

Lessons from Corequisite Math Reform

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In response to low rates of developmental education course completion, states and college systems across the country are adopting a promising reform strategy: corequisite coursework.

Corequisite reforms adopt a model where students deemed “not college-ready” (a status often based on a placement test or other criteria) concurrently enroll in a college-level course and a (corequisite) developmental course. Black and Hispanic students, and students from families with low incomes, are among those most likely to be labeled as not college ready.

Corequisite reforms improve college student outcomes.

Evidence from various settings, including Tennessee, CUNY and my own work in Texas, suggests that corequisite reforms improve student outcomes, particularly in gateway college math. Because the effects are similar across racial subgroups, widely implementing corequisite reforms stands to improve college-level math course completion and degree attainment rates among Black and Hispanic students, and other groups overrepresented in developmental education.

College personnel must determine how to enact the prescribed changes.

My prior research suggests that when institutions implement dev-ed reforms on a small scale (i.e., limiting access to reformed pathways), they are likely to enroll white students, relatively higher-performing students and younger students who recently transitioned from high school. In mixed-implementation models that maintain both the status quo dev-ed and reforms (e.g., only a small handful of corequisite courses), racially minoritized students, less affluent students and adult learners may be left behind in the traditional prerequisite dev-ed sequences.

Moving corequisites to scale — eliminating and overhauling the traditional dev-ed system — is essential to ensuring that these students gain access to college-level courses. The implementation of largescale corequisite reform requires several moving pieces. Personnel from various units (upper administration, faculty, advisors, institutional researchers) all must play a role in moving corequisites to scale.

Over the past several years, my research team has been examining how community colleges in Texas responded to a statewide mandate for corequisite coursework. Using descriptive statistics capturing whether colleges were performing above, at or below

the state's target for corequisite coursework enrollments in math, we selected 16 focal colleges (approximately five colleges in each group: above, at and below state targets.) We conducted qualitative interviews with administrators, math faculty and advisors to understand how they interpreted and implemented the policy, including challenges and next steps in implementation.

Successful strategies for implementing corequisites

Among high implementation colleges (those exceeding state targets and moving rapidly to scale), we noticed several common strategies to smooth the transition to corequisite reforms:

1) Regularly reporting student outcomes

Faculty were much more likely to be persuaded by data from their own institution than evidence from similar reforms in other contexts. One professor noted: "When you see your own data, it really helps you understand the impact. In 2015, we had really low percentiles: 30% passing College Algebra. And now, with the corequisite, that's up to 60 and 70% by second year implementation of the corequisite. You can't really argue with those statistics."

In colleges that emphasized reporting student outcomes to faculty and staff implementing reforms, the personnel described improvements in pass rates and time-to-passing gateway math. That is, they were aware that the reforms worked as intended.

Without access to that data, faculty with prior experience teaching gateway math (primarily to students meeting college-readiness standards) interpreted lower pass rates within their newly paired gateway math course (which included students not meeting college-readiness standards) as evidence that the reforms produced worse outcomes.

In reality, more students at the college were passing gateway math. When colleges present outcomes data to faculty, it allows instructors to differentiate between the forest (overall pass rates among all students) and the trees (pass rates of just the students they see in day-to-day teaching).

2) Leveraging external examples and learning through networks

The majority of high implementation colleges encouraged and incentivized participation in webinars and events, held by organizations like the Charles A. Dana Center and Texas Association of Community Colleges, that provided professional development opportunities to learn about corequisite design and strategies.

In addition to describing requirements of the policy change (which were also covered in events held by the state's coordinating board), the conferences offered examples of how to implement those required changes, describing successful corequisite models from other contexts. The space facilitated open dialogue for members of the same team (they could discuss whether and how exemplar corequisite models might work in their college and for which students) and among colleges to allow for exchange of ideas.

3) Leading from the middle

Most colleges that moved to scale quickly had a strong mid-level administrator — often math department chair or program coordinator who served to:

- Engage with upper-level administrators in determining appropriate goal posts
- Catalyze efforts and "cheerlead" in their department
- Corral faculty and other personnel to take next steps

One department chair noted that the implementation process could not stem entirely from faculty governance; the department needed a starting point from which to build their plans:

"I had to create this picture of what it's going to look like for us from the beginning, so that we could plan it out and let people know what we're going to be doing, and get groups to work on it."

Most administrators overseeing this process admitted it was difficult at times, but all-hands-on-deck planning meetings helped ensure all personnel had the same information and that their voices were heard. Meetings that incorporated faculty and advisors were essential. Faculty develop course sequences and placement recommendations, but advisors serve as students' first contact about recommended course sequences. The meetings opened communication between student services and instructional staff, which sometimes were siloed from one another previously.

4) Ensuring everyone has skin in the game

Many high implementation colleges worked to distribute the load of implementation across faculty, by assigning all faculty to working groups to design the courses and sequences. In some cases, they assigned all full-time faculty to teach corequisite coursework (either the college-level component, dev-ed component or both) as it became more ubiquitous.

Distributing the load gave all the involved personnel a personal stake in the success of the reforms. That approach stood in

contrast to a more targeted method where resistant faculty remained disengaged from the reform efforts. One faculty member explained that many instructors wouldn't "get it" until they actually taught a corequisite course: "I think until you've done it, you

don't really grasp the concept of what needs to be done to not only to comply with the bill, but to actually help the students be successful."

5) Adapting to meet challenges

Largescale reforms involve cultural shifts and logistical challenges that must be faced head on. High implementation colleges, which are leading the state in corequisite participation and improved passing rates in gateway math, faced bumps in the road as they rolled out corequisites. They continue to seek effective ways to increase buy-in and leverage existing data to ensure their reforms work for students. "Adapt we will adapt" was a common response to how the personnel would respond if initial attempts at corequisite implementation required refinement. Real-time data reporting, invested leaders and engaged faculty and staff enable that adaptation, helping personnel push forward toward their goal of reaching 100% corequisites.

High implementation colleges are overhauling the dev-ed structures that typically created barriers for student progress. Given the role dev-ed has played in suppressing opportunity for racially minoritized students and students from low-income families, colleges that move to scale with corequisite practices democratize access to college-level coursework.

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