KNEWTON TECHNOLOGY HELPED MORE ARIZONA STATE UNIVERSITY STUDENTS SUCCEED.

Together, Knewton and ASU increased pass rates, reduced withdrawals, and advanced students faster through developmental math.

THE PROBLEM

With more than 70,000 students, Arizona State University (ASU) is the largest public university in the United States. As a research university committed to improving access to education, ASU was strained by the large number of enrolled students — each with diverse needs, interests, and educational backgrounds — who were not college-ready in mathematics, a key predictor of university success. ASU saw a high correlation between students who succeeded in developmental math and overall academic success. Students who earned an A, B, or C had 50% higher persistence rates (i.e. retention through graduation) than those earning lower grades. Unfortunately, more than 30% of students failed to receive a C or higher in ASU's developmental math course.

THE SOLUTION

ASU developmental math students now use Knewton Math Readiness, a developmental math course powered by the Knewton platform and aligned with the Common Core Standards for Mathematics. As students work through online math lessons, Knewton analyzes vast amounts of anonymized data to figure out what a student knows and how they learn best. Then Knewton recommends what concept in the course each student should study next, personalizing the educational experience and helping students at any level succeed.

HOW IT WORKS

Knewton technology enables an entire class to work through material in a sequence and pace customized for each individual.

As students progress through the course, Knewton analyzes data behind the scenes to continually assess students' mathematical proficiency. Knewton then recommends what concept within the online course a student needs to work on next, creating a continuously updated personalized learning path for each student.

Teachers use Knewton-powered real-time reports to detect gaps in knowledge, create adaptive study plans for each student, and focus lessons around concepts where students need the most help. Students work through the course at their own pace with an instructor's guidance. Instructors can see which students are off-track, search for individual student performance metrics, or view trends across an entire group of students to determine which concepts are most difficult across the board.

The course goal is to complete the requisite number of lessons at a certain performance standard. Each student must also pass a final exam administered by ASU.

THE OUTCOME

After two semesters of use with over 2,000 developmental math students at ASU, course withdrawal rates dropped by 56% and pass rates increased from 64% to 75%. Almost half of students finished the course four weeks early, allowing them to advance immediately to the next level upon mastering course concepts.

	FALL 2009-SPRING 2011 (without Knewton Math Readiness)	FALL 2011-SPRING 2012 (with Knewton Math Readiness)
PASS RATES	2,419 students - **64%**	1,565 students - **75%**
WITHDRAWAL RATES	613 students - **16%**	138 students - **7%**
STUDENTS FINISHING EARLY	n/a	~942 students - **45%**
TOTAL NUMBER OF STUDENTS	**3776**	**2095**