CASE STUDY

DIGITAL LEARNING IN ACTION

How Arizona State University Uses Data to Achieve Its Digital Learning Goals

Digital Learning Is Core to ASU's Mission and Goals

Arizona State University is differentiated among four-year research institutions by its focus on student access. The ASU charter states that the university should be "measured not by whom it excludes, but rather by whom it includes and how they succeed," and the institution sets goals that reflect this mission. Among ASU's 2025 goals are measurable outcomes related to student access and success, including:

- Enhance quality while reducing the cost of a degree.
- Enroll 100,000 online and distance-education degree-seeking students.
- Improve freshman persistence to greater than 90 percent.
- Increase the university graduation rate to greater than 80 percent and more than 32,000 graduates.

In pursuit of these targets, ASU has developed a portfolio of digital learning with three primary course offerings. ASU Online offers fully online courses and programs that help to increase access to the institution. iCourses – online courses offered to campus-based students – improve course flexibility and access. Adaptive learning courses – face-to-face and online courses delivered using adaptive learning technologies – aim to boost student success.

AT A GLANCE

ASU Arizona State University

- Total enrollment of over 103,000, with over 83,000 undergraduates and nearly 20,000 graduate students
- ASU serves a diverse undergraduate student population:
  - 48.5% female, 51.5% male
  - 50% white
  - 23% Hispanic
  - 7% Asian
  - 4% black / African American
- 33% of first-time freshmen are Pell Grant eligible

FALL 2017 STATISTICS; DEMOGRAPHIC DATA INCLUDES STUDENTS ON METROPOLITAN PHOENIX CAMPUSES ONLY.

Data Analysis Helps ASU Continually Improve Its Digital Learning

ASU collects and uses data on student performance, student access, course quality, resource usage and more in order to make data-based decisions about the approaches it uses to achieve its objectives. In fact, ASU has a research and development group, called The Action Lab, focused on making assessments about the quality, efficacy and outcomes of digital learning. Below are examples of how ASU uses data to continuously improve its digital learning offerings.

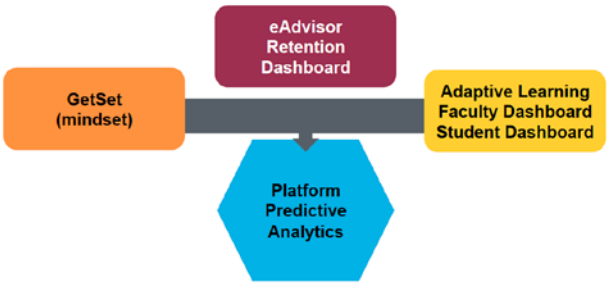
- **Using vendor partnerships strategically to support growth and manage costs.** By regularly reviewing its vendor relationships and internal needs and capabilities, ASU makes informed decisions about starting, maintaining and ending contracts with vendors to help achieve institutional goals while

managing costs. For example, to help achieve its ambitious growth targets for online programs and ensure the success of new students at ASU, the institution partnered with an online program management company in 2010. The partner helped with student acquisition and student support, allowing ASU to access expert assistance while managing its risks and costs in pursuit of its growth goals. In 2016, after building its own expertise and scale, ASU decided to bring the student support function in-house. This decision was based on an analysis of costs, level of institutional control and quality of services.

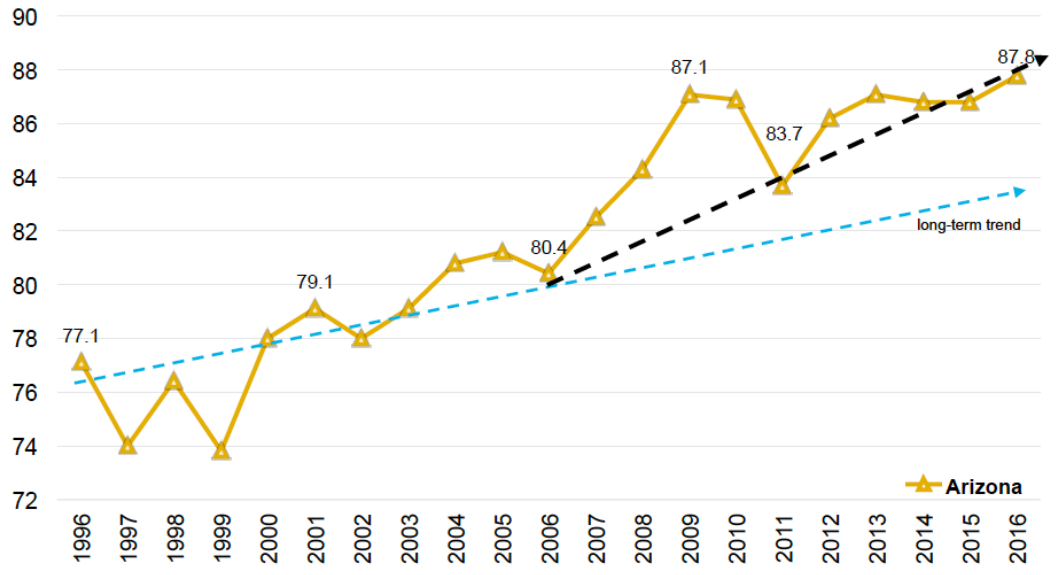
- **Leveraging best practices and regular feedback to improve digital courses.** New or refreshed digital courses undergo a design process that includes faculty onboarding, use of a Quality Matters rubric for course design, pairing of faculty members with an instructional designer, and course readiness checks by students before launch. However, the course design process doesn't end there. Each semester, a 360-degree course review is completed that collects feedback to inform further course improvements. Through this approach, underperforming courses are identified early and receive design support to enable ongoing improvement for greater student success.

- **Integrating systems to aggregate data that helps ASU meet student needs.** To identify at-risk students early and keep those students engaged and enrolled, ASU has worked to integrate its various sources of student information to feed its predictive analytics platform and anticipate student needs. By integrating the data from its different systems, ASU not only improves outcomes for students but also keeps better track of how its vendor partnerships and interventions are impacting student success in order to make informed decisions about the value of those relationships and interventions.

Integration of Information Sources



Arizona Freshman Retention Rate and Interventions in Use by Year



eAdvisor ► Retention Dashboard ► Predictive Analytics	X	X																X	X
Adaptive Learning (expansion to 20,000 students)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GetSet																		X	X	

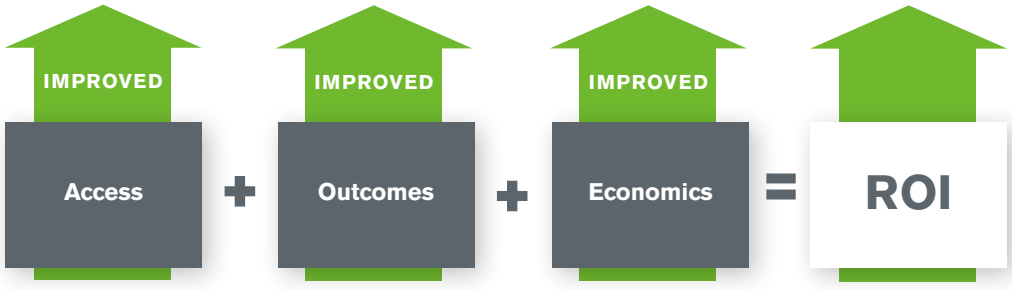
How ASU Sees the Return on Its Investment in Digital Learning

In 2018, Arizona State University and Boston Consulting Group released "Making Digital Learning Work," a report based on over two years of analysis on the return on investment from digital learning initiatives in six institutional contexts. The report identifies three components of the return realized from an institution's investments in digital learning: impacts on student *access* to higher education, impacts on student learning *outcomes*, and impacts on institutional and student *economics.*

ASU's investment in digital learning has impacted these three components in many ways, including:

- **Increasing access to ASU courses for target student populations.** At ASU, the student base taking exclusively online courses looks different from the student base taking exclusively face-to-face courses in several important ways: on average, online students are older (30 years old versus 22), more female (57 percent versus 39 percent) and more likely to receive federal financial aid in the form of Pell Grants (39 percent versus 32 percent).
- **Improving course outcomes through adaptive courseware.** Over 8,000 undergraduate students enroll in College Algebra each year at ASU. The historical course success rate (students receiving a C or better) was in the mid-50 percent range, indicating that the course needed a major overhaul. It was redesigned using adaptive courseware for the fall 2016 semester, and the student success rate improved by 20 percentage points compared with the fall 2015 cohort. This translated into over 650 additional students in the fall 2016 cohort passing the course at first attempt as compared to the fall 2015 cohort.
- **Lowering resource use and cost to students, while driving revenue for the institution.** Online courses help to control resource use at ASU. For example, sections for online courses at ASU are significantly larger than sections for face-to-face courses, reducing instructional cost per credit hour. Students pay about 30 percent less per credit hour[1] to enroll in ASU online courses compared with on-campus courses. Overall, ASU reports resource use per degree of 17 percent less than its peers.[2] At the same time, online learning helps drive revenue for the institution through higher enrollment growth in online programs than face-to-face programs.

While not all institutions have similar results from their digital learning initiatives, this case study shows how digital learning can produce a positive return on investment.



1. Compares online tuition and fees to resident tuition and fees for campus-based courses for students taking up to 7 credit hours per semester. For students taking more than 7 credit hours per semester, the discount for online versus face-to-face courses is reduced.
2. https://president.asu.edu/sites/default/files/abor_strategic_enterprise_plan_final_020819.pdf

Arizona State University

This document is presented by Every Learner Everywhere and was based on "Making Digital Learning Work," a 2018 report produced by Arizona State University and Boston Consulting Group.