

STUDENT
SUCCESS IS
ABOUT PEOPLE

FEATURING
CIVITAS LEARNING
PARTNER INSTITUTIONS

LEARNING

BRIEF



Angela Baldasare Assistant Provost for Institutional Research

INCREMENTAL GAINS

USING PREDICTIVE ANALYTICS TO INCREASE RETENTION TO 90 PERCENT BY 2020

UNIVERSITY OF ARIZONA

By the Numbers



Melissa Vito Senior Vice President for Student Affairs & Enrollment Management and Senior Vice Provost for Academic Initiatives & Student Success

1885
YEAR ESTABLISHED

300+
MAJORS OFFERED

1,563
TOTAL FACULTY

31,670
*Undergraduate
Students*

8,951
*Graduate & Professional
Students*

BUILDING CAPACITY

An Opportunity for Analytics

In 2007, The University of Arizona (UA) launched an effort to replace their institutional business systems and revamp their data warehouse. “There were push and pull factors to this project,” said Hank Childers, Executive Director of University Analytics & Institutional Research. “There were potential compliance issues with the systems being out of date, but we also wanted to integrate data and information. We saw it as a great opportunity to make information available to more people.”

Five years later, the UA not only had a new environment with new tools and processes, but also new thoughts around using data to drive decision-making, and leveraging predictive analytics to take incremental steps toward their goal of increasing

retention from 82% to 90%, and the number of bachelors degrees awarded from 6,400 to 8,100 by 2020. “We knew getting to 90 percent retention would mean finding that extra student in 10 for whom we could build better pathways,” said Provost Andrew Comrie. “And that doing that would involve the difficult task of not only looking at data more broadly, but also diving in deeper in order to connect the dots.”

In December 2013, the UA joined Civitas Learning™ to improve outcomes by powering student success initiatives focused on retention. Data from their PeopleSoft student information system (SIS) and behavioral data from the UA Think Tank, which offers tutoring and other student services, was initially ingested and validated through the



Michele Norin Chief Information Officer

Civitas Learning platform. Upon deploying the Civitas Learning Illume™ application, the institution gained better access and visibility into broad data, as well as real-time predictive insights to help design and measure the impact of initiatives aimed to “recruit to retain.”

Through some of their early work using Illume, the UA was able to identify subsets of just a few hundred students who would not have been found in the aggregate of all student behaviors. “This was powerful for us because it meant that insights from Illume were going to help us recognize and treat individuals as individuals – not to mention what you could do with these kinds of actionable insights a thousand times over,” said Provost Comrie.

Finding Change in “Pockets”



Hank Childers Executive Director, University Analytics & Institutional Research

Prior to Civitas Learning, the UA had done extensive work to identify factors that help predict student success such as academic readiness, residency, gender, etc. The Academic Index, an enrollment projection model developed by Assistant Director of Institutional Research Guillermo Uribe, is a model that is still used and maintained by the university to predict first-year GPA for incoming students. However, while this model provides valuable information for planning decisions, it does not reflect the rich data that become available after a student arrives, behavioral data from the UA Think Tank, or other information that was

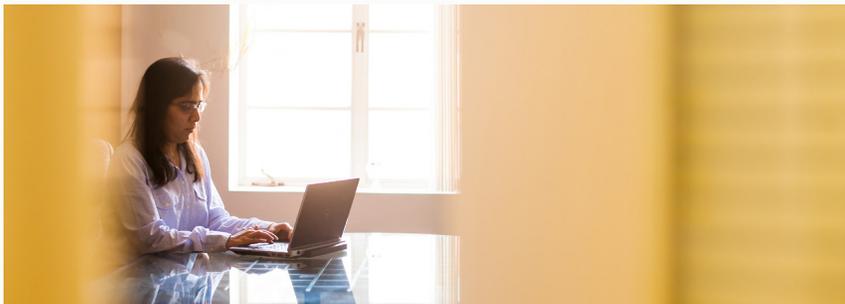
becoming more accessible as the new IT infrastructure was put in place. Moreover, in one instance of Illume the UA discovered that there were in fact many layers within individual predictive factors (e.g. gender) that they could dive into in order to find pockets of the student population where initiatives or interventions could be implemented to help those students succeed. Illume uncovered 660 non-resident female students with GPAs between 2.4 and 3.0 who were predicted to be at risk in the Fall of 2014. “This defied our expectations, as females have generally higher retention and graduation rates than male students,” said Uribe.

“Illume is enabling finer-grained segmentation of our students, to identify smaller cohorts that we may never have been able to see otherwise. This makes it possible for our interventions to be highly targeted. And though we don't have ‘home-runs’ to hit, we know there are a lot of singles and, together, they will be significant.”

EXECUTIVE DIRECTOR OF UNIVERSITY ANALYTICS & INSTITUTIONAL RESEARCH
Hank Childers | University of Arizona

BUSTING SILOS

University of Analytics & Institutional Research (UAIR)



Sabah Currim Computer Scientist

In July 2014, Institutional Research (IR) and Business Intelligence (BI) merged to form the office of University Analytics & Institutional Research (UAIR). The vision was to reduce tension between data from transactional BI systems – what people could pull and see for themselves – and data that appeared in official IR reports that determine things

like budgeting, etc.

“The decision to bring the two groups together was made to increase the speed and availability of all kinds of information – from transactional to finished reporting – as well as new insights available through Illume,” said Angela Baldasare, Assistant Provost for Institutional Research. “As our institution’s

analytics culture evolves, it will be very valuable for people to see insights and the results of combined data to learn about the impact and interconnectedness of student success initiatives – particularly institutional teams who have pioneered programs to bolster retention.”

IMPROVING RETENTION

The Importance of Trying Something

“When I die, they will write on my tombstone that I was the queen of pilots,” said Melissa Vito, Senior Vice President for Student Affairs. “When retention first came under Student Affairs and we saw how we were doing with the class of 2009, we put multiple pilots together to move the needle on our retention rates.”

For incoming students, one pilot designed to offer math support for students testing below college algebra helped improve freshman-to-sophomore retention from 60% to almost 70% for the cohort of students who completed the program in its first year. Bear Down Camp, another initiative focused on incoming non-resident students, is helping 250 students feel more prepared for their first year by bringing them to

campus for four days to learn about the UA and things to do on and off campus that may help them be successful.

“We felt that we had done a lot of the obvious things around retention,” said Vito. “So in 2015 we formed an Enrollment Management Council – a team that includes Academic Affairs, the Senior Vice Provost who works across the colleges, Residential Life, Enrollment Management, a retention committee, Institutional Research, and others to work together to learn as much as we can about our students, and turn that knowledge into action.”

This team is already using insights from Illume to inform the design of programs, services, and outreach to students to keep them in school and help them succeed.

Student Interventions



Jeff Orgera
Senior Assistant VP Student Affairs

One of the members of the Enrollment Management Council, Dr. Jeff Orgera, Senior Assistant Vice President for Student Affairs and Enrollment Management, was using ad-hoc reports to pick segments of the student population, identify their needs, design programs and services, and adjust policy along the way to help more students come back for their sophomore years.

Orgera is now working on interventions to the group of 660 students identified through Illume.

“Our approach is not to alert them or make them feel at risk. We are letting students know that registration is coming up, making sure they have checked their financial health, that they know where they’ll be living next year, and offering an opportunity to come in to chat with someone who can work with them and offer financial, academic, and other kinds of assistance,” he said.

Following an initial email, Orgera plans to follow up with personal phone calls to students in two colleges

that tend to have the highest number of attrition – pre-business and undecided – thus narrowing down the list of 660 to about 250. Though he recognizes that some of those students will not respond to email, many won’t return phone calls, and others may have already checked out mentally, Orgera wants his team to work on the list to make sure they do everything they can – including looping in faculty and advisors when necessary – to have conversations that may help change some

students’ paths.

“Our window of opportunity is small,” Orgera said. “Many students are making decisions about whether they’ll come back to the institution within the first 4-6 weeks they’re on campus, when they barely have their feet under them. If things don’t come together socially, financially, or emotionally, they won’t even be around long enough for us to have the chance to do anything about building better pathways for them.”

“We know we won’t be able to get to 100% retention or narrow the funnel in a way to where we only need a pool of 9,000 student to get a class of 8,000. But we do know we can do better through incremental change, and data can help us get better.”

SENIOR VICE PRESIDENT FOR STUDENT AFFAIRS & ENROLLMENT MANAGEMENT
AND SENIOR VICE PROVOST FOR ACADEMIC INITIATIVES & STUDENT SUCCESS
Melissa Vito | *University of Arizona*

WHAT’S NEXT

Connecting the Dots

“We’re at a point where we will be exposing Illume to more people who could benefit from the information,” said Angela Baldasare. “We featured Illume and some of our initial learnings at a February 2015 meeting with the Arizona Board of Regents (ABOR) and they are thrilled about the potential impact on retention as well as the transformative potential on our institution and our culture for analytics.”

Down the road, the UA wants to expand their view through Illume by integrating

data from their D2L learning management system (LMS) in order to look at curricular flow. “We have a rich set of SIS data and there is more that we will learn from that – it’s useful from a retention and graduation rate perspective, but not from an individual course success perspective,” said Hank Childers. “By integrating our LMS data and increasing the frequency with which we update, we could potentially identify students and implement interventions while a course is still in progress in order to

make a difference in the life of current students.”

Moreover, the university wants to leverage Illume to look at other “universes” of data such as Wi-Fi information, card swipe data, and

anything else that provides clues about what students are doing on campus. “We want to be able to connect the dots. We want to gain a better understanding for who is most likely to come to

the UA in order to meet our overall enrollment goals in a more effective way relative to deployment of financial aid, scholarship and recruitment,” said Melissa Vito.

“Additionally, we want to know more about the students who come into our community in order to predict and intervene to help them be more successful. Whether that may be things like having more insight into curricular flow or having analytics around how being part of Greek life, working on campus, joining a campus organization, etc. impact student retention.” ■

“In an increasingly digital world we’ve gotten used to having information at our fingertips. But while that exists in some spheres of life, that kind of immediacy doesn’t yet exist – not at scale – to run an institution and measurably change student lives. One of the most exciting things about Civitas Learning for us is the ability to personalize at scale, so that we can put care back into what we do.”

PROVOST
Andrew Comrie | *University of Arizona*



Civitas Learning™ is building a community of higher education institutions to bring leading-edge technology, design thinking, and data science together to help a million more students learn well and finish strong. Using predictive analytics platform and engaging applications, institutions can bring deep insights to decision makers and personalized recommendations to the front lines of learning to measurably improve student success.

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