Using Assessment Tools to Collect and Analyze Data
CSU Long Beach

Science and Math Early Alert[1]

CSULB has developed course-specific academic early alert advising, an academic advising plan, designed to identify and support students experiencing academic difficulties mid-way through the semester. In the fourth or fifth week of each semester, advisors invite faculty in math and science to refer students who are not thriving to their academic advisor for guidance and support.

To encourage participation, professors may report their the mid-semester alerts in a variety of ways. In Fall 2019, CSULB integrated our early alert program with EAB's Student Success Collaborative Navigate, a web-based system through which professors identify students in need of support, campus wide. All professors teaching GE QR courses took part in the pilot. Others, particularly those teaching larger courses, for which the SSC Navigate interface is cumbersome, export the information directly from their grade books in CSULB's LMS. In Fall 2019, six biology courses and nine chemistry courses throughout the undergraduate curriculum, and five entry-level multi-section math courses participated.

Advisors in the College of Natural Sciences and Mathematics compile this information, to produce a tool to help identify what interventions are appropriate. Students struggling in a single course are invited to meet with their professor, their academic advisor, or both, to explore the nature of the problem, and strategize interventions to help them achieve satisfactory academic progress. Depending on which courses they are in, students are also encouraged to take advantage of on-campus resources, such as tutoring or meeting with learning skills specialists. Students struggling in more than one course in the early alert program are offered additional support such as access to peer mentors or the MyMajors software, which helps students find majors at CSULB that fit their interests.

The use of this system for MATH 112A (first semester of year-long pre-calculus algebra course), MATH 113 (pre-calculus algebra), and calculus I courses (MATH 119A and MATH 122) is particularly important. Our data[2] shows that 85% of STEM-bound freshman who failed 1st semester algebra course and 50% of students who failed their first calculus course switch majors out of STEM by the end of their sophomore year. Our proactive advising plan is designed to identify students who are struggling, and help them discover what they need to do to succeed in their STEM courses, or efficiently find a new academic plan.

[1] Description of Early Alert for Students: https://web.csulb.edu/colleges/cnsm/advising/early-alert.html

[2] Poster presentation: Academic performance in freshman courses and major switching patterns of CNSM students: http://www.csulb.edu/sites/default/files/u49646/poster_cnsm_academic_performance_in_freshman_courses_and_major_switching_patterns.pdf