

# Rethinking the Corequisite Model: What Is It, Why Remedial<sup>1</sup> English and Mathematics, and What Is Its Net Effect?

Alexandros M. Goudas

## ABOUT THE AUTHOR

*Alex Goudas is an Associate Professor of English at Delta College in Michigan and has been an educator for nearly 20 years. He also frequently speaks and writes about postsecondary research, especially on two-year colleges, and is the author of [communitycollegedata.com](http://communitycollegedata.com).*

Imagine you are an administrator at a local college and are analyzing first-year fail rates. General Biology I (BIO I) and II (BIO II) are two sequential courses students fail at rates higher than normal. You and your team decide to implement a new reform to deal with the problem. As it is now, only 30 out of 100 students who start in BIO I end up passing BIO II. Part of the problem has to do with students not enrolling in the second course: Only 45 of the 60 who pass BIO I even enroll in BIO II. Success in both is required for most majors.

Your goal is to increase retention and BIO II pass rates, so one part of your reform is to ensure students enroll in it. Therefore, you take 100 students who qualify for BIO I and enroll them in BIO II, but you also double the time of BIO II. That way students are really taking BIO I and II concurrently, and they have a lot of time—eight hours a week—to make sure they understand the material. The BIO I part of the course is termed a *companion course* and exists primarily to help students through the BIO II material. Students cannot stop out after BIO I because both classes are taken simultaneously.

The results of your pilot come in: Students who take BIO I and II concurrently pass both at a rate of 60 out of 100. You effectively doubled the pass rates in BIO II. Because of this, you decide to eliminate stand-alone BIO I courses and enroll all students into the new combined course. Soon you realize students do not need a 4-hour companion course; pass rates remain similar if you reduce that part of the course to two hours a week. Some instructors even run a pilot to replace the two-hour companion

course with a mandatory weekly hour in the tutor center. Pass rates remain higher overall, you consider the reform a great success, and you are looking into applying this model to other sequential first-year college-level courses.

If you are an instructor of biology or of any first-year college course, this reform may seem odd. You probably would not agree with it for several reasons, not the least of which is the fact that students require time to understand tiered biology concepts. Additionally, reducing the time in class that much means a lot less material will be covered. You know fail rates are high mainly because students are entering college underprepared in biology. You also realize that most of the time, students stop out of college after the first semester due to reasons unrelated to coursework (“A Matter of Degrees,” 2012, p. 7). Finally, you understand that for the majority of students, the answer to underpreparedness in biology or any gateway course is not to fast-track or eliminate it just to increase pass rates in the second of two sequential courses. You want to ensure that the students who pass biology understand the curriculum so they can do well later in other STEM courses and programs.

Nonetheless, this hypothetical scenario is playing out at hundreds of institutions across the nation, except instead of BIO I and II, the courses being modified are almost all remedial English and mathematics. The reform model is called *corequisites*, and the goal of the model is to increase pass rates in the second of two or more tiered English or math courses. Ultimately, as the theory goes, increasing pass rates in initial college-level courses should increase graduation rates as well.

Unsurprisingly, the data almost always show that pass rates rise under the corequisite model. This happens because of how researchers set the goal and analyze the data. First, instead of setting the goal of increasing graduation rates, researchers target raising the pass rates in only one or two college-level courses. If you start students in the second of two sequential courses and give them double the time in that course, and then you compare those pass rates to a group of students who had to take the two courses over two semesters, you will almost always find that the group that takes the one-semester combination will pass at a higher rate than the group that takes both classes sequentially. It is a matter of comparing first-semester pass rates to second-semester pass rates, which of course includes students who do not enroll in the second semester. The theory here is that if students do not have an opportunity to stop out, they will be more likely to persist and pass a class.

<sup>1</sup>The term *remedial* is used deliberately in this paper for two reasons. First, remediation, which refers to stand-alone English and math courses taken to prepare students for college-level gatekeeper courses, should not be confused with developmental education, which is a system of support based on the principles of adult education that includes remedial courses. Second, since most institutions that are implementing versions of corequisites do not actually employ them within models of developmental education, remedial is a more apt term in this case.

As instructors know, students withdraw from and fail courses due to many different reasons, and they tend to fail first-year, first-semester courses at the highest rates (Yeado, Haycock, Johnstone, & Chaplot, 2014; Zeidenberg, Jenkins, & Scott, 2012). Overall attrition is always highest after a student's first semester. Does this mean we should fast-track, combine, and eliminate most first-semester courses simply because they are taken in the first semester? Clearly this would be misguided. Apparently, however, this approach is only acceptable when it comes to remedial English and math.

In spite of the inconsistent application of this idea, the corequisite model is now widely promoted and implemented, and is even mandatory in some state systems: Tennessee, Georgia, Texas, and California are examples of entire state systems mandating that most or all remedial courses be replaced with corequisite models (Scott-Clayton, 2018).

If this acceleration model actually works, why is it being applied inconsistently? Part of the problem is that many decision-makers and researchers do not recognize that remedial English and math are parts of a tiered sequence of learning outcomes in those disciplines, just like BIO I and BIO II. The main issue, however, is that they are also confusing causation with correlation and assuming that the remedial English and math courses are *causing* high fail rates or attrition.

Again, as research shows, a particular course does not cause high fail rates. Instead, what causes high fail rates and attrition are the initial semester and the preparedness levels of students. Indeed, first-semester classes have the highest fail rates. Most importantly, there is no association between any type of first-year course passed and subsequent graduation rates. As Zeidenberg et al. (2012) from the Community College Research Center (CCRC) state, "We found that success in gatekeeper math and English is no more associated with completion than is success in the other courses" (p. 28). Therefore, the problem is not remedial courses, nor is it any specific first-year, first-semester course. It comes down to a lack of prerequisite knowledge and skills, as well as inadequate support in college.

Similarly, the main problem with corequisites is not the model itself, which has been studied by the CCRC and has been shown to modestly increase first- and second-semester college composition pass rates. The Accelerated Learning Program (ALP), which is the original and most thoroughly researched corequisite model, is a comprehensive model that when implemented fully can have some positive temporary benefits for students beneath the college-level cutoff (Cho, Kopko, Jenkins, & Jaggars, 2012).

Rather, the problem is the net effect of the reform movement. Instead of implementing corequisites as they

have been studied, institutions and entire states are using the model as a way to implement unresearched reforms, such as enrolling lower-level students in higher-level courses with as little support as a one-hour weekly tutor session. Another negative net effect of the corequisite reform movement is the elimination of prerequisite remedial courses. In the worst cases, limited corequisite research is giving some policy makers the *data* to rationalize moving back to a de facto right-to-fail model (Goudas, 2017).

The answer to underpreparedness should not simply be the acceleration and elimination of remediation, nor should it be the implementation of unstudied corequisite models that lack support. In fact, the model that actually moves the completion needle goes in the opposite direction. It involves *more* support and funding for underprepared students, and it does not cut remediation.

The Accelerated Study in Associate Programs (ASAP) model is a holistic reform that combines full support with course design changes, and it results in the doubling of graduation rates for underprepared and prepared students alike ("Significant Increases," 2016). ASAP includes prerequisite remediation as part of a tiered learning process, and students are required to take those courses first. But the important part is that the model involves a comprehensive network of support to mitigate attrition and high fail rates.

Perhaps we need to rethink what corequisites are, why they are only applied to remedial coursework, and why they would not work with such courses as BIO I and II. By design, they temporarily increase the pass rates of certain gateway courses. Yet the CCRC notes that many first-year courses have high fail rates. Why aren't we fast-tracking and doubling the time on task in every single gateway course with low pass rates? It appears like a biased application of what is supposed to be sound research on this acceleration model.

What is most disappointing is that no rigorous research exists showing an increase in graduation rates, which is the purported goal of this reform. Surprisingly, the original CCRC research on ALP shows that corequisite students actually had lower certificate attainment rates (Cho et al., 2012, p. 20), yet no one highlights this part of the study. Combine that with the fact that ALP costs double compared to traditional remediation and one begins to wonder why this model is being sold as *the* solution to low graduation rates ("Remediation," 2012). Even more importantly, CCRC researchers themselves are now conceding that corequisites will not increase completion (Jaggars & Bickerstaff, 2018, p. 496). The net effect of this model, however, is that fewer students have access to necessary and helpful remedial courses because entire states and hundreds of institutions are eliminating prerequisite English and math courses completely.

The goal should be to increase success rates throughout college for at-risk students by addressing the actual causes of fail rates and attrition instead of eliminating helpful courses.

Ironically, we have some recent data on remediation that show positive results. A National Center for Education Statistics study reveals that two-year college remedial students who complete their sequences actually graduate at a rate higher than nonremedial students, 43% compared to 39% (Chen, 2016, p. 35). And 49% of all remedial students complete their sequences (p. v). All of these data were pulled before the corequisite reform movement took hold in the nation. Perhaps labeling remediation as ineffective and doing away with it was premature.

Thinking more holistically, we should not set the goal at temporarily increasing gateway course pass rates. That is short-term thinking. The goal should be to increase success rates throughout college for at-risk students by addressing the actual causes of fail rates and attrition instead of eliminating helpful courses. Indeed, we can do much better for underprepared students, and ASAP is a model which leads the way. All we need to do is commit to holistic reform and fund it. The combination of short-term gain and a mindset of fast, simple, and cheap has never worked well in education. The corequisite reform movement is no different.

### References

- Center for Community College Student Engagement. (2012). *A matter of degrees: Promising practices for community college student success (a first look)*. Austin, TX: The University of Texas at Austin, Community College Leadership Program. Retrieved from [https://www.ccsse.org/docs/Matter\\_of\\_Degrees.pdf](https://www.ccsse.org/docs/Matter_of_Degrees.pdf)
- Chen, X. (2016). *Remedial coursetaking at U.S. public 2- and 4-year institutions: Scope, experiences, and outcomes* (NCES 2016-405). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubs2016/2016405.pdf>
- Cho, S.W., Kopko, E., Jenkins, & C., Jaggars, S. (2012). *New evidence of success for community college remedial English students: Tracking the outcomes of students in the Accelerated Learning Program (ALP)* (CCRC Working Paper No. 53). New York, NY: Community College Research Center, Columbia University, Teachers College. Retrieved from <http://ccrc.tc.columbia.edu/media/k2/attachments/ccbc-alp-student-outcomes-follow-up.pdf>
- City University of New York. (2016). *Significant increases in associate degree graduation rates: CUNY accelerated study in associate programs (ASAP)*. New York, NY: City University of New York Office of Institutional Research and Assessment (OIRA). Retrieved from [http://www1.cuny.edu/sites/asap/wp-content/uploads/sites/8/2016/06/ASAP\\_Program\\_Overview\\_Web.pdf](http://www1.cuny.edu/sites/asap/wp-content/uploads/sites/8/2016/06/ASAP_Program_Overview_Web.pdf)
- Complete College America. (2012). *Remediation: Higher education's bridge to nowhere*. Retrieved from [https://www.insidehighered.com/sites/default/server\\_files/files/CCA%20Remediation%20ES%20FINAL.pdf](https://www.insidehighered.com/sites/default/server_files/files/CCA%20Remediation%20ES%20FINAL.pdf)
- Goudas, A. M. (2017). The corequisite reform movement: An education bait and switch (Working Paper). Community College Data. Retrieved from <http://communitycollegedata.com/articles/the-corequisite-reform-movement/>
- Jaggars, S. S., & Bickerstaff, S. (2018). Developmental education: The evolution of research and reform. In M. B. Paulsen (Ed.), (2018). *Higher education: Handbook of theory and research* (pp. 469–503). New York: er International Publishing.
- Scott-Clayton, J. (2018, March 29). Evidence-based reforms in college remediation are gaining steam – and so far living up to the hype. The Brookings Institute. Retrieved from <https://www.brookings.edu/research/evidence-based-reforms-in-college-remediation-are-gaining-steam-and-so-far-living-up-to-the-hype/>
- Yeado, J., Haycock, K., Johnstone, R., & Chaplot, P. (2014). *Education trust higher education practice guide: Learning from high-performing and fast-gaining institutions*. Education Trust. Retrieved from <http://edtrust.org/wp-content/uploads/2013/10/PracticeGuide1.pdf>
- Zeidenberg, M., Jenkins, D., & Scott, M. A. (2012). *Not just math and English: Courses that pose obstacles to community college completion* (CCRC Working Paper No. 52). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from <http://ccrc.tc.columbia.edu/media/k2/attachments/not-just-math-and-english.pdf>