooling?

Students in the new pathways are completing college math at rates two to four times higher than in the traditional curriculum. At Cuyamaca College in Southern California, completion of college math increased from 20 percent to 81 percent in the initial pilot. At College of the Canyons in Santa Clarita, it increased from 22 percent to 78 percent.

Despite their promise, statistics pathways face formidable opposition from some faculty leaders in the community college system, as well as inside the University of California and California State University systems. Faculty widely acknowledge that little algebra is needed for the study of statistics. However, a vocal contingent continues to insist that all students should be required to complete intermediate algebra, whether or not it is relevant to their major.

This vocal contingent is fighting hard to block pathway reform. The battleground is whether CSU and UC will recognize the new courses as valid prerequisites for college statistics. If they insist that only intermediate algebra will be recognized as proof of "college readiness" in math – and refuse to

award transfer credit for statistics courses with alternative remedial preparation – the reform is unlikely to survive.

Advocates point out that the 16 colleges piloting statistics pathways made no changes to their college-level courses. If students from the new pathways are performing well in rigorous statistics courses, isn't that proof enough that they were "ready" for the challenges of the college level?

Reform-minded faculty hope that UC and CSU will reconsider their policy on intermediate algebra. They argue that the policy should allow community college faculty the flexibility to design prerequisites that are better tailored to statistics but equally challenging.

These teachers want their academic senate leaders to advocate on their behalf. The senate president and vice president represent the community college system in policy conversations with UC and CSU on the Intersegmental Committee of Academic Senates, which is expected to take up the prerequisite policy this year.

Reform advocates have drafted several resolutions to be debated at the community college senate plenary meeting that began Thursday. The question is: Will senate leaders support them? So far, the signs don't look good. Last month, the executive committee rejected a petition from 22 faculty members at nine community colleges to form a caucus on math pathways.

President Barack Obama has challenged community colleges to dramatically increase their completion rates by 2020, but we will never succeed if we keep losing the majority of our students at the front door. Statistics pathways are the single most promising innovation to emerge in the nationwide effort to improve community college completion.

Until now, this reform has been led by committed faculty champions – teachers who are unhappy with the status quo and working hard to develop solutions. But their early successes are in jeopardy. Decisions are being made at the state level that will either maintain space for this reform or more tightly shackle colleges to the existing system of remedial mathematics.

The issue is too important to be decided behind closed doors, by people who are more worried about whether students can factor a polynomial than the fact that students' college dreams are dying in remedial math courses. We need to come together to support innovations that work – faculty, administrators and trustees; community colleges, CSU and UC; legislators and taxpayers.

The success of community college students is everyone's business.

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