School of Science and Engineering

Dallas Independent School District, Dallas, Texas

Location type: Large city
District enrollment: 159,713 students
School enrollment: 414 students
Percentage of students at school eligible for free and reduced price meals: 66

Key Takeaways

The School of Science and Engineering (SEM) has participated in the OECD Test for Schools every year, beginning with the 2012 pilot. The results from the pilot provided valuable information as to areas in which SEM could improve. While SEM students performed well in all content areas, the school recognized that it needed to implement practice shifts in the classroom in an effort to move more students to proficiency levels 5 and 6 in math, reading, and science. SEM's results also demonstrated a very strong school climate, but there was still room for improvement. Specifically, SEM found the need for improvement within the areas of student self-efficacy, student motivation, and teacher-student relations: 10 percent of students did not see a long-term role for mathematics in their lives, students reported the lowest self-efficacy for tasks related to life skills (reading a train timetable, using a map, etc.), and teacher-student relations were weaker when it came to how teachers engaged with and were available to students.

Actions Taken

- There has been a shift in practice regarding math homework, which included moving away from grading homework assignments and towards assessing content mastery with daily quizzes.
- The school also instituted new techniques to improve students' critical thinking and problem-solving skills.
- To address teacher-student relations, SEM created student surveys to receive feedback on teachers, provided more opportunities for one-on-one time for teachers and students, and assigned students to teachers based on student performance and student interests.
- The school also added more real-world problems to math courses to improve students' instrumental motivation and self-efficacy.
- Overall, SEM's participation in the OECD Test for Schools drove a focus on data-driven practices. During common planning, instructional coaches shifted discussions from operational and procedural items to the systematic use of item-level data analysis on all assessments. The use of this data helped to inform lesson plan design, instructional calendars, and curriculum redesign.
- With a focus on data, teachers developed personal professional development plans and are encouraged to attend any conferences they felt would strengthen their content knowledge or quality of instruction.
- Representatives from SEM have participated in a number of the Global Learning Network's virtual convenings, including serving as a featured presenter during a session on the math learning environment measures; the 2014 Convening of World-Leading Schools; and the 2015 regional meeting in Houston. All of these afforded opportunities to dig deeper into SEM's results, share best practices with peers, and discuss additional action steps.

SEM has been successful in developing students' deeper learning skills so that they can perform at the highest proficiency levels. The school took the OECD Test for Schools again in 2015, and the results showed that the percentage of students performing at levels 5 and 6 has increased in math, reading, and science.

Those wishing to learn more about the practices at the School of Science and Engineering may contact Tiffany Huitt, Principal, at thuitt@dallasisd.org and Joshua Newton, Math Cluster Coordinator, at josnewton@dallasisd.org.