

Sherwood Middle School, LA

Middle School • Fewer than 10,000 Students • MathXL for School

Sherwood Middle School is a magnet school. Any student from the parish who has a minimum 2.5 GPA may apply; selections are made by lottery.

Study Implementation

During academic year 2008/09, teacher Darlene Ford taught two of her four sections of Algebra I using Pearson's MathXL for School, and two sections using another online learning program. A total of 81 students participated in a study. Student demographics in both groups were the same, and students were randomly assigned to groups. Class instruction—including group activities, peer-instruction assignments, lecture, and homework review—was identical in both sections. Classes met for 90 minutes every other day, such that during some weeks, students met two days a week, and during other weeks, three days a week. Students worked on in-class computers to begin homework assignments, which enabled them to share strategies and to peer-tutor when necessary.

Students in groups using MathXL could complete their homework at school or at home. Those in groups using the other program completed their homework either in class or on a school computer during a free period.

MathXL Implementation

MathXL was used both in class and outside of class for homework and quizzes. For emphasis on the connection between completing homework assignments and scoring well on tests, the overall course point value for homework was valued at just slightly less than that for tests. Every MathXL assignment was followed by a 5- to 10-question quiz. Additional use of MathXL included optional use of the Study Plan and videos. Students were encouraged to practice math on those days that class did not meet.

Results

Both groups showed significant improvements from pretest scores to posttest scores: from 60.37 percent to 92.62 percent in the group using another learning program, and from 65.54 percent to 94.34 percent in the group using MathXL for School. (See figure 1.)

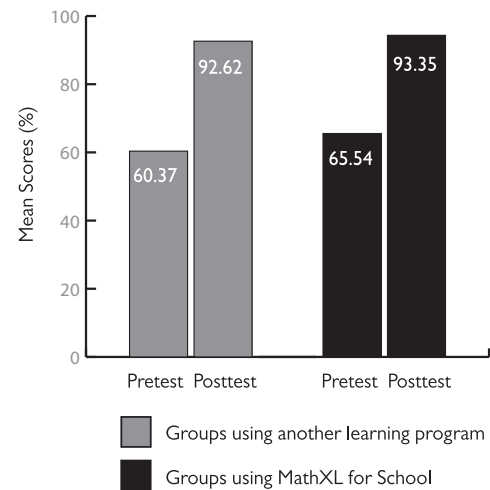


Figure 1. Comparison of Algebra I Pre- and Posttest Scores for Groups Using Another Learning Program and Groups Using MathXL for School

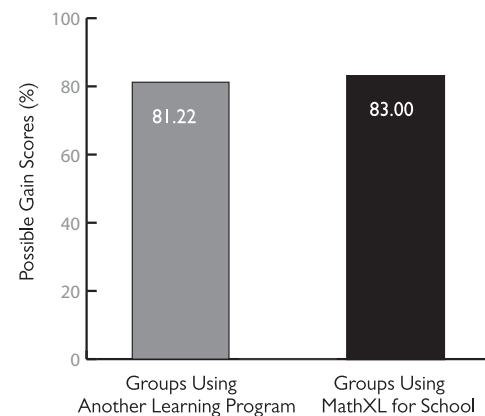


Figure 2. Comparison of Pre- and Posttest Possible Gain Scores for Groups Using Another Learning Program and Groups Using MathXL for School

The possible gain scores from the pretest to the posttest in each group were calculated in order to measure the amount of improvement throughout the course. In both groups, a significant amount of improvement was found. The amount of improvement in the group using MathXL for School was slightly larger than the amount of improvement in the other group. For the group using another learning program there was a gain score of 81.22 percent; for the group using MathXL for School there was a gain score of 83 percent. (See figure 2.)

Parish and Statewide Comparisons

All of Louisiana's middle school students are required to take a standardized, online mathematics test at the end of the school year. Scores are rated as Excellent, Good, Fair, and Needs Improvement.

A comparison of 2009/10 Sherwood Middle School results with the results of East Baton Rouge parish and the state shows a significantly higher percent of Sherwood students earning a score of Excellent (59 percent) and Good (38 percent)—and 0 percent of Sherwood students earning Needs Improvement. (See figure 3.)

Unexpected Benefits of MathXL

"Middle school students are still learning the ropes," says Ford. "Not only are they learning their individual course materials, but also they're getting a foundation of solid study habits: how to be responsible, work independently, effectively manage time, and so on." Most of the middle school students are not yet equipped to accomplish those tasks without the assistance of tools and procedures.

MathXL offers students the structure they need for monitoring their learning and developing their sense of responsibility—on their own and in their own time. "This aspect alone makes MathXL superior to the other learning program," says Ford. "It enables students to work on math homework at the time and in the place that they're ready to do so. Students learn to be more thorough and more careful and to think critically, thereby preparing them for both online testing and their future academic careers."

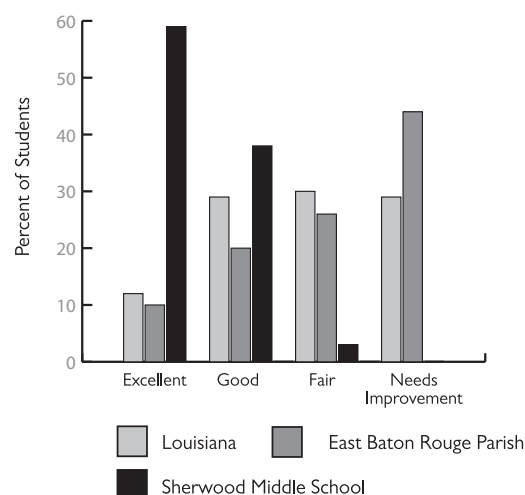


Figure 3. Comparison of Statewide, Parishwide, and Sherwood Middle School End-of-Year Exam Results, 2009/10

Conclusion

Sherwood Middle School administration selected MathXL for all of its Algebra I students. The administration reported that MathXL offered more benefits, including accessibility from home, accessibility by parents, insights into student behavior, and defensible grading.

Ford is confident that MathXL for School is educationally effective. She reports that for the years prior to MathXL, student scores on standardized tests were lower, frequently at a basic-learning level. Scores by students using MathXL regularly indicate learning at mastery and advanced levels.

—Submitted by Darlene Ford, Teacher
Phoebe Rouse, Louisiana State University College Readiness Director