# PPIC Report on AB 705/Multiple Measures -- Interventions

**<u>Interview Insights: Challenges to improving outcomes in <span style="color:red">math corequisites</span></u>**
When it came to the features of successful corequisite math courses, we found that math and English faculty shared similar strategies. Specifically, our interviews with math faculty found that all the corequisite features identified in English were also perceived as important in supporting success in transfer-level math (e.g., **having the same instructor, just-in-time remediation, collaborative classroom setting, relevant and rigorous curriculum, addressing the affective domain, and professional development**). Additionally, when it comes to supporting more equitable outcomes**, faculty believed that addressing the affective domain, building community inside the classroom, and using equity-centered teaching practices (e.g., fewer high-stakes assessments and professional development on unconscious bias) went a long way in supporting the success of historically underrepresented students.**

However, relatively low outcomes and persistent equity gaps suggest that these strategies may not be implemented widely and consistently across the system. With only a few exceptions— among them Cuyamaca and Citrus—in the nine colleges we interviewed for math we learned that even within the same institution, whether or not a college adopts strategies for successful corequisite courses depends largely on whether or not instructors have participated in professional development opportunities (e.g., CAP conferences, early implementer college site visits). Partly a result of the lack of professional development, the corequisite may sometimes be disconnected from the transfer-level course (e.g., not practicing "backward design" where the content and learning goals of the parent and support course are aligned)—this may especially be the case if the courses are not linked and a different instructor teaches the corequisite. Or in some cases, the corequisite may look like a traditional developmental math course that focuses on developing discrete algebra-based skills.

Additionally, in math there are additional challenges associated with having to significantly increase statistics offerings. **Many faculty are teaching statistics for the first time**, and shifting from a lecture to an activity- or collaboration-based teaching approach can be difficult and requires robust training and practice. Several faculty members also indicated that teaching to a range of prior abilities and math skills in a corequisite BSTEM math course can be a great challenge and these courses can be daunting for students who have not taken algebra 2.

In math, we also learned that faculty **mindsets can be one of the biggest challenges to reform**—even with data on improved outcomes, math faculty do not always believe the corequisite approach is the right thing to do. As a result, faculty leaders we spoke to found it challenging to convince some faculty that students can be successful without traditional remediation. One faculty member worried that if faculty feel forced into a new way of doing things, they may have a bias against the students, whom they perceive as underprepared.

Nevertheless, some faculty have realized that the issues interfering with student success **"are not math skills, but 'being a student' skills."** In the past, the vast majority of students coming into the transfer-level math course were not freshmen. They had been in college one or more years and taken one or more developmental math courses. Now, transfer-level courses are getting more first-time college students. Some colleges are addressing this by trying to explicitly address issues like **time management,**

**notetaking, and study strategies** (Hern and Snell 2013). However, we learned math faculty are generally not trained in these areas. As has been previously noted, supporting faculty to teach in a new way will require continuous professional development opportunities and communities of practice that center on equity

### Interview Insights: Features of successful English corequisites

Our faculty interviews helped illuminate some of the features of a successful corequisite course. Below we summarize themes from interviews with 20 faculty at 15 colleges that offered corequisite courses during fall 2019. Importantly, several of the key features faculty highlighted were attributed to the trainings offered by the California Acceleration Project (CAP) to support faculty teaching corequisites and accelerated English courses. In fact, faculty described having honed their skills in accelerated English classrooms, which embedded CAP's principles of design and transferring these skills to the corequisite setting.

**Instruction**: English faculty indicated that one of the principal ways a corequisite course supports success in college composition is that it often provides extra time with the instructor, as is the case in linked and enhanced courses. This time facilitates more one-on-one targeted support and provides opportunities for faculty to get to know students better and to **show "authentic care"** for them. Another strategy was scaffolding instruction—breaking assignments into discrete parts, with support for each task—in a way that is individualized and makes no assumptions about what students can and cannot do. Faculty shared that being **"thoughtful about unconscious biases"** and **embracing equity-minded teaching practices** was also important. The instructor's attitude and mindset—**having "faith in student capacity"** and believing that students can succeed—were also considered key in improving student outcomes.

**Just-in-time remediation**: Faculty shared that just-in-time remediation was helpful in supporting success in college composition, especially when done in collaboration with **embedded tutors**. In this approach, faculty and tutors work together to identify students who need extra help, and the extra time in the corequisite allows them to provide targeted guidance for assignments (e.g., developing a thesis or working on grammar) and to give students lowstakes, formative assessments. This one-on-one attention and the ability to check students' work on the spot help to address areas that need development early, before they become a larger barrier to course success.

**Collaborative classroom setting:** A classroom setting that facilitates discussion and collaboration among students—where instructors and tutors are floating around the classroom to facilitate and lend support—was identified as an important feature of corequisite courses. In some instances, interviewees noted that they literally changed the classroom furniture and added whiteboards to allow students to actively engage in the writing process in groups (e.g., brainstorming for a writing assignment). In this way "writing becomes a community practice," which in turn helps with student engagement because faculty are not lecturing. Importantly, faculty members noted that the community students create in the classroom sometimes leads to the creation of study groups led by their embedded tutors in the campus writing center.

**Culturally relevant and rigorous curriculum**: Faculty consistently identified the importance of having a relevant and rigorous curriculum as an important feature of the corequisite course. This point was

framed as having a high-challenge and high-support course that includes thought-provoking and relevant content. Faculty create these opportunities by using **thematic units that incorporate issues that are academic and also culturally relevant**. This strategy was considered especially important in helping address equity gaps. The trainings provided by CAP's community of practice provide faculty opportunity to develop these courses.

**Affective domain:** Across the board, faculty identified addressing the affective domain—which consists of strategies to help students acquire the skills needed to be a successful college student—as an important strategy for student success. These skills include study skills, time management, goal setting, and seeking college services and supports. Faculty embedded these skills into the curriculum through reflective writing assignments, activities that involve campus resources (e.g., visiting the writing center or library), and class presentations from student services and academic services personnel (e.g., librarians or Disabled Students Programs and Services tutors). Because many students in corequisite courses are also first-time/first-generation college students, faculty noted that helping students develop these skills could be particularly useful in addressing equity gaps. Some colleges are expanding this strategy to the standalone college composition courses as well.

**Professional development**: Faculty indicated that implementing these strategies successfully requires professional development and ongoing support from **communities of practice**. These opportunities—which are sometimes paid and open to full- and part-time faculty—are especially important now because faculty find themselves needing to teach students with more varied academic skills and backgrounds. Professional development opportunities from the college, department, and organizations like CAP can help faculty feel "capable of changing their teaching styles" and allow faculty to share successful strategies and lessons learned. Importantly, professional development has also been used to help promote equity-focused, data-driven change at the faculty and classroom levels. Interviewees from colleges that did not have communities of practice voiced a strong interest in this form of ongoing training and support; funding and administrative support were identified as barriers to not having them on their campus.