Established in 1985, the MLSC is a drop-in tutoring facility currently located on the 5th floor of the OSU library and operated by the Mathematics Department. Its mission is to provide support for students in lower division mathematics courses. There are 40 tutors currently employed at the center, including five undergraduate student coordinators who serve as experienced tutors and take on a management role.

Facilities and Resources

Although math centers are common, the Mathematics Learning Success Center (MLSC) at Oklahoma State University is exceptional. We have an expansive remodeled space on the fifth floor of the Library in the center of campus, outfitted with laptops, whiteboard walls, and lots of space for collaboration. The undergraduates who work as tutors are phenomenal students who go through 8 hours of training per semester to improve their tutoring skills. The professors who coordinate the multi-section math courses are in direct communication with the MLSC director to ensure that the instruction that students receive in the classroom is reflected in the way the tutors talk about the material. Instructors in the 1000 and 2000 level courses conduct office hours in the MLSC. Our website contains up-to-date videos and information about instructor office hours and review materials.

What is the MLSC?

The chart below shows the median number of students in the MLSC at certain times from the Fall 2017 data. Students spend 72 minutes at the MLSC, on average.

At the MLSC is that we take a research-based approach to supporting students in their math classes. Our tutor training and programming are guided by principles developed through research, and we are utilizing research methods to determine the effectiveness of our center.

Tutor training sessions are based on results from research in undergraduate mathematics education and are designed to teach tutors productive ways of understanding the mathematical concepts and pedagogical best practices.

As part of their training, the tutors are required to record and transcribe a tutoring session, and respond to reflection questions. We also use transcripts of actual tutoring sessions in group training meetings. Currently we are analyzing in detail the interactions that take place in tutoring sessions to get a better understanding of mathematics learning in a tutoring environment and to develop tutor training modules based on authentic interactions.

Benefits of Math Tutoring

Math tutoring has been linked to increased pass rates in mathematics courses even after controlling for prior ability (Byerley & Rickard, 2018; Rickard & Mills, 2018; Xu, Hartman, Uribe & Menke, 2014) and an increase in positive student attitudes towards mathematics (Gillard, Robathan, & Wilson, 2012; Johnson & Hansen, 2015; Patel & Little, 2005). The Mathematics Association of America’s Characteristics of Successful Programs in College Calculus (CSPCC) surveyed 118 U.S. universities and 97.5% of them offered tutoring for Calculus I, with 89.5% offering tutoring by undergraduates (Johnson & Hansen, 2015). Thus we can see that mathematics peer tutoring offered by undergraduates is commonplace in universities in the United States.

It was reported that 40% of Calculus I students attended tutoring, but at the MLSC we have a much higher rate consistently around 60%. A multiple regression analysis of data from Calculus I students predicted that every 3 visits to the MLSC corresponds to a 1% increase in final grade after controlling for prior academic ability. Also, for lower-achieving students, attending tutoring has a greater impact on final grades.