

College Readiness

Louisiana State University College Readiness and Dual Credit Program

Committed to improving graduation rates in Louisiana, Phoebe Rouse, Louisiana State University (LSU) precalculus mathematics and college readiness program director, has spent the past seven years analyzing school data—test scores, course grades, and graduation rates. She discovered that incoming freshman who earn an A, B, or C the first time they take college algebra have a six-year graduation rate of 62 percent. Those who earn a D, F, or withdrawal from the course have a graduation rate of 33 percent—only one in three graduates. “Years of data unequivocally show that lack of preparedness for college algebra causes graduation rates to plummet,” says Rouse.

Rouse’s efforts at the high school level were inspired by her experience overseeing LSU’s college algebra redesign, which began in 2004. “We had three main goals for redesign: increase use of technology, reduce costs, and improve student success,” she says. “Our model alternated students working in class with students working independently, and all work—homework, quizzes, and tests—was completed in MyMathLab. It was a huge success. In addition to achieving our stated goals, we gained consistency and increased quality control—in short, it was a sustainable model.”

EOC Score Range	Percent of Students before MyMathLab	Percent of Students after MyMathLab
739–800 Excellent	1.0	7.0
700–738 Good	12.0	25.0
668–699 Fair	32.0	43.0
600–667 Needs Improvement	55.0	25.0

Table 1. Comparison of Average Algebra I EOC Scores from LSU College Readiness Program High Schools (Broadmoor, Northeast, Tara, Woodlawn) before and after Implementation of MyMathLab, 2010–2011

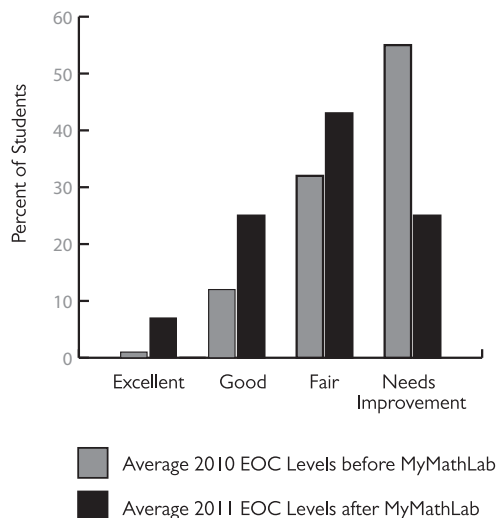


Figure 1. Comparison of Average Algebra I EOC Levels from LSU College Readiness Program High Schools (Broadmoor, Northeast, Tara, Woodlawn) before and after Implementation of MyMathLab, 2010–2011

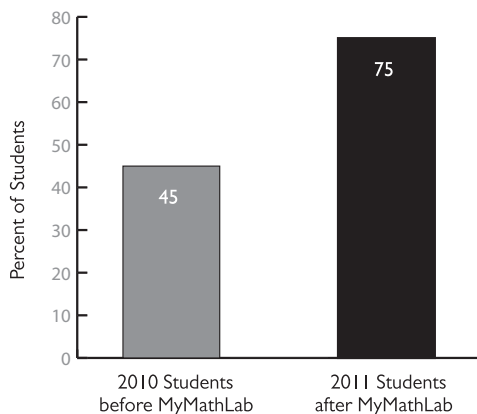


Figure 2. Comparison of Average Algebra I EOC Pass Rates from LSU College Readiness Program High Schools (Broadmoor, Northeast, Tara, Woodlawn) before and after Implementation of MyMathLab, 2010–2011

By 2006, Rouse had developed the LSU College Readiness and Dual Credit Program, a program to bring MyMathLab into regional high schools. A key part of the program is teacher training workshops.

Workshops last eight days, during which time teachers learn to use MyMathLab to redesign course delivery. In addition, they're given access to courses developed by Louisiana teachers containing online learning aids and assessments correlated to the LCC GLEs, and have an opportunity to observe LSU math classes, work with students in the LSU Math Lab, and network with other program-certified teachers from around the area.

Most of the topics in Louisiana's Advanced Math course are covered in LSU's College Algebra and Trigonometry courses. Students who meet the Board of Regents Early Start Program requirements may dually enroll in high school Advanced Math and LSU's College Algebra and Trigonometry courses. Students who earn a course grade of 70 percent or greater earn college credit transferable to any institution that accepts credit from LSU.

Following are the results reported by teachers from four high schools: Broadmoor, Northeast, Tara, and Woodlawn. Each teacher participated in an LSU College Readiness workshop and implemented MyMathLab into her classroom during the 2010/11 school year.

MyMathLab makes all the difference. We finally have a mechanism to deliver college-level content—within a clear and consistent model—at the high school level.

—Phoebe Rouse
Louisiana State University College Readiness Program Director

Data reported reflects End-of-Course (EOC) exam results from school year 2009/10 (before MyMathLab was used) and school year 2010/11 (after MyMathLab was implemented). Scores in the Excellent, Good, and Fair ranges indicate a passing grade. The results indicate an extraordinary improvement in learning: an average EOC exam pass rate increase of 29 percentage points.*

*As recognized by Guillermo Ferreyra, Ph.D., chief, STEM Goal Office of the Louisiana Department of Education.

Broadmoor High School, LA

Algebra I • MyMathLab

Johnson used MyMathLab twice a week during the first semester, slightly more during the second semester. Those who don't have computer access at home could use one of three computers in the classroom or work at the library.

It used to be difficult to reach all of my students and offer additional attention to those who were falling behind. With MyMathLab, I can do just that.

—Michelle Johnson, Math Teacher
Broadmoor High School

Even before participating in the LSU College Readiness Program, Johnson believed in MyMathLab. "I'd seen it in action and was happy to get it," she says. "After I got over the newness of it, I was able to switch gears in my teaching so that my lessons and my students' work online in the lab supported each other. It works better for me and is a whole lot better for my students."

Johnson appreciates MyMathLab's flexibility, its Gradebook features, and the accountability and problem-solving skills it promotes. "The program supports my students' learning whenever and wherever they're doing math" says Johnson. "For many it's the first time they've received a score of 100 percent. When they see that they're capable of such a score, they gain confidence and the strength to persevere."

Because MyMathLab keeps students interested and engaged, Johnson's class remains on task longer and does more math problems than it would in a traditionally taught class. And it works—this year, 82 percent of my students passed the EOC exam versus only 46 percent who passed last year." See Table 2.

MyMathLab made an even bigger impact on Johnson's special education students. "They were able to complete additional work in their study skills class," says Johnson. "At the end of the semester, more than 55 percent passed the class compared to only 11 percent in 2010."

—Submitted by Michelle Johnson, Math Teacher

Northeast High School, LA

Algebra I • MyMathLab

Ruby Hull, math teacher, used MyMathLab in her Algebra I class to help her students improve their math skills and practice solving problems on the computer. She assigned four homework assignments for each unit, and students attended the math lab on Tuesdays and Thursdays. Work on MyMathLab contributed 10 percent to each student's overall course grade.

MyMathLab streamlined Hull's time and enabled her to work closely with those students who were having trouble. Meanwhile, those who were more comfortable with their skills and with the computer itself could use Ask the Instructor and the program's other interactive teaching and learning resources. "Teaching is all about finding creative ways to motivate students to learn. And, although every student is different, they all responded to the program's immediate feedback and 24/7 support."

Hull particularly appreciated the way that MyMathLab promoted self-paced, mastery learning. "The program fed my students problems specifically attuned to their individual skill levels," she says. "It then ensured that they did not move ahead until they were comfortable with the concept at hand."

For those students who took the time to read the instructions and do the problems, MyMathLab helped them, and they did well. Hull's 2010–2011 EOC exam pass rates improved from 63.6 percent in 2010 to 70.8 percent in 2011. See Table 3.

—Submitted by Ruby Hull, Math Teacher

Tara High School, LA

Algebra I • MyMathLab

Lisa Hoppenstedt, math teacher at Tara High School, used the majority of the homework assignments available in LSU's College Readiness Program Algebra I course and created seven additional end-of-course chapter review assignments. Students attended the computer lab twice a week. Work completed in MyMathLab contributed 40 to 50 percent of each student's final course grade.

Hoppenstedt discovered several benefits to teaching with MyMathLab.

- More productive learning environment. "On the days we spent in the computer lab, students arrived to class eager to work—students were prepared and focused on the task ahead."
- Time savings. "The program saved me at least three hours of grading time a week. Next year I'm moving all my quizzes online, too."

EOC Score Range	Percent of Students before MyMathLab	Percent of Students after MyMathLab
739–800 Excellent	1.5	6.0
700–738 Good	14.0	31.0
668–699 Fair	30.5	45.0
600–667 Needs Improvement	54.0	18.0

Table 2. Broadmoor High School Algebra I EOC Scores before and after Implementation of MyMathLab, 2010–11

EOC Score Range	Percent of Students before MyMathLab	Percent of Students after MyMathLab
739–800 Excellent	1.1	13.8
700–738 Good	12.5	17.0
668–699 Fair	50.0	40.0
600–667 Needs Improvement	36.4	29.2

Table 3. Northeast High School Algebra I EOC Scores before and after Implementation of MyMathLab, 2010–11

EOC Score Range	Percent of Students before MyMathLab	Percent of Students after MyMathLab
739–800 Excellent	0.0	4.5
700–738 Good	6.9	25.8
668–699 Fair	19.5	39.4
600–667 Needs Improvement	73.6	30.3

Table 4. Tara High School Algebra I EOC Scores before and after Implementation of MyMathLab, 2010–11

- Increased communication. “The program’s Gradebook feature enabled me to immediately see which students needed help without having to wait for them to ask.”

Hoppenstedt views MyMathLab as a win-win for all her students. “Students who use the program practice more,” she says. “Some of them actually asked for more problems—some because they were behind, others because they wanted to work ahead. I used to prepare two or three assignments ahead, now I need even more!”

Hoppenstedt’s EOC exam pass rates skyrocketed from 26.4 percent in 2010 to 69.7 percent after program implementation in 2011—an increase of 43.3 percentage points. See Table 4.

—Submitted by Lisa Hoppenstedt, Math Teacher

Woodlawn High School, LA

Algebra I • MyMathLab

Stephanie Fike, math teacher, chose MyMathLab homework assignments that corresponded with the Louisiana Comprehensive Curriculum and used the program’s lesson resources to both introduce new material and as a warm-up to each class period. Students were required to complete the Whole Class Discussion problems in class and to work the corresponding homework assignments using MyMathLab.

Teaching with MyMathLab made teaching fun again. It enabled me to return to the kind of daily, one-on-one interaction with my students that I really enjoy.

—Stephanie Fike, Math Teacher
Woodlawn High School

EOC Score Range	Percent of Students before MyMathLab	Percent of Students after MyMathLab
739–800 Excellent	0.0	0.0
700–738 Good	18.0	22.5
668–699 Fair	27.0	51.5
600–667 Needs Improvement	55.0	26.0

Table 5. Woodlawn High School Algebra I EOC Scores before and after Implementation of MyMathLab, 2010–11

“Students could access the program at home whether they needed remediation or if they simply wanted more practice,” says Fike. “And some did just that. I know they wouldn’t have sought more work from a textbook.”

MyMathLab facilitates many of today’s proven best practices, including increased time on task, content relevance, a strengthened teacher/student connection, and enhanced student self-confidence. “Students were excited to see that green check mark,” says Fike. “Some previously had so little success that this indication of their ability empowered them. They developed a more positive attitude about math, gained confidence in themselves, and were less likely to give up.”

Fike wondered if her students were prepared enough for the EOC tests. “But when I saw the results, I was really pleased,” she says. “74 percent of them passed on their first try—a huge improvement over last year’s pass rate of 45 percent.” See Table 5.

—Submitted by Stephanie Fike, Math Teacher