As part of a 2014 commitment to President Obama to recruit and graduate more STEM majors, Yale developed an online bridge program “Online Experiences for Yale Scholars” (ONEXYS) to boost the quantitative reasoning skills of selected incoming freshmen. The result was a not-for-credit pre-calculus course consisting of online videos, adaptive practice quizzes, challenging applications of math content, and undergraduates acting as coaches for teams of incoming students. We report on evidence of gains in learning and increased feelings of preparedness from the first two summers of ONEXYS as shown by pre/post test data, survey data, and feedback from focus groups. (Received September 22, 2015)