Reframing Your View of Student Success:

A Holistic Approach Using Integrated Data and Custom Insights

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Today's campuses are pursuing any number of ways to meet their success and retention goals: student support services, programs to increase engagement, academic policies to promote student-centered learning, use of early alerts, use of predictive analytics, and targeted assessments. Some institutions tackle only some or a few of these, while others try to do it all. Very few institutions feel confident that they're doing enough.

> **"One of the most important evolutionary changes in higher education recently has been the broad recognition that access is not enough. Most educators today understand that the goal line has moved from helping students gain entry to college to helping them succeed once they have enrolled."**
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> John O'Brien
> President and CEO, EDUCAUSE
> "Student Success: Mission Critical"
> May/June 2017 *EDUCAUSE Review*

Meanwhile, the collection and management of data has become a campus-wide reality. Faculty and administrators track class attendance, course grades, and outcomes achievement. Student affairs staff might track student involvement in clubs and organizations as well as attendance at campus events. An institution might also have data on the use of facilities, such as the tutoring center, the library, and the cafeteria. Since all of this information is already being collected by various offices on campus, why can't the data points be used to create a comprehensive view of student success?

What's needed is a new way to frame conversations around success and retention. By reframing their view, campuses will develop a better understanding of what students need in order to persist and which initiatives are having the strongest impact. With a holistic view, campuses will be in a better position to predict and influence success and retention rates at both the individual and aggregate level.

Supporting Student Success

On most campuses, student success entails progress toward degree completion. Consider that in 2009, just 59 percent of students attending a four-year institution were completing their degree within six years. (Source: National Center for Educational Statistics) In 2015, that percentage dipped to just under 54. (Source: NCES, IPEDS 2015 Graduation Rate Survey) Also in 2015, first-year retention for students returning for their second year was just under 79 percent. That means roughly 20 percent of students did not persist after their first year. (Source: NCHEMS Information Center) Any efforts to improve retention and graduation rates are a step toward strengthening student success.

In addition to prioritizing on-time graduation, institutions increasingly measure success by the number of students who find post-graduation jobs in their field and go on to pursue rewarding careers. Being employable

reflects positively on the new graduates, as well as on the institution's ability to prepare them for jobs that align with their interests and skills. The added long-term benefit is the gratitude of alumni who recognize the role that their college education has played in their professional success.

The Four Frames: A Compartmentalized View of Success

Why do some students persist and others drop out? How can institutions improve the odds for at-risk students? Are there students who might not fit the typical criteria for being "at risk" but might still be struggling? Traditional campus silos reinforce a compartmentalized view of success, which limits the ability to explore all the factors that might answer these key questions. The following four frames capture the common ways the view of student success is compartmentalized on a campus.

Frame One: Dedicated Support and Services

Perhaps the most traditional approach operates through the frame of support and services. This includes dedicated first-year advisors, peer mentoring programs, staff support networks, success coaches, degree transition specialists, pipeline internships, and even industry coaches. Emphasis on the first-year experience has also grown to include focused sophomore-year experiences and more attention given to students in their last two years of attendance. Faculty and staff learn how to use early-alert systems and identify students who may be struggling or going off-path early. Students are provided with the advice and support they need as they transition from high school to college, work toward their academic major, and then begin looking for successful career placement upon graduation.

Frame Two: Policies and Procedures Focused on Retention

Within the second frame, campuses create policies and procedures designed to position students for retention and graduation. On many campuses, students are required to take first-year experience courses that can ease their transition to college. Advisors meet regularly with new students, who are positioned for success right from the start. Some institutions have begun requiring students to register for 15 credit hours, even if the minimum full-time requirement is 12. The idea is to keep students on pace, not only to graduate within their chosen academic program but to do so on-time. And to entice incoming students to commit to attending for a full year, some campuses allow them to choose their schedule for both fall and spring semesters at the same time. Students who aren't able to enroll in a desired class right away can still have the immediate satisfaction of seeing it on their schedule for the next semester. Many campuses have also begun to address the impact of financial stress on student success. Access to emergency micro-scholarships and policies such as bursar-hold forgiveness can alleviate financial burdens that often distract students from their academic commitments.

Frame Three: Targeted Programs and Engagement Opportunities

The third frame is the development of intentional student success programs and campus engagement efforts that stretch beyond the classroom. Engagement apps, co-curricular pathways, and flash polls all work to enhance student engagement. Likewise, required high-impact practices, such as study abroad, undergraduate research, and learning communities, can strengthen the intellectual and social bonds students have with each other as well as with the larger campus community. Extended orientation programs for new students can also ease the transition to college during the first weeks of class. Targeted programming based on campus culture or student needs helps to individualize the experience and increase long-term student success. Summer bridge programming—most often in math and English—can help students avoid having to take remedial courses during the regular academic term. Finally, for those students who are currently enrolled or have dropped out, last-mile programs are designed to help them finish their remaining credit hours. These programs can include tuition grants, experiential learning in place of classroom hours, or an emphasis on distance education.

Frame Four: Data and Analytics

The fourth frame refers to the way campuses typically collect and analyze their student success data. This includes data about demographics, academic performance, involvement, and retention rates. Very often the data is collected separately and warehoused in specific offices. When analytics are applied, the focus is typically on a specific set of data. Using predictive analytics, for instance, campuses might analyze data about class attendance to forecast patterns and behaviors. When coupled with an intrusive advising system, predictive analytics can be used to trigger early alerts. Responding to an early alert, faculty and staff nudge a student and intervene with an appropriate solution. While most systems rely on alerts that need to be triggered manually, some campuses use tracking software that can issue alerts based on specific variables. The main characteristic of this approach is a siloed handling of the data; each warehouse of information is kept separate and analyzed in isolation.

Bringing the Data Together: A Single Frame for a Holistic View

On most campuses, data related to student success is stored in nearly every office—from the registrar's office to financial aid to enrollment management to the student success center. But in its siloed state, the data's utility is limited. Data management should also involve determining how a campus will respond when alerts are raised for students, when survey responses indicate possible concerns, or when a sophomore requests transcripts be sent to six other institutions. This piece of the student success puzzle presents an opportunity for campus-wide conversations about how individual stakeholders (including faculty, staff, and students) can work together and create better outcomes for students by leveraging a unified set of student success data.

What's needed is a networked approach in which valuable data points can be shared, integrated, and turned into information for better insights. The goal is a clear picture of what success should look like for every student at the

institution. The key to reframing student success, then, is to combine all four perspectives into one coherent framework, and explore the issues through a single, broader frame.

Indeed, a commitment to individual student success means a commitment to gathering data about the entire student journey. This implies a better understanding of a student's interactions with every person and every resource at the institution—from the moment the admissions office receives the application right up until graduation. Yet even if stakeholders at an institution agree that success is holistic—and retention is everyone's responsibility—aggregating campus-wide information about each student poses a challenge. The possibilities open up once the usual silos are broken down and the emphasis shifts from archived snapshots to a continually updated source of information.

"As predictive analytics becomes more sophisticated, there is a tremendous opportunity to capture behavioral and engagement data in the campus data warehouse and to use that data both to identify students who may need greater support and to understand which experiences contribute to student success."

Kevin Kruger, President, Student Affairs Administrators (NASPA) "Student Success: Mission Critical" May/June 2017 *EDUCAUSE Review*

A holistic approach focuses on the student lifecycle, leverages analytics, and provides easy access to a continuous data stream. Using predictive analytics, seemingly disparate data sets are connected in order to highlight instructive patterns and trends about behavior. The goal is to forecast any barriers to success by identifying the common characteristics of at-risk students as well as those who are likely to succeed.

And it's not just the squeaky wheel that will get the grease. Attuned to the unique needs of a campus, predictive models can segment the student population and surface the shared characteristics of successful students as well as those who may be at risk down the road. Campuses should in fact coordinate preemptive measures for "average" students whose GPA falls between a B and a C—and for whom the ability to persist is not always a given.

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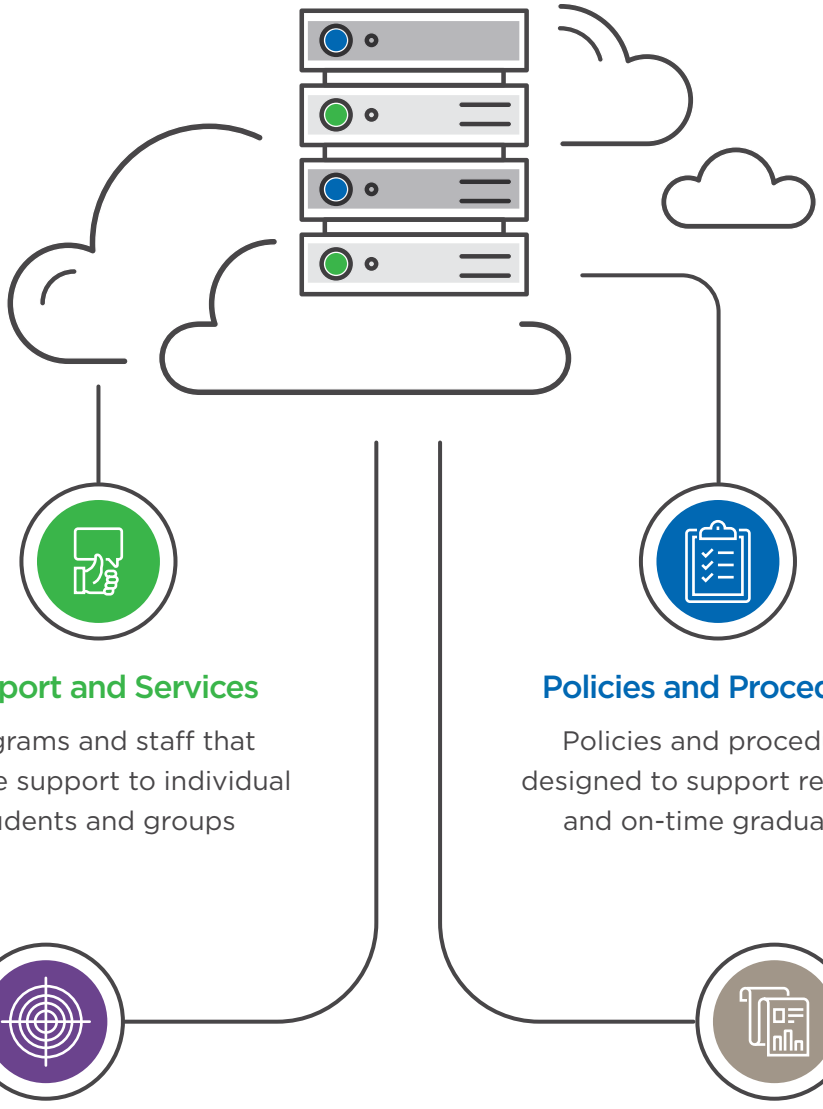
A New Framework for Success

Data Management and Integration for Actionable Insights

Accessing and connecting campus-wide data to identify meaningful patterns that can inform a strategy for strengthening student success



Support and Services

Programs and staff that provide support to individual students and groups

Policies and Procedures

Policies and procedures designed to support retention and on-time graduation

Programs and Engagement

Targeted programming to support success and meaningful campus engagement

Campus-wide Data and Analytics

The collection and storage of data on campus, often analyzed within conventional silos

How Can a Campus Know What's Working?

It's not enough to identify at-risk students and then prescribe an intervention. Campuses also need to assess which support services, programs, policies, and procedures are working and which aren't. Without measuring the impact of all the different initiatives, inefficiencies will remain hidden and continue to undermine efforts. Given that resources of time and money are limited, the stakes are too high. It's crucial that campuses identify which methods are most effective and then allocate resources accordingly.

Aligning two traditionally separate concepts—student success and institutional effectiveness—is the first step toward gathering the evidence. Evidence confirms how a campus anticipates, identifies, and fulfills the needs of students using all the available resources. It's not enough to celebrate a five-point increase in the retention of first-year students. A campus should identify any and all efforts that contributed to that increase, as well as the efforts that fell short. A broader use of data analytics can help answer a variety of questions tied to an institution's strategic goals and priorities for retention. Here are just some examples:

Which orientation programs are the most effective?

Can a summer bridge program significantly improve the second-term attrition rate?

What co-curricular involvements do successful students tend to pursue?

How late should the tutoring center be open two weeks before midterm exams?

How many sections of English 101 should be offered in the morning?

Should faculty be encouraged to keep office hours before the semester officially begins?

Which courses have the lowest success rates on campus, and how can they be adjusted to better ensure students are successful in their first attempt?

Are students taking courses in a logical order to be successful in their program of study?

The reality is that institutional effectiveness, at its core, is impossible without maximizing the potential for individual student success. The goal should be to minimize reliance on hunches about siloed efforts and instead, confirm the strategies that are having a positive impact. Indeed, we can think of analytics as the unifying frame through which the four main areas can be viewed.

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Connect More Data to Measure, Predict, and Confirm Success

To better measure and predict success, it's critical to move beyond basic analyses of easily tracked variables, such as standardized test scores, GPA, and financial aid status. Campuses should also be leveraging a greatly expanded set of data points, including noncognitive strengths and weaknesses, co-curricular involvement, and course enrollment behavior.

With connected data and real-time analytics, institutions can monitor campus-wide success and also keep a pulse on the day-to-day factors affecting persistence. The result is a greater impact on individual student success and deeper insight into scenarios that can go under the radar. Let's consider a few hypothetical examples.

The overinvolved student

A student with strong academic potential is frequently absent from class. Involvement data tells us she's joined a significant number of organizations and attends one on-campus event almost every day. Armed with this information, an advisor can guide the student toward a healthier balance between academics and co-curricular involvement.

The "good student" with low resiliency

Two students enter college with the same impressive ACT scores and high school GPA, express very similar themes in their admission essays, yet begin to have entirely different campus experiences after the first semester. A closer look at their noncognitive skills reveals the reason: the first student has a high degree of resiliency, while the second student has very low resiliency. Helping the second student cope with her first low grade on an assignment can have a significant impact. It can mean the difference between the student giving up too easily and sabotaging her efforts on future assignments, and the student being encouraged to persevere.

The student who hides a financial burden

A first-generation student has above-average cognitive skills but is struggling in introductory courses. For reasons that include a strong sense of pride, he doesn't disclose the fact that he's holding down two part-time jobs while taking a full course load. While the student may have high self-efficacy in academics and noncognitives, the overriding risk is low academic engagement because of his preoccupation about money. An advisor can tactfully broach the topic of financial assistance and the likelihood that the student is eligible for a Pell grant.

The student who overestimates competency in a specific area

A first-year student is taking three writing-intensive courses and is in danger of failing at least two of them. An advisor refers to academic input data that includes the student's low scores on pre-admission writing tests. The next step is to counsel the student to avoid taking so many courses that require a lot of writing during the same semester.

Tracking various student success efforts in real time can identify potentially alarming trends for individual students, cohorts, as well as all students. Using a traditional, compartmentalized approach, a key indicator like low course enrollment rates might fall off the radar. But with data and analytics as the overarching frame, this trend will be identified right as it's happening. In addition to supporting individual or groups of students, real-time monitoring can confirm exactly which programs and services are most effective.

Factors Contributing to Student Success

PRE-ENROLLMENT ACADEMIC RECORDS
Including high-school GPA and standardized test scores

COLLEGE ACADEMIC RECORDS
Including a listing of courses taken and the grades earned in each course

DEMOGRAPHICS
Such as gender, race, ethnicity, and eligibility for Pell grants and other types of financial aid

NONCOGNITIVE SKILLS
Including levels of confidence and resilience

ASSESSMENT DATA
Such as course-based outcome measures or indirect survey results

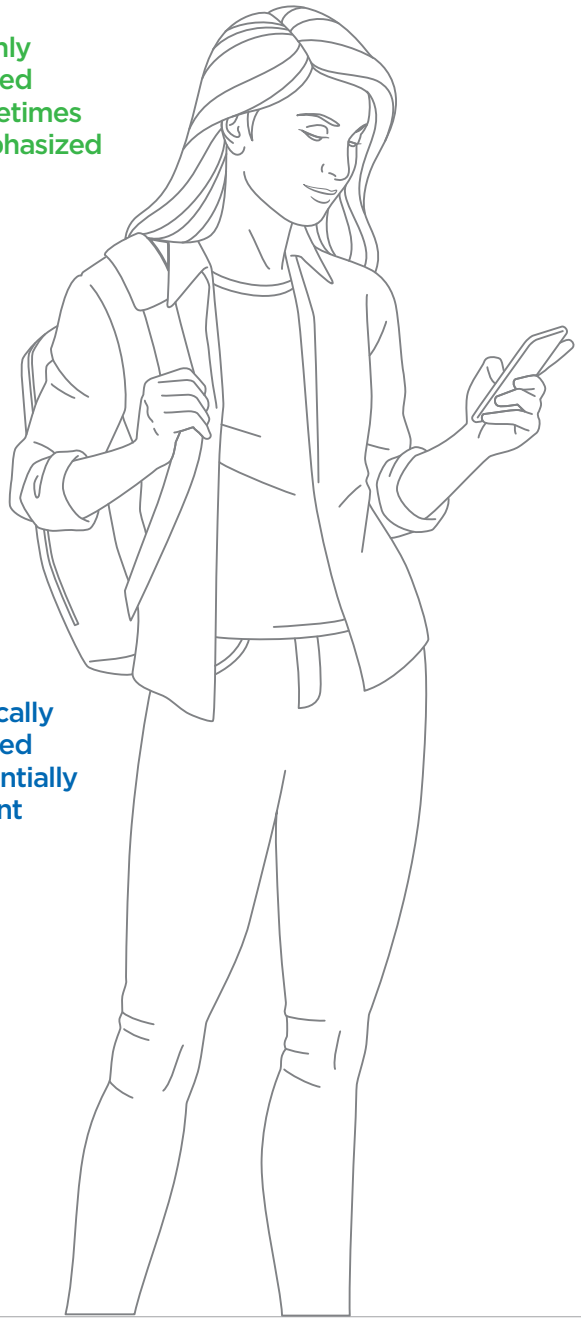
CO-CURRICULAR INVOLVEMENT
Including attendance at events and participation in specialized programs, clubs, and student organizations

PROGRAM PARTICIPATION
Including federally funded programs such as TRIO or a Title IV program

COURSE ENROLLMENT BEHAVIOR
Including how early or how late a student tends to register for classes as well as what kind of courses the student prefers

Commonly considered but sometimes overemphasized

Not typically considered but potentially significant



Powerful Tools That Can Reframe Your View

Cultivating a holistic view can pose challenges. But with the right tools, institutions built around traditional silos can break through a compartmentalized view. To reframe the view of student success, it's necessary to use an integrated solution that offers these benefits:

Centralization of data from across campus

Focusing solely on demographic and academic performance data results in an incomplete picture. Comprehensive data sets must be brought together in an integrated, centralized system, capturing data points related to the student experience, whether that's assessment, involvement, noncognitive factors, or other relevant variables.

Accessibility for multiple stakeholders

Eliminating campus-wide silos shouldn't result in the creation of one large silo. If only a single stakeholder, or a few from the same office, can access the data, then its utility is being undermined. The right tools will make valuable information about the student experience accessible to every stakeholder on campus, while still providing the ability to adjust permissions.

Customization

Since every campus is unique, why shouldn't the approach be, too? Stakeholders should be able to develop their own models and explore the specific data they need, in a format that they can easily use. The data should also be displayed using custom terminology that makes sense for their campus.

Dynamic visualizations

Seeing is believing, and the ability to glimpse the immediate impact of campus-wide patterns is invaluable. This is where dynamic data visualizations can make all the difference. Stakeholders should be able to explore patterns of data in real time, making it easier to monitor variables like course registrations and class absences so they can do proactive outreach. With a simple click, users should be able to filter the data and discover whether a troubling pattern applies to all students, specific cohorts, or a few individuals.

Management and ease of use

Querying a database and using visualizations to explore campus data shouldn't require a degree in data science. The tools should be highly intuitive, and supported by technical implementations that will have everything up and running relatively quickly.

Conclusion

Services, programs, and policies operating within the four different frames for student success may be well-thought-out, but ultimately, a compartmentalized approach undermines the goal of strengthening student success. Silos prevent a holistic view of all the contributing factors, which results in duplicated efforts, wasted resources, and missed opportunities.

Institutions need to craft a student success plan that ensures all students are well-positioned for persistence and success. By using data analytics as the overarching framework, campuses can fully leverage their data ecosystem. And by connecting more data points, institutions are empowered to launch a proactive success plan that will more precisely meet the needs of current—and future—students.

About Campus Labs

Campus Labs empowers institutions to make valuable connections with their data. We offer a complete set of integrated solutions for areas such as assessment, retention, teaching and learning, student engagement, and institutional effectiveness. We're proud to serve more than 1,100 public and private colleges and universities.

To learn more about our integrated platform, including our predictive analytics and solutions for student success, visit **CampusLabs.com**. To stay current with the latest in our thought leadership for higher education, visit **CampusIntelligence.com**.