CAPR | CENTER FOR THE ANALYSIS OF POSTSECONDARY READINESS

Research Brief Supplement \ September 2023

Student Survey Data for the Fall 2021 and Spring 2022 Semesters

A Supplement to "Lessons from the Dana Center's Corequisite Research Design Collaborative Study"

Oscar Cerna, Vivianna Plancarte, Julia Raufman, Jorge Mahecha-Rodriguez, with Ellen Wasserman

Overview

Corequisite remediation involves placing students who have been designated as underprepared directly into college-level courses with concurrent supports—such as in-class tutoring, online learning labs, or a supplemental class—rather than making them take non-credit-bearing developmental courses first. There are multiple corequisite course models; the Corequisite Research Design Collaborative (CRDC) colleges used a support corequisite model and an embedded corequisite model. The support corequisite model involved enrolling corequisite students in a college-level math or English course that also included students who placed out of developmental education; the corequisite students were also enrolled in a separate, supplementary support course that was offered before, after, or on different days than the college-level course. Students conceptualized these as two courses paired together. The support courses had smaller class sizes and they provided students additional time to become familiar with the content taught in their paired college-level courses. The embedded corequisite model involved enrolling the same group of students (or a cohort) in a college-level course and

a developmental course that were taught back to back; this combination of courses is referred to as an "embedded course" in this supplement. Students conceptualized these back-to-back courses as a single course.[1]

During the fall 2021 and spring 2022 semesters, a student survey was distributed to every CRDC college except Houston Community College, which is located in Texas.[2] The other three CRDC colleges—Fond du Lac Tribal and Community College (FDLTCC), St. Cloud Technical and Community College (SCTCC), and St. Cloud State University (SCSU)—are located in Minnesota. The survey was intended to evaluate students' experiences in their corequisite courses. The three colleges that were surveyed offered corequisite math courses in spring and fall; only one college, Fond du Lac, offered corequisite English courses both semesters. All three colleges used the support corequisite model; St. Cloud Technical and Community College also used an embedded corequisite model.

To distribute the survey, the Community College Research Center and MDRC researchers first gave the student survey and email recruitment language to the CRDC faculty liaisons, who passed them to corequisite instructors. The instructors then emailed the survey to all students who were enrolled in corequisite courses that semester. During the fall 2021 semester, the survey was active for three weeks in December. During the spring 2022 semester, the survey was available for a longer period of time—from March to May—because initial response rates were low.

The fall 2021 and spring 2022 student surveys collected 171 responses (108 in the fall and the remaining 63 in the spring). While participation levels in the survey were lower than expected, particularly in the spring of 2022, the data that were collected show a pattern of homogeneity in responses that is worth highlighting, despite it not being generalizable to the whole population of students in both corequisite models.

This pattern of homogeneity can be seen in the responses to survey questions on course experiences and perceived course difficulty. It shows that most students felt comfortable engaging in class and seeking help from instructors. The percentage of students who agreed with statements related to different aspects of class engagement—such as feeling comfortable asking questions, responding to questions even when unsure of the answer, engaging with faculty, and working with peers—is often over 80 percent. An interesting trend is that, in general, students appeared more comfortable engaging in support courses than in the paired college-level courses. This trend suggests that support courses can play an important role in improving student engagement by providing an additional space for students to interact with the course contents, their peers, and faculty. It could be suggestive evidence for supporting the corequisite models more broadly, although higher response rates and larger samples are needed to provide more conclusive evidence in this regard.

It is also worth mentioning that students reported very positive perceptions of the tests and quizzes, instructional materials, and instruction and feedback from faculty. Students had

comparable or more favorable perceptions of the learning resources in the support courses in relation to the paired college-level courses.

Corequisite Course Enrollment: Fall 2021

A total of 108 students from the three participating Minnesota colleges responded to the student survey in fall 2021. A majority of respondents were enrolled at SCSU (n = 44) followed by an equal number of students from FDLTCC (n = 32) and SCTCC (n = 32). Most respondents were enrolled in a support math course and paired college-level course (70 percent, n = 76); 18 percent (n = 19) of students were enrolled in an embedded math course, and 12 percent (n = 13) of students were enrolled in a support English course and a paired college-level course.

SUPPLEMENT TABLE 1. Corequisite Course Enrollment, by College: Fall 2021

Corequisite Course Type	FDLTCC (%)	SCSU (%)	SCTCC (%)	Total
Embedded math course	NA	NA	59.4	19 (18%)
Support math course	59.4	100.0	40.6	76 (70%)
Support English course	40.6	NA	NA	13 (12%)
Total responses	32	44	32	108

NOTE: NA = not applicable. It is used when the listed corequisite course type was not offered at that school.

Corequisite Course Enrollment: Spring 2022

A total of 63 students from the three Minnesota colleges responded to the survey in spring 2022. Twenty-nine respondents were enrolled at SCSU, 27 were enrolled at SCTCC, and 7 were enrolled at FDLTCC. Forty-five students who were surveyed were enrolled in a support math or English course with a paired college level course, and 18 were enrolled in an embedded math course.

SUPPLEMENT TABLE 2. Corequisite Course Enrollment, by College: Spring 2022

Corequisite Course Type	FDLTCC (%)	SCSU (%)	SCTCC (%)	Total
Embedded math course	NA	NA	66.7	18 (29%)
Support math course	57.1	100.0	33.3	42 (67%)
Support English course	42.9	0.0	0.0	3 (4%)
Total responses	7	29	27	63

NOTE: NA = not applicable. It is used when the listed corequisite course type was not offered at that school.

Student Experiences: Fall 2021

The survey asked students about their experiences in the corequisite courses, including how comfortable they were engaging in class and seeking support. Results from the fall 2021 survey found that a majority of students reported feeling comfortable engaging in class and seeking help from their instructors. For example, all students who took an embedded math course (100 percent) reported feeling comfortable asking questions in class. Similarly, nearly all students who took a support math course (92 percent) or support English course (92 percent) felt comfortable asking questions in their paired college-level course. However, more students who took a support math or English course reported feeling comfortable asking questions in their support course than in their paired college-level course.

SUPPLEMENT TABLE 3. Student Experiences, by Corequisite Model: Fall 2021

	Embedded Model (Math)	Support Model (Math)		Support Model (English)	
Strongly Agree/Agree (%)	Embedded Course	College-Level Course	Support Course	College-Level Course	Support Course
I feel comfortable asking questions.	100.0	92.1	97.4	92.3	100.0
I feel comfortable responding to questions even when unsure of the answer.	100.0	81.6	93.4	92.3	100.0
I feel comfortable responding to other students' questions or comments.	84.2	85.5	93.4	84.6	84.6
I feel comfortable working in small groups.	89.5	86.8	94.7	92.3	84.6
I feel comfortable meeting with the instructor outside of class for help.	89.5	84.2	93.4	100.0	100.0
I feel confident that I can understand complicated ideas presented.	79.0	89.5	97.4	100.0	100.0
I feel confident that I can learn all the material presented.	84.2	94.7	94.7	100.0	100.0
I feel confident that I can do the hardest work that is assigned.	84.2	88.2	96.1	92.3	92.3
The other students understand who I am and where I am coming from.	73.7	72.4	75.0	84.6	84.6
Total responses	19	76	76	13	13

NOTE: The survey given to students who took a class that used the embedded corequisite model asked for responses about both their college-level and developmental course (combined, those courses are called the "embedded course" in this supplement). The survey given to students who took a class that used the support corequisite model asked for separate responses for their college-level course and their developmental (support) course.

Student Experiences: Spring 2022

Results from the survey that was launched in spring 2022 showed that most students who were enrolled in both types of corequisite courses reported feeling comfortable seeking support and engaging in class. However, results showed that a slightly higher percentage of students who were enrolled in the embedded courses reported feeling comfortable than students in support courses (with paired college-level courses). For example, 100 percent of students "agreed" or "strongly agreed" (n = 18) that they felt comfortable asking questions in their embedded math course, compared with 93 percent of students taking a support math course and 83 percent students in the paired college-level course. Results also showed that, generally, more students reported feeling comfortable seeking support and engaging in their support course than in their paired college-level course. For example, 81 percent of students "agreed" or "strongly agreed" that they felt comfortable responding to questions even when unsure of the answer in their support math course, compared with 74 percent of students who felt the same in their paired college-level course.

SUPPLEMENT TABLE 4. Student Experiences, by Corequisite Model: Spring 2022

	Embedded Model (Math)	Support Model (Math)		Support Model (English)	
Strongly Agree/Agree (%)	Embedded Course	College-Level Course	Support Course	College-Level Course	Support Course
I feel comfortable asking questions.	100.0	83.3	92.9	100.0	100.0
I feel comfortable responding to questions even when unsure of the answer.	94.4	73.8	81.0	100.0	100.0
I feel comfortable responding to other students' questions or comments.	NA	NA	NA	NA	NA
I feel comfortable working in small groups.	55.6	69.0	76.2	100.0	100.0
I feel comfortable meeting with the instructor outside of class for help.	94.4	83.3	88.1	100.0	100.0
I feel confident that I can understand complicated ideas presented.	NA	NA	NA	NA	NA
I feel confident that I can learn all the material presented.	88.9	85.7	90.5	100.0	100.0
I feel confident that I can do the hardest work that is assigned.	NA	NA	NA	NA	NA
The other students understand who I am and where I am coming from.	NA	NA	NA	NA	NA
Total responses	18	42	42	3	3

NOTES: The survey given to students who took a class that used the embedded corequisite model asked for responses about both their college-level and developmental course (combined, those courses are called the "embedded course" in this supplement). The survey given to students who took a class that used the support corequisite model asked for separate responses for their college-level course and their developmental (support) course.

NA = not applicable. Students were not asked those questions during the spring 2022 semester.

Corequisite Course Learning Resources: Fall 2021

Most students who took an embedded math course during the fall 2021 semester felt that the tests or quizzes (90 percent), instructional materials (95 percent), instruction (95 percent), and feedback (90 percent) they received were useful. Fewer students felt that what they were asked to learn was important (74 percent). Ninety percent of students in the embedded math course would have highly recommended their course to other students. A majority of students who took courses using the support corequisite model (for both math and English) also felt that the tests or quizzes, instructional materials, instruction, and feedback they received were useful. However, a greater percentage of students felt that the instructor provided useful feedback on their performance in their support math course (95 percent) than in their paired college-level course (79 percent). (See Table 5.)

Corequisite Course Learning Resources: Spring 2022

Like in the fall 2021 semester, a majority of students who took an embedded math course in spring 2022 felt that the tests or quizzes (89 percent), instructional materials (89 percent), instruction (89 percent), and feedback (89 percent) they received were useful. Ninety-four percent of students said they would recommend their embedded math course to other students.

Most students enrolled in the support math courses—with paired college-level courses—also felt that the tests or quizzes, instructional materials, instruction, and feedback they received were useful. More students reported that their instructor helped improve their learning strategies (74 percent) and provided useful feedback (91 percent) in the support courses compared with the paired college-level courses (62 percent and 81 percent, respectively). Of the students enrolled in math courses using the support corequisite model, more students reported that they would recommend their paired college-level course (93 percent) than their support course (88 percent). (See Table 6.)

Student Demographics: Fall 2021

A majority of respondents were female (65 percent, n = 70). Fifty-three percent of respondents were White (n = 57), 17 percent (n = 18) were Black or African American, 10 percent (n = 11) were Native American or Alaskan Native, 6 percent (n = 6) were Hispanic or Latino, 4 percent (n = 4) were Asian, and 9 percent (n = 10) were multiracial. More than half of the students from SCSU who completed the survey had parents with no college education. However, most students at FDLTCC and SCTCC who completed the survey had parents with at least some college education. Fewer students at SCSU reported that English was their first (native) language (68 percent) than at FDLTCC (91 percent) and SCTCC (97 percent). (See Table 7.)

SUPPLEMENT TABLE 5. Corequisite Course Learning Resources, by Corequisite Model: Fall 2021

	Embedded Model (Math)	Support Model (Math)		Support Model (English)	
Strongly Agree/Agree (%)	Embedded Course	College-Level Course	Support Course	College-Level Course	Support Course
The tests/quizzes measured my knowledge of the material.	89.5	98.7	93.4	100.0	92.3
The instructional materials (e.g., books, readings, handouts, study guides, lab manuals, multimedia, software) increased my knowledge and skills in the subject matter.	94.7	93.4	93.4	100.0	100.0
What I'm being asked to learn is important.	73.7	93.4	92.1	100.0	100.0
The instruction (i.e., the way the instructor teaches) increased my knowledge and skills in the subject matter.	94.7	93.4	96.1	100.0	100.0
My instructor provides useful feedback on my performance (tests, papers, discussions, etc.).	89.5	78.9	94.7	100.0	100.0
My instructor believes in my potential to succeed academically.	94.7	94.7	97.4	100.0	100.0
My instructor supports me when I need it.	94.7	90.8	96.1	100.0	100.0
My instructor shows an interest in helping students learn.	94.7	96.1	100.0	100.0	100.0
My instructor helped me improve my learning strategies (e.g., study skills, time management, note-taking, class participation).	89.5	68.4	88.2	76.9	76.9
My instructor encourages students to learn about people from different races, ethnicities, or cultures.	89.5	84.2	81.6	100.0	100.0
My instructor treats people from different races, ethnicities, or cultures fairly.	94.7	94.7	94.7	100.0	100.0
I feel that my college-level and support courses will prepare me to meet my career goals	94.7	92.1	92.1	100.0	100.0
I would highly recommend this course to other students.	89.5	92.1	93.4	100.0	100.0
Total responses	19	76	76	13	13

NOTE: The survey given to students who took a class that used the embedded corequisite model asked for responses about both their college-level and developmental course (combined, those courses are called the "embedded course" in this supplement). The survey given to students who took a class that used the support corequisite model asked for separate responses for their college-level course and their developmental (support) course.

SUPPLEMENT TABLE 6. Corequisite Course Learning Resources, by Corequisite Model: Spring 2022

	Embedded Model (Math)	Support Model (Math)		Support Model (English)	
Strongly Agree/Agree (%)	Embedded Course	College-Level Course	Support Course	College-Level Course	Support Course
The tests/quizzes measured my knowledge of the material.	88.9	97.6	83.3	100.0	100.0
The instructional materials (e.g., books, readings, handouts, study guides, lab manuals, multimedia, software) increased my knowledge and skills in the subject matter.	88.9	92.9	88.1	100.0	100.0
What I'm being asked to learn is important.	NA	NA	NA	NA	NA
The instruction (i.e., the way the instructor teaches) increased my knowledge and skills in the subject matter.	88.9	85.7	90.5	100.0	100.0
My instructor provides useful feedback on my performance (tests, papers, discussions, etc.).	88.9	81.0	90.5	100.0	100.0
My instructor believes in my potential to succeed academically.	NA	NA	NA	NA	NA
My instructor supports me when I need it.	94.4	88.1	92.9	100.0	100.0
My instructor shows an interest in helping students learn.	NA	NA	NA	NA	NA
My instructor helped me improve my learning strategies (e.g., study skills, time management, note-taking, class participation).	94.4	61.9	73.8	100.0	100.0
My instructor encourages students to learn about people from different races, ethnicities, or cultures.	NA	NA	NA	NA	NA
My instructor treats people from different races, ethnicities, or cultures fairly.	100.0	92.9	95.2	100.0	100.0
I feel that my college-level and support courses will prepare me to meet my career goals	88.9	85.7	85.7	100.0	100.0
I would highly recommend this course to other students.	94.4	92.9	88.1	100.0	100.0
Total responses	18	42	42	3	3

NOTES: The survey given to students who took a class that used the embedded corequisite model asked for responses about both their college-level and developmental course (combined, those courses are called the "embedded course" in this supplement). The survey given to students who took a class that used the support corequisite model asked for separate responses for their college-level course and their developmental (support) course.

NA = not applicable. Students were not asked those questions during the spring 2022 semester.

SUPPLEMENT TABLE 7. Student Demographics, by College: Fall 2021

Characteristic	FDLTCC (%)	SCSU (%)	SCTCC (%)	Total
Race/ethnicity				
White	50.0	34.1	81.2	57 (53%)
Black or African American	9.4	34.1	0.0	18 (17%)
Asian	0.0	9.1	0.0	4 (4%)
Native American or Alaskan Native	28.1	2.3	3.1	11 (10%)
Multiracial	9.4	11.4	6.3	10 (9%)
Prefer not to say	3.1	9.1	9.4	8 (7%)
Hispanic or Latino	6.3	9.1	0.0	6 (6%)
Gender				
Female	59.4	59.1	78.1	70 (65%)
Male	37.5	36.4	15.6	33 (31%)
Nonbinary	0.0	4.6	6.3	4 (4%)
Prefer not to say	3.1	0.0	0.0	1 (1%)
Education				
Highest level of education attained by parent/guardian with the most education is some college or more	62.5	47.7	87.5	69 (64%)
Language				
English is student's first (native) language	90.6	68.2	96.9	90 (83%)
Total responses	32	44	32	108

Student Demographics: Spring 2022

A majority (60 percent) of the students in the sample were female. Sixty percent (n = 36) of the respondents were White, 17 percent (n = 10) were Black or African American, 5 percent (n = 3) were Native American or Alaskan Native, 7 percent (n = 4) were Hispanic or Latino, 2 percent (n = 1) were Asian, and 8 percent (n = 5) were multiracial. In contrast to the previous semester, of the students who completed the survey, most students at SCSU—but a minority of students at SCTCC—had parents with at least some college education. Fewer students reported that English was their first (native) language at SCTCC (78 percent) than at FDLTCC (100 percent) or SCSU (86 percent).

SUPPLEMENT TABLE 8. Student Demographics, by College: Spring 2022

Characteristic	FDLTCC (%)	SCSU (%)	SCTCC (%)	Total
Race/ethnicity				
White	25.0	62.1	63.0	36 (60%)
Black or African American	0.0	20.7	14.8	10 (17%)
Asian	0.0	3.4	0.0	1 (2%)
Native American or Alaskan Native	75.0	0.0	0.0	3 (5%)
Multiracial	0.0	13.8	3.7	5 (8%)
Prefer not to say	0.0	0.0	18.5	5 (8%)
Hispanic or Latino	0.0	3.4	11.1	4 (7%)
Gender				
Female	50.0	62.1	59.3	36 (60%)
Male	50.0	37.9	33.3	22 (37%)
Nonbinary	0.0	0.0	3.7	1 (2%)
Prefer not to say	0.0	0.0	3.7	1 (2%)
Education				
Highest level of education attained by parent/guardian with the most education is some college or more	75.0	72.4	44.4	36 (60%)
Language				
English is student's first (native) language	100.0	86.2	77.8	50 (83%)
Total responses	4	29	27	60

Notes

1 The survey given to students who took a class that used the embedded corequisite model asked for responses about their "corequisite course," that is, their embedded course. Students who took a class that used the support corequisite model recorded separate answers for their college-level course and their developmental (support) course.

2 Houston Community College did not participate in the student survey because the research team did not receive corequisite course enrollment information from the college in time for survey administration.

Acknowledgments

The Center for the Analysis of Postsecondary Readiness (CAPR) is a partnership of research scholars led by CCRC and MDRC and supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305C140007 and Grant R305U200010 to Teachers College, Columbia University. Funding for this brief was generously provided by the Bill & Melinda Gates Foundation. The opinions expressed herein are those of the authors and do not represent the views of the Institute, the U.S. Department of Education, or the Bill & Melinda Gates Foundation.

The authors are also grateful for the partnership and contributions from the Charles A. Dana Center at the University of Texas, Austin, particularly from Joan Zoellner and Afi Wiggins.

This brief would not have been possible without the administrators, faculty, staff, and students at the four participating colleges who offered their time and insights to the Corequisite Research Design Collaborative study. In particular, we would like to thank the following college representatives for their coordination of the data collection activities: Jana Anderson and Rain Newcomb at Fond du Lac Tribal and Community College, Betty Fortune and Desmond Lewis at Houston Community College, Katie Smieja at St. Cloud Technical and Community College, and Nick Haverhals and Stephanie Houdek at St. Cloud State University.

The authors would also like to thank former members of the Center for the Analysis of Postsecondary Readiness Jessica Brathwaite, Marco Lepe, and Elizabeth Zachry-Rutschow for their early contributions to this study's design and implementation.

We thank Susan Bickerstaff and Nikki Edgecombe from CCRC and Alexander Mayer, Dan Cullinan, DeShawn Preston, and Jillian Verrillo from MDRC for their thoughtful review of drafts of this brief.

For more information about CAPR, visit postsecondaryreadiness.org.

Copyright © 2023 by CAPR. All rights reserved.

CENTER FOR THE ANALYSIS OF POSTSECONDARY READINESS
Teachers College, Columbia University
525 West 120th Street, Box 174, New York, NY 10027
P 212.678.3091 | @CAPR_deved
capr@columbia.edu | postsecondaryreadiness.org

CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY
ccrc.tc.columbia.edu | @CommunityCCRC

mdrc
BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY
mdrc.org | @MDRC_News