

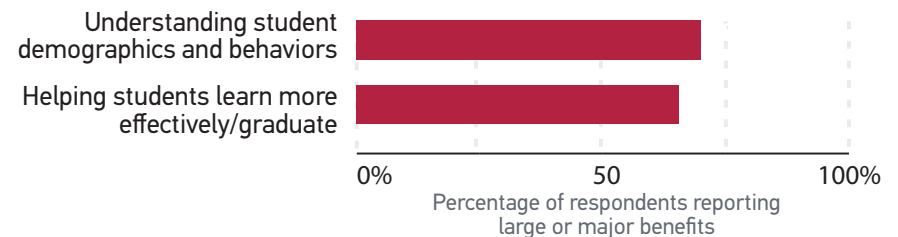
# Key Questions for Personalized Pathways: Navigating Higher Education

Colleges and universities are increasingly focused on helping students successfully attain their goals. With varying backgrounds, abilities, educational goals, and learning preferences, students need support tailored to their circumstances. Institutions are investing in new techniques to guide students through course selection, degree selection, and career planning. Technology can automate and enhance these techniques and tailor them to individual student needs, providing students with personalized pathways through their higher education experience and helping advisors or faculty focus on nonroutine tasks. These programs depend on analytics, a form of decision support based on the extensive use of data, statistical and quantitative analytics, and explanatory and predictive models. Student success is one of higher education's primary applications of analytics. This EDUCAUSE research brief outlines key questions leaders should ask—and relevant data to consider—to help develop or refine a strategic investment in analytics to develop personalized pathways and to support student success.

## Is using analytics to improve student success a priority for your institution?

About 85% of institutions consider analytics more important today than it was two years ago and predict that it will continue to grow in importance. Almost two-thirds of institutions see applying analytics to enrollment and student success as a large or major benefit of analytics (figure 1).

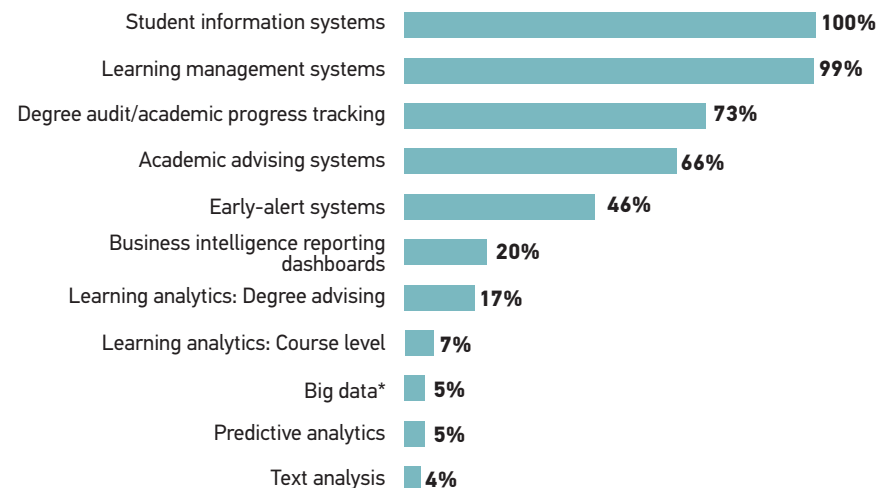
Another data point comes from EDUCAUSE members, who identified “improving student outcomes through an institutional approach that strategically leverages technology” as the number one IT issue for higher education in 2014.



**Figure 1.** Perceived benefits of analytics for higher education

## Which analytics technologies and techniques do you use today to improve student success?

Almost every institution has the data foundation for analytics: a student information system and a learning management system. Many also have systems to support education planning, advising, and counseling. About half have a data warehouse to store and integrate the data. Far fewer have begun to apply analytics technologies to these data sources (figure 2).

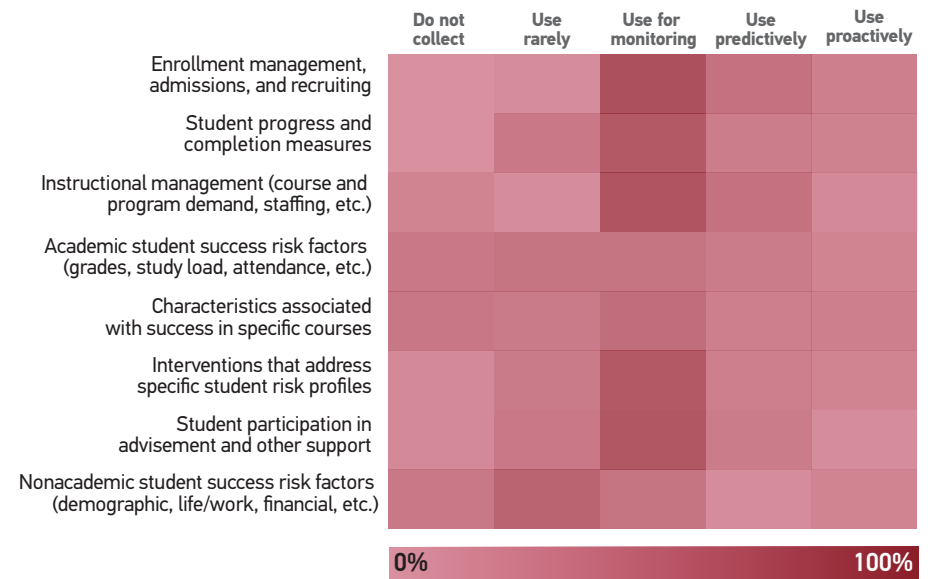


\* Applying advanced computing and analytics to massive and often highly complex sets of information.

**Figure 2.** Institutions with analytics technologies for student success

## How do you use data today to improve student success?

Most student success analytics initiatives today use data to monitor student performance; predictive uses are rare, and proactive uses rarer still (figure 3).



**Figure 3.** Student success officers' current uses of data

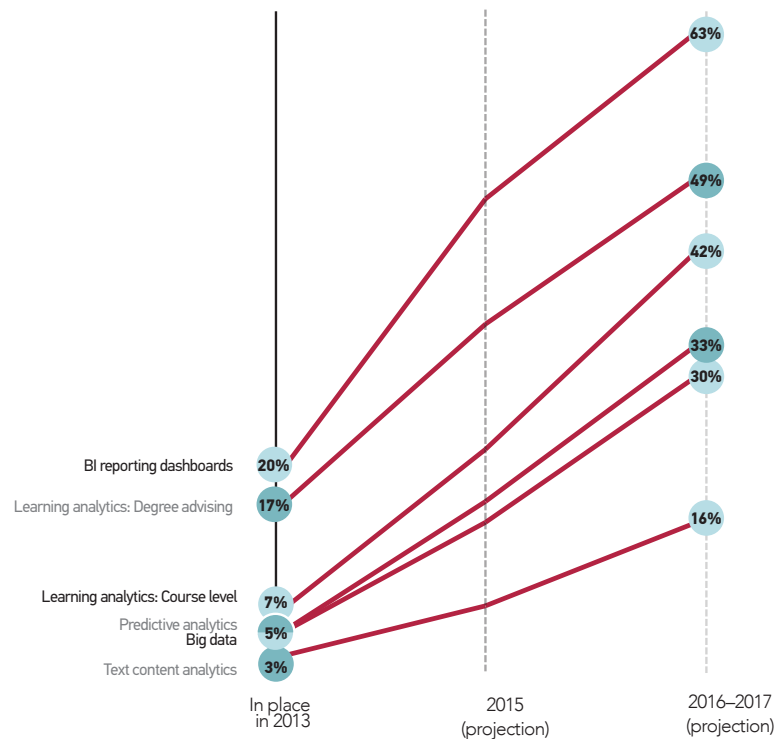
As uses of data expand, data-privacy and confidentiality issues need to be considered. CIOs identified data privacy and confidentiality as one of the most important areas for IT risk management (figure 4).



**Figure 4.** Importance of and effectiveness in addressing data privacy and confidentiality

## Which analytics technologies do you plan to implement in the next 1–2 years?

If institutional plans are any indication, the landscape is poised to change, and change rapidly. Analytics technologies supporting student success accounted for three of 2014's top 10 strategic technologies in higher education. Technologies currently in place at fewer than one in five institutions may be in use at one or even two in three by 2016–17 (figure 5).<sup>1</sup>



**Figure 5.** Implementation estimates for analytics technologies

## What is the single most important next step for your institution in improving student success?

Successful use of technology is less about the technology than about the processes and people who support and use it. EDUCAUSE has identified six key elements that characterize mature analytics initiatives:

- Process involves applying data to key strategic outcomes, having effective communications, and involving institutional research leadership in strategic planning.
- Culture refers to senior leaders' commitment to data-informed decision making and faculty and administration's acceptance of the use of analytics.
- Expertise is having the right IT and analytics professionals and ensuring that student success officers, other administrators, and faculty understand how to apply analytics to their areas.
- Investment consists of not only the critical requirement of sufficient funding but also sufficient staffing and training.
- Governance/infrastructure relates to policies for data access and security, sufficient data storage and management infrastructure, and data that are integrated across the institution.

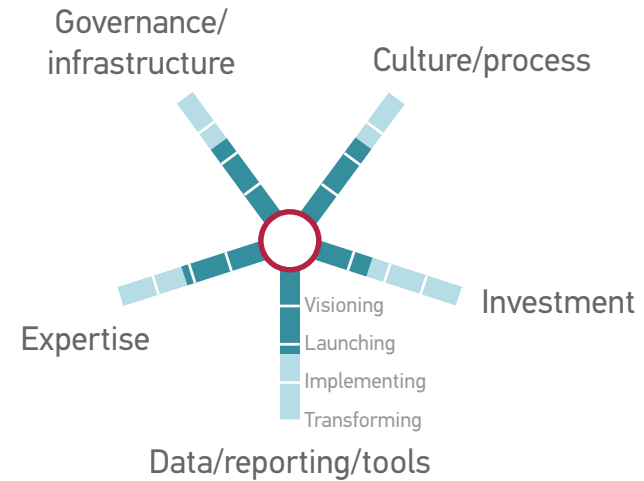
<sup>1</sup> EDUCAUSE defines "strategic technologies" as relatively new technologies institutions will be spending the most time implementing, planning, and tracking.

- Data/reporting/tools includes both the tools needed for analytics and data that are relevant, clean, standardized across the institution, accessible, up to date, and in useful formats.

The most important next step for your institution might be investing in technologies, or it could involve laying the groundwork for such investments to be truly effective.

## How would you rate your institution on the maturity of key elements of analytics?

EDUCAUSE has developed an [online tool](#) to enable you to assess your institution’s analytics maturity. You can compare your institution with the average for higher education, decide which level of maturity is most appropriate for your institution to achieve, and take the assessment again to track your progress (figure 6).



**Figure 6.** Analytics maturity index

## Implications

An initiative to apply analytics to support personalized pathways can help an institution move from a culture of access to a culture of completion. There are no silver bullets. Success requires institution-wide commitment and sustained investments.

### About This Brief

This report is one of a series of executive briefs designed to help institutional leaders optimize the impact of IT in higher education. It was supported by a grant from the Lumina Foundation. To read the other briefs and access related resources, go to [Resources for Presidents and Senior Executives](#).



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