Michael B. Scott* (mscott@csumb.edu), Mathematics and Statistics Department, California State University, Monterey Bay, 100 Campus Center, Seaside, CA 93955. Using Online Technology to Improve Student Learning in Mathematics Courses. Preliminary report.

Cal State Monterey Bay uses a web-based homework system to supplement Pre-Calculus, Calculus and other mathematics courses. The infrastructure of the online homework has been expanded into a full course management system for coordinating every aspect of the course and serving as a platform for delivering supplemental resources to students. These resources include, but are not limited to, exam study guides, course notes and video lectures. Expansion of the system makes possible the collection of rich data streams about individual students. In addition to course grade data such as exam, homework and quiz scores, items such as college entrance exam scores, GPA, course resources students accessed are also included in the data. The presenter will discuss the measurement, collection, analysis and reporting of these data for the purposes of understanding and optimizing students’ learning experiences using online technology. (Received September 17, 2013)