How Does Corequisite Remediation Change Student Experiences?

Results from a Randomized Study in Five Texas Community Colleges

Some students who enter college can benefit from additional academic support in reading, writing, and mathematics to ensure success with college coursework. For decades, postsecondary institutions have used assessments of college readiness and required some students to take one or more semester-long developmental education courses (also known as remedial courses) before they were able to enroll in college-level courses and earn college credits. Research has found that this traditional model is not optimal for student success: Many students in developmental courses were dropping out before ever taking college-level courses.

In response, colleges across the United States are scaling new approaches, such as corequisite remediation, to support students entering college. Corequisite remediation requires that students be placed directly into a college-level, credit-bearing course while receiving additional, aligned academic support during the semester. Early studies show that corequisite remediation is more effective than standalone developmental education courses prior to college coursework: Students in corequisites are much more likely to successfully complete college-level math and English courses within the first year of college.

However, it is unclear how corequisite remediation might drive student success more than traditional developmental courses. Do corequisite students encounter more challenging coursework? Do corequisite students feel that they benefit from learning alongside college-ready peers? Do corequisite students feel less stigmatized than students who attend separate, standalone developmental courses? Identifying some of the factors that drive—and do not drive—academic success in corequisite classes can help inform the design of corequisite remediation models going forward.

To find answers to these and related questions, RAND Corporation researchers compared the experiences of Texas community college students in English corequisite remediation courses with the experiences of students in standalone developmental reading and writing courses. This research brief summarizes research findings and highlights the implications that higher education policymakers, college administrators, and teachers should consider as they continue to design approaches to corequisite remediation.

How the Study Was Conducted

Researchers conducted a randomized control trial with first-year college students at five community colleges in Texas. Students who scored within a predetermined range on Texas's college readiness exam were recruited to participate in the study during orientation or initial advising sessions. The final study sample included four cohorts of students, who were recruited from fall 2016 through fall 2018. Researchers recruited a total of 1,434 students. Each student was randomly assigned to either

1. corequisite remediation, a three-credit-hour college-level English Composition I course paired with one to three additional hours of developmental academic support
2. Integrated Reading and Writing, a three- to five-credit-hour developmental education course.

The approaches to corequisite remediation varied across the five community colleges. Two of the colleges implemented the popular Accelerated Learning Program (ALP) model, an approach that mixes students testing at developmental and college-ready levels in the college English course and then pairs that course with an academic support course for the smaller group of developmental education students; that support course is taught by the same instructor and focuses largely on the college coursework. (A third college adopted ALP as a second corequisite model in fall 2018.) Two of the other colleges adopted models that mixed college-ready and non–college-ready student populations in the college English courses, similar to the ALP model. However, these courses had different types of academic support, emphasizing one-on-one support through office hours or tutoring. The fifth college fully integrated the academic support into the course, offering a four-hour English course with support embedded throughout; these courses only enrolled non–college-ready students.

Researchers identified eight areas in which experiences might differ between corequisite remediation in standalone developmental education (Table 1). To identify these areas, researchers performed a literature review to identify theories about why corequisite remediation was believed to work and other aspects of developmental and adult instruction believed to be important to postsecondary success. Researchers then refined the areas of interest through interviews with faculty and administrators at the five randomized control trial colleges and at 31 additional community colleges; these interviews were conducted as part of a statewide implementation study.

The findings are primarily based on quantitative analysis of student-level data, including administrative data and data from a follow-up survey that was conducted with students approximately eight months after enrollment. The team supplemented these quantitative findings with data from a range of qualitative data sources, including interviews and focus groups with administrators, instructors, and students; classroom observations; and an instructor survey.

Key Findings

Researchers examined contrasts between students assigned to corequisite remediation and students assigned to standalone developmental education courses across 48 different quantitative measures within researchers' eight areas of interest. Researchers found statistically significant differences across 16 of these measures (as highlighted in Table 2). Most of these findings favored corequisite remediation; the boxes shaded in green indicate favorable results for corequisite remediation, while those shaded in yellow indicate favorable results for standalone developmental education.

As the results show, students assigned to corequisite remediation benefited from early opportunities to complete college coursework and gain momentum, attempting two more credits in the first semester than students who took the standalone developmental education course. Students assigned to corequisite remediation received slightly more weekly hours of instruction on average; this additional instructional time each week might have helped support their learning. Corequisite students were less likely to perceive their classes as too easy or repetitive and were less likely to know they were in developmental education and feel embarrassed to be enrolled in their course. Several corequisite models were designed to mix students by ability to leverage peer effects. In addition, corequisite students reported engaging less often in individual deskwork. Qualitative data indicated that corequisite remediation built in more opportunities to align instruction through common instructors and shared coursework, and instruction in both corequisite remediation and developmental education courses was commonly student-centered and engaged peers in learning together.

In a few areas, findings were mixed or did not favor corequisite remediation. Four of the colleges designed corequisite models with reduced class sizes to facilitate personalized attention, but results suggest that corequisite students were no more likely than students in developmental education classes to perceive that they frequently had received individual attention from the instructor. Instructors in developmental education courses relied on more individual desk work, while engaging at similar rates in other forms of student-centered instruction (e.g., group projects, class discussion). Individual desk work might have enhanced opportunities for student-centered learning and provided opportunities for one-on-one instructional support despite larger class sizes. And although students in both types of courses received high levels of support around success skills (e.g., social and emotional learning, study skills), students in the developmental education courses were more likely to perceive their instructors as believing in their potential to succeed. Students in standalone developmental education courses were also more likely to plan to use tutoring in the future.

TABLE 1
Areas in Which Corequisite Remediation Might Change Student Experiences

Area of Interest	How Corequisite Remediation Might Change Student Experiences
Early opportunities to progress (gain momentum)	Corequisite remediation requires students to immediately enroll in college coursework and begin earning credits and could reduce the total amount of developmental (i.e., noncredit) course hours required.
Intensity/compression of academic practice	Corequisite remediation compresses enrollment in college coursework and developmental coursework into a single semester and might increase overall weekly time spent on reading and writing practice.
Rigor of coursework and expectations	Corequisite models typically center developmental education support around the coursework from the college course, which might increase the rigor of coursework and instruction. In addition, some corequisite models do not track students into different course sections by test scores to ensure that students receive instruction of equivalent rigor.
Alignment of remediation with college courses	Corequisite remediation typically calls for increased alignment between developmental education support and college coursework through shared learning objectives and coursework across the college course and academic support. Corequisite models can also align calendars and use the same instructor (or allow shared planning time for different instructors) to make real-time adjustments to support.
Opportunities for student-centered learning	Corequisite models often call for smaller class sizes and more opportunities for one-on-one academic support. Corequisites (and standalone developmental education courses) can enhance student-centered learning with instructional strategies that more actively engage students, making connections between coursework and students' lives, and differentiating the content and pacing of coursework.
Opportunities for peer learning	Some corequisite models mix students by ability to enhance peer learning; others require the same group of students to attend the college course and academic support as a group to build a learning community. Corequisites (and standalone developmental education courses) might also enhance opportunities for peer learning by building in activities that require students to interact more frequently.
Support for success skills	Corequisite remediation (and standalone developmental education courses) might provide direct instruction on study skills and create environments that foster social and emotional competency-building (e.g., self-efficacy, self-regulation); it could also introduce students to academic support services (e.g., tutoring, office hours) and require use through course requirements.
Exposure to stigma	Corequisite remediation might reduce student exposure to stigma by minimizing the appearance that students are being assigned to different levels of coursework and reducing the likelihood that students realize that they are receiving developmental education.

Study Implications

Although research demonstrates the benefits of corequisite remediation on passing gateway English and math courses, little is known about how these reforms have shifted student experiences. The findings in this study suggest that corequisite remediation improved student experiences in a variety of ways; it provided early opportunities to earn credit, more-intensive instruction, greater rigor, greater alignment, and increased opportunities to learn from peers. It also reduced stigma around participation in developmental education.

The few areas in which results did not favor corequisite remediation might present opportunities for improvement; institutions could continue to offer professional development around support for success skills and instructional strategies for supporting student-centered learning. Institutions could consider the eight areas that researchers identified from the literature and practitioner interviews as a checklist of practices to incorporate into corequisite remediation. Corequisite models could achieve alignment in a variety of ways (e.g., same instructor, shared planning time, calendars across different instructors) or peer learning (e.g., mixing students by ability, peer-based activities), and institutions might consider attending to each of these eight areas as they design corequisite models, support instructors teaching corequisites, and assess the effects of these approaches on students.

More research is needed to fully understand how corequisite remediation is affecting student experiences; larger samples are needed to examine variation across corequisite models and the development of more-robust, validated measures of student experiences in college classrooms. However, this study provides an initial glimpse at student experiences and offers a broader framework for thinking about the design of corequisite models and corequisite instruction.

TABLE 2

Experiences of Students Assigned to Corequisite Remediation and Standalone Developmental Education

Area of Interest	Student-Level Measure	Standalone Developmental Education Course	Corequisite Remediation	*p*-value
Early opportunities to make progress	Number of college credits attempted in the first semester*	4.88	6.81	0.000
	Took college-level English course in first semester*	43.8%	87.1%	0.000
Instructional intensity/ compression	Number of hours of reading and writing instruction over the course of the semester*	57.2	66.8	0.000
Rigor of coursework and expectations	Course repeated things I learned in high school (half, most, or all of the time)	26.0%	14.7%	0.002
	Course was too easy (half, most, or all of the time)	50.9%	30.1%	0.000
	Course was boring (half, most, or all of the time)	29.9%	19.4%	0.007
	It would have been more appropriate to take a different (higher- or lower-level) English course (yes)	41.0%	9.6%	0.000
Alignment of remediation with college courses	Quantitative measures were limited and not statistically significant; qualitative data suggested stronger alignment for students assigned to corequisite remediation.			
Opportunities for student-centered learning	Class size*	18.3	14.6	0.000
	My instructor asked me to work independently on reading/writing activities or assignments (half, most, or all of the time)	64.4%	49.9%	0.001
Opportunities for peer learning	Percentage college-ready in both reading and writing*	18.4%	25.2%	0.000
	Compared with the other students in your class, please rate yourself on study skills (slightly above or very above average)	34.6%	25.8%	0.025
	My instructor asked me to work independently on reading/writing activities or assignments (half, most, or all of the time)	64.4%	49.9%	0.001
Support for success skills	The instructor believed in my potential to succeed academically (half, most or all of the time)	93.0%	87.6%	0.035
	How likely are you to use tutoring in the future for ANY of your courses? (somewhat or very likely)	77.2%	67.8%	0.021
Exposure to stigma	Did you take any developmental education courses during the last semester? (yes)	65.7%	53.2%	0.005
	Reflecting back on your feelings about taking the course, how embarrassing did it feel? (not at all embarrassing)	52.6%	63.6%	0.009

NOTES: * measures that were pulled from administrative data files. All other measures are drawn from a student follow-up survey conducted eight months after enrollment. The percentages represent those survey respondents who chose the responses reflected in the italicized brackets for each survey item. Boxes shaded in green indicate favorable results for corequisite remediation, while those shaded in yellow indicate favorable results for standalone developmental education.

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