

THE CHRONICLE of Higher Education

SPECIAL REPORTS

We All Need to Be Data People

By Archie P. Cubarrubia | OCTOBER 13, 2019

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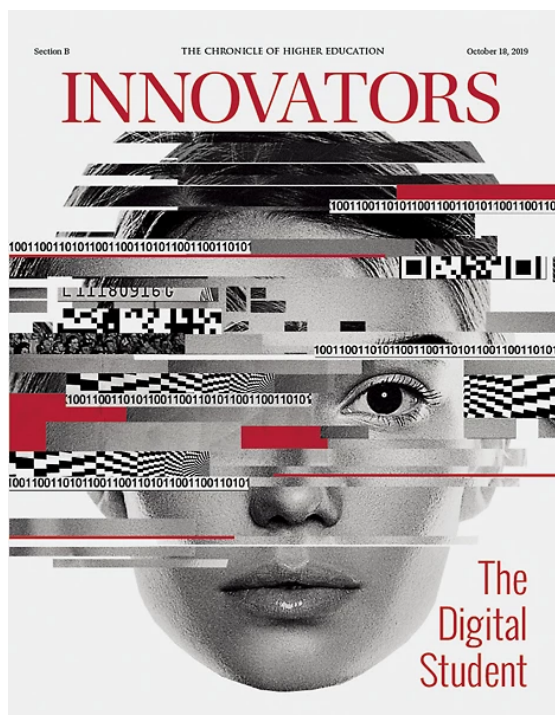
Lincoln Agnew for The Chronicle

More than ever before, colleges are making real efforts to improve student success.

Flipping classrooms, expanding student-support services, and increasing course availability through innovative delivery methods are a just a few of the many strategies institutions are deploying. Despite the effort, too many students, particularly those who are low income, are not

graduating on time — or even graduating at all.

One reason is that, although there is a lot of institutional, state, and federal data that could be used to improve student success, few people at colleges know how to make sense of it. More important, even fewer know how to use it effectively.



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The need to fix that lack of data literacy is critical. Lawmakers are setting up accountability policies like performance-based funding that require institutions to pay more-granular attention to measures of student success. Accreditation standards emphasize the use of data and evidence to ensure institutional effectiveness. Students and families want to know whether attending our institutions will be worth it.

Higher education is recognizing that it needs more "data people." In 2016, the Association for Institutional Research articulated its aspirations for the institutional-research function at colleges. AIR observed that an institution's data and analysis functions have been traditionally siloed in an institutional-research office given the primary job of compliance reporting, and of serving the interests of a select few (usually

the president or provost). But AIR's vision puts student success front and center and calls for restructuring institutions' data-and-analysis functions to serve an expanded definition of decision makers, including the faculty, frontline staff members, and even students themselves.

This summer, the professional associations representing institutional researchers (AIR), information-technology officers (Educause), and business officers (Nacubo) released a joint statement reaffirming "higher education's commitment to the use of data and analytics to make better strategic decisions." The statement urges institutions to "accelerate the meaningful use of analytics and take advantage of the power of data to make the decisions and take the actions that just may save higher education. Really."

Although there's a growing recognition that data literacy is critical, not everyone who works at a college has a background in statistics, research methods, or quantitative and qualitative analysis. Not everyone is conversant with institutional, state, and national data sets. Not everyone can create compelling dashboards and informative pivot tables.

And frankly, not everyone wants to develop those skills. For some, data use can be intimidating, whether because of painful memories from an undergraduate stats class or because data have been used against them. Others may not have enough bandwidth to incorporate another training requirement.

But what if colleges got better at articulating expectations for data literacy for all their employees? What if they made data available to more people in ways that were more useful for strategic decision making?

Imagine harnessing data to ensure student learning and success across the curriculum. For example, if we know how students' performance in a gateway math course affects their performance in the next math course or a chemistry course in their major, we can help ensure that course content, course sequences, and even course schedules are better aligned. Better yet, if we know how their performance in that math course affects the likelihood that they'll graduate on time, we can identify appropriate supports and when best to deliver them.

Or imagine gleaning insights about what really facilitates equitable student success. If we knew the combinations of academic and student services that help narrow success gaps for students of color, low-income students, and first-generation-college students, we could ensure that faculty, academic advisers, and residence-hall directors align their efforts and allocate their finite resources accordingly.



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And imagine being better able to tell our students' success stories to policy makers and the public. We know that student success isn't adequately captured by graduation rates. But if we knew the postcollege outcomes of our students — broken down by academic

program and by certain student characteristics — we could better articulate the value of a college education.

Thankfully, many institutions are starting to center their data and analysis functions on student success and expanding the availability of data to more people at the institution. When I was at Miami Dade College, we started a Data Academy, a reconstituted research-methods course for staff and faculty grounded in the college's strategic priorities and designed to facilitate the use of institutional, state, and federal data to ask smarter questions about student success. Similarly, institutions like California State at Long Beach and at San Marcos, the University of Washington at Tacoma, and Georgia Tech have instituted "data fellows" programs to build data literacy and expand capacity.

Data for strategic decision making is an asset that should be made available to more faculty and staff. Accordingly, expectations for responsible data use by all employees should be specified, and professional development to improve data literacy should be supported.

Intentional opportunities on campus and at conferences are a start. Some colleges might even consider embedding data literacy in job descriptions and performance expectations. In the same way that many institutions have called for data literacy as a core student-learning outcome, might we apply the same expectation for college leaders, faculty, and staff?

Not everyone who works in higher education has — or needs to have — a degree in statistics. But they all have an opportunity to use data and analytics to improve student success. They have resources at their fingertips, starting with colleagues who work in institutional research, business affairs, information technology, and even their math departments. Although those colleagues might be the usual "data people" at our colleges and universities, here's the truth: We are all data people.

Archie P. Cubarrubia is deputy director for institutional transformation at the Bill & Melinda Gates Foundation. He has also served as vice provost for institutional effectiveness at Miami Dade College.

A version of this article appeared in the October 18, 2019 issue.

1255 23rd Street, N.W.
Washington, D.C. 20037