



BREAKTHROUGH MOMENTS



Following the Data: The Correct Math Plus Corequisite Support

Linn-Benton Community College (LBCC) has been engaged in guided pathways work since the movement's earliest days. The college has implemented many aspects of pathways and is deeply committed to using data to drive decisions. However, the college has not yet made significant gains in completion rates.

"My aha moment was when Hana Lahr shared completion data showing that colleges that did not strongly integrate corequisite education did not see progress," says Ann Buchele, vice president of academic and student affairs. "Colleges that were tackling all elements of pathways except corequisite education — mapping, meta majors, scheduling changes — were still struggling. And that was us."

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Buchele is referring to a presentation by Lahr, senior research associate, Community College Research Center, at an early Rural Guided Pathways Institute. Lahr presented data about the first cohort of colleges from the American Association of Community Colleges (AACC) pathways project. LBCC was part of that cohort.

Buchele and Lisa Avery, LBCC president, decided that the college had to replace traditional developmental education with corequisite education.

A Leadership Decision Based on Data

"LBCC has been part of guided pathways since the earliest days with AACC. Everyone here did a lot of great work, and there was a lot of redesign, particularly on the student support side," Avery says. "But it only nibbled at our success rates."



The Rural Guided Pathways Project helps a national cohort of rural community colleges implement evidence-based, institution-wide reforms grounded in the guided pathways framework. College teams include community partners in their regions, and they receive support from coaches, subject matter experts, and other colleges that are part of the project. The National Center for Inquiry & Improvement leads the project.

For more information, contact Gretchen Schmidt, gretchen@ncii-improve.com.

The data presented at the Institute showed that implementing corequisite education was key to creating sustained student progress.

“There was concern about administrative overreach in this decision,” Avery continues. “But too often the default is to blame — blame faculty, leadership, students, K–12 — when that is the wrong framing. The reality is that math is an essential skill. It is a language. We need students to learn it so they can be citizens and employees and educated consumers. To do that, we have to change the way we structure teaching it.”

Avery adds, “From a leadership perspective, we said that math needed to be restructured. And we asked our faculty to figure out what that looks like in the classroom. We need to have more students speaking that language not just so our data improves, but also so our students can help our communities thrive.”

Faculty-Designed Implementation With a Focus on Placement

Math faculty took the lead on designing LBCC’s corequisite approach. They also involved the director of curriculum and scheduling as well as the director who oversees the college navigators.

“They discussed potential barriers, and they were really collaborative,” Buchele says. “I’m hopeful it created a product that is seamless and as positive as possible.”

Most incoming students at LBCC take one of two math classes: Math 105, which is Math in Society, a class that does not require algebra and focuses on financial math and statistics; or Math 111, which is Precalculus (and used to be called College Algebra). The college rolled out corequisite education for Math 105 in spring 2024 and for Math 111 in summer 2024. Corequisite education for writing also launched in fall 2024. All of the corequisite classes are opt out.

Early on, the math faculty determined that math advising and placement would be critical parts of the final plan.

“Math faculty believed that if we could get the right students in each class, we could help a good portion of them successfully complete math in one term,” says Sheri Rogers, chair of the Math Department.

They began by working with departments across the campus to make sure every pathway had the correct math requirement.

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“We made sure that someone from the math department sat down with someone from every other department,” says Rogers. “We asked if their students needed Math 111 or if their students could use Math 105 instead.”

Rogers explains that students generally are more successful in Math 105. However, math faculty members have some concerns about corequisite education for Math 111.

“Students need a larger skill set to be successful in Math 111 because of all the algebra techniques that are needed,” Rogers explains. “It’s a lot of skills and concepts to absorb and process in such a short period of time.”

She notes that students who have had some algebra should do well in the Math 111 corequisite class. But she is concerned that it will be a stretch for students who have not completed Algebra 1 before arriving at LBCC.

Rogers emphasizes that corequisite education has been going well for the students in Math 105. “They like that we give them a little jump ahead of the class so that when they come to their class, everything is not foreign and brand new,” she says. “They have a little more confidence and a little more comfort with what’s going on.”

Supports for Students and Training for Faculty

Both corequisite math classes use just-in-time remediation, and instructors connect students with other supports including the college’s math cafe, tutoring, the math help desk, and extra time for test review.

LBCC provided training for faculty teaching the earliest corequisite classes. And as the college prepared to roll out corequisite education for all math classes in fall 2024, the department provided additional training for faculty who had not taught corequisite classes before.

A Hopeful View for the Future

LBCC is tracking data for the corequisite classes, and despite some differing views, the team has maintained a collaborative approach.

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“We have the support of the advising and placement staff, which is important,” Rogers says. “And we’ve had math advisors on call to help get every student in the right class and place them as high as we can for their success.”

She adds, “And we are doing more training so instructors understand how to make the corequisite classes work. This year, there will be a lot for us to learn with Math 111, and we’ll all be learning together.”

The team is hopeful that math success rates will start to improve quickly. Better aligning

math requirements — determining that Math 105 rather than Math 111 is the appropriate math for some degree programs — was a critical first step. And early data shows high success rates for corequisite Math 105 classes.

“Everyone at LBCC — administrators, faculty, and staff — is concerned about student success. Many people are worried about the very small handful of students who may not be able to achieve much success in any math,” Avery says. “But we had to restructure math for the 95 or 98 percent of students who can be successful. We have to set up systems for the bulk of students who, with support, can make it through. And then figure out the plan for the handful of students who still will struggle.”

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Both Avery and Buchele note that being part of the Rural Guided Pathways Project has made it possible for them to do this work.

“Having these absolutely amazing colleagues around the nation who are willing to talk about their work so we can learn from them has been so helpful,” Buchele says.

“The power of being in a network has been extraordinary because we’re part of a collaborative group of faculty and leaders who share data and best practices,” Avery adds. “Being in a group where we really are supported makes it easier to take risks. This work was unlikely to have happened in isolation.”