Using Data to Drive Student Success

INSIDE HIGHER ED | D2L

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How Data and Analytics Can Help Support and Enable Student Success

Nick Oddson, Chief Technology Officer, D2L

Technology impacts almost every aspect of our lives, and education is no exception. We've seen how digital tools can improve accessibility, create opportunities for communication and enable new ways of learning. Integrating technology in traditional learning practices can also result in a wealth of information being produced.

We can find rich data sources in many places across academic institutions. The information can allow institutions to better understand engagement with content, enrollment statistics, student participation and more—helping them assess trends and measure outcomes. Unfortunately, academic institutions don't always have the resources and processes in place to effectively analyze the data they have at their disposal.

At D2L, we know that data can be overwhelming, but we also know that it can't be ignored. Institutions need the right tools to visualize data and use it to help solve the challenges that impact the institution, faculty and students.

When it comes to learning analytics, each academic institution has its own unique challenges and needs. That's why one-size-fits-all data management solutions may not solve them. We also understand that data from an institution's learning management system may not be the only piece of the puzzle. Unlocking the true power of data analytics can only happen when pockets of data are brought together to form a unified picture.

That's why we make information available to academic institutions through data sets that can be easily combined with data from sources outside of D2L Brightspace. This helps colleges and universities align their data with their own goals, strategic plans and learning objectives. Our approach is to provide institutions with easy-to-use tools and functionalities that help them dive in at every level—from identifying an individual at-risk learner who needs support through equipping academic stakeholders with the big-picture information they need to make data-informed decisions.

While we know that learning analytics can provide great insights, we recognize too that the data that powers it must be used properly and with appropriate considerations for learners' privacy and anonymity. With D2L, institutions own their data; we keep it secure. Security and privacy aren't responsibilities that can be taken lightly.

When institutions are striving to innovate and improve programs, learning analytics must be at the heart of it all. The right analytics give institutions a 360-degree view of what's working, what needs to change and why. They can be key to creating responsive, effective educational environments. And when it comes down to it, they can help enable success—for institutions, faculty and students.

Introduction

It wasn't too long ago--5-10 years max--that a booklet entitled "Using Data to Drive Student Success" might not have found much of an audience. Sure, colleges and universities collected data on lots of topics, and savvy institutional leaders increasingly recognized that ensuring that students persisted and ultimately graduated was both the right thing to do *and* a wise strategy.

Today student success isn't a "nice to have," it's a must. And colleges and universities that aren't mining available data to shape their understanding of students and influence their policies, processes and approaches are shunning a potentially important set of tools.

This collection of news articles and essays from the pages of *Inside Higher Ed*, explores how institutions, instructors, states and others are integrating data and analysis into their decision-making about academics, student affairs and institutional equity, among other discussions.

The compilation highlights successful institutional strategies as well as potential pitfalls, and acknowledges that data analysis is most helpful as a tool to decide when and how best to involve colleges' most important resource: talented and compassionate human beings.

We hope these articles help you in your important work. Please connect with us if you have suggestions for future coverage about this topic.

–The Editors
editor@insidehighered.com

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Data Talks

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40%

of students in the US drop out of college each year.[i]

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[i]https://www.thinkimpact.com/college-dropout-rates/
[ii]https://www.collegeatlas.org/college-dropout.html

NEWS

Seeking Better Data in Hopes of Better Outcomes

Community college leaders say they want to prioritize gathering data on the well-being of students, but efforts to ramp up student needs data are decentralized and underresourced, according to a new report.

By Sara Weissman // April 28, 2021

Community college leaders want to collect more data about the basic needs of students in order to help them have better academic outcomes. The leaders also care about data that serve social justice imperatives, but many feel their campuses lack the resources to gather this information in a more holistic way.

These goals were among the findings outlined in a new report by the research group Ithaka S+R, which surveyed more than 125 community college leaders, 70 percent of them provosts, between October and December 2020. The survey examined how the leaders' campuses collect and disaggregate data about student needs, the success metrics they use, and their data priorities going forward.

The report is an effort of the Basic Needs Initiative, a cohort of seven organizations and institutions undertaking projects related to student needs, and is funded by a $3.1 million investment from the ECMC Foundation. The foundation supports projects focused on improving outcomes for underserved students.

It provides "the language and also the framing" for how community college leaders define student success, said Angela Sanchez, the foundation's college success program officer. "Is student success … only a matter of persistence and GPA, or do we really care about the health and well-being of our students? Then, what does health and well-being include?"

ANDY CROSS/THE DENVER POST/GETTY IMAGES
Pikes Peak Community College survival training coach Eddie Hughes and student Dan Bahlen visit the campus food pantry.

The survey found that administrators mainly focused on the traditional student success metrics they rely on for funding and accreditation, such as retention and graduation rates. But 80 percent of them felt basic needs, like food and housing security, were priorities, and 75 percent saw physical and mental health as critical to students thriving academically.

"It's clear that leaders are really on board with basic needs provision as part of their mission," said Christine Wolff-Eisenberg, co-author of the report and manager of surveys and research at Ithaka S+R. "They really see this as part of what they owe to their student body, and they also really see the tie between moving the needle on student basic needs and other kinds of outcomes like graduation, retention, course completion."

Administrators also showed height-

ened interest in racial equity. The share of community college leaders who described social justice issues as a high priority doubled compared to a survey conducted in 2019. In line with that thinking, three-quarters of provosts listed socioeconomic status and race and ethnicity as the most important categories by which to disaggregate their data. More than 80 percent reported they want more fine-tuned data across these particular subgroups.

Pam Eddinger, president of Bunker Hill Community College in Massachusetts, served as an adviser for the Ithaka S+R report and sees her institution reflected in its findings, especially in the context of the COVID-19 pandemic and Black Lives Matter protests last summer.

"Both the pandemic and the reignited civil rights movement pushed us to understand the historical and social context in which our students live and learn," said Eddinger. "We saw great disparities as we survey the damage done by the pandemic, and the frustrations and brutality that fueled the protest … It is not a simple case of academic performance, but the learning of the student in an ecosystem that constantly exerts historical and current socioeconomic forces upon them."

The report also pointed out examples of how community colleges aren't disaggregating their data. Provosts showed less effort toward, and interest in, data disaggregated by sexual orientation and gender identity or data focused on student parents.

"When you look at it in terms of how the provosts are looking at, it could be that it is a smaller amount of students at their campus, but then at the same time, these are students with the largest level of need at some points," said co-author Melissa Blankstein, surveys analyst at Ithaka S+R. "Provosts are kind of juggling what they can do … versus what they are interested in knowing more [about]."

> "Administrators assume "if you get through your college-level courses, you're going to succeed." But "that's not true, because you could be financially unstable at the same time."

The survey results suggest financial obstacles prevent community colleges from collecting the comprehensive student needs data that the institutions' leaders want. Larger colleges tended to collect more data on student needs than smaller colleges, the report found. In general, student data are often centered around the supports campuses can already afford to offer or what accreditors or state lawmakers want as proof of student success. About 90 percent of campus leaders reported that accreditors majorly influenced their data collection practices, and 81 percent felt the same way about their state education department or college system.

Eddinger doesn't believe Bunker Hill currently has the resources it needs to get a fuller picture of entering students' needs. She said the institution is looking into software that could help administrators get more detailed information about students.

The college collaborated with the Hope Center for College, Community and Justice -- formerly the Wisconsin HOPE Lab -- on a set of surveys on food and housing insecurity among students. Those surveys continue to inform the support services the campus now offers.

Eddinger would ideally like to see the institution adopt regular student needs surveys, become "more adept" at accounting for students with multiple ethnicities and undertake a "deeper disaggregation" of Asians and Pacific Islanders.

Another obstacle to that work is how student needs data are collected, the report noted. Academic success metrics and data on students' basic needs are often decentralized and gathered by different

offices, which overshadows the inherent connection between the two kinds of data. While academic affairs departments, which report to the provost, tend to lead on student success metrics, student affairs departments more often collect data on student basic needs.

While there's nothing "inherently wrong" with that, "I think for us, there is a strong relationship between the kinds of metrics that historically have been centralized and the types of metrics that have historically been prioritized," said Wolff-Eisenberg. "The extent to which data are centralized, particularly within institutional research, tends to kind of be a proxy for the value of doing that kind of work."

Eddinger described more centralized, holistic data collection on student needs as crucial new territory for community colleges.

> Both the pandemic and the reignited civil rights movement pushed us to understand the historical and social context in which our students live and learn.

Without such data, administrators assume, "if you get through your college-level courses, you're going to succeed," she said. But "no, that's not true, because you could be financially unstable at the same time. And no matter how good you are academically, you might not be able to tolerate the financial risk of continuing. I think we're at the beginning of this new frontier in some ways, but it's probably one of the most important pieces of work we have to do." ■

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The Future of Education | Reimagined

How is your institution adapting to support enrollment and retention with changing student needs?

Timothy Werth
Chief Information Officer
Purdue University Global

Amelia Manning
Chief Operating Officer
Southern New
Hampshire University

Phil Hill
Ed Tech Analyst
Mindwires

Learn from the experts as they explore trends and uncover how to leverage your data to support faculty and students.

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Are Algorithms the Answer?

An experiment suggests colleges can help students bypass remedial courses for college-level classes by using algorithms instead of placement tests to predict academic outcomes.

By Sara Weissman // July 1, 2021

At more than 70 percent of colleges, placement tests determine whether students need to take remedial courses. If those tests are inaccurate, students may find themselves incorrectly placed on a remedial track and enrolled in noncredit classes that delay them from earning their degrees and increase the cost of their education.

A working paper, one in a series released by the National Bureau of Economic Research in June, suggests that placement tests could be replaced by an algorithm that uses a more wide-ranging set of measures to predict whether a student would succeed in credit-bearing college courses.

The authors developed an algorithm and tested it in an experiment that included 12,544 first-year students across seven different community colleges in the State University of New York system, observing a subsample of students for two years. The goal was to see how placements changed as a result of the algorithm, and whether the algorithm assigned students to college-level courses at higher rates than did placement tests. Researchers also wanted to know whether students placed by the algorithm passed their courses as predicted.

SOLSTOCK/E+/GETTY IMAGES

The results were promising. The algorithm yielded more students being placed in college-level classes. Students assigned to class levels by the algorithm were 6.6 percentage points more likely to be placed in a college-level math course and 2.6 percentage points more likely to enroll in a college-level math course. They were also 1.9 percentage points more likely to pass the course in their first term.

The differences were even more stark for English classes. Students placed by the algorithm were 32 percentage points more likely to be put into a college-level English course, 14 percentage points more likely to enroll and seven percentage points more likely to pass the course in the first term.

"Perhaps the biggest relief is that the algorithm's predictions seemed to bear out," co-author Peter Bergman, associate professor of economics and education at Columbia University's Teachers College, said in an email. "This is a relief, because without running an experiment, you don't know if the assumptions underpinning the algorithm's validity will hold up in practice. And it seems they did, which is great news."

The research was conducted by the Center for the Analysis of Postsecondary Readiness at Teachers College and supported by the Institute of Education Sciences, the statistics, research and evaluation arm of the U.S. Department of Education. The experiment showed that

students placed by the algorithm were more often assigned to and enrolled in college-level math and English courses, and, as a result, they earned more college credits compared to their peers whose course placements were determined by the usual tests. Students assigned by the algorithm also passed college-level courses at rates on par with their peers.

The findings of the experiment are in line with a long-standing body of research that determined students who took placement tests indicating they should enroll in noncredit, remedial courses often do just fine in college-level courses. There has also been broad recognition among higher education leaders in recent years that non-credit-bearing courses not only slow students' progress toward graduation but can hurt persistence rates, especially for students of color who have long been overassigned to developmental tracks. Colleges have increasingly turned to other models such as corequisite courses, developmental classes taken alongside college-level courses and additional tutoring and other academic supports to address ongoing concerns about remedial education.

The algorithm, tailored to each of the colleges, used different metrics to assess how likely students were to pass college-level courses, including high school GPA, high school class rank and how much time had passed since high school graduation, in addition to the regular placement-exam scores.

Dan Cullinan, senior research associate for postsecondary education at MDRC, a nonprofit education research organization, said no model can predict with perfect accuracy whether a student is going to succeed in a college-level course.

> Data analytics holds great promise for many areas within higher education and now more than ever, the use of data analytics to make data-informed decision is an important key to our future.

"There's going to always be a lot of factors you can't put in a model that have a big effect on whether or not a student is successful," he said. There might be aspects of their home life or financial challenges, for example, that affect students' motivation and drive "that you can't just throw into a placement model."

But the accuracy of a model as a predictor of student success is less important than a placement model that ensures more students can take courses for college credit as soon as possible, Cullinan added, because "there's just really no evidence" that it benefits students to put them in noncredit developmental courses when there's a chance they could do well in college courses.

Taking fewer remedial courses could not only save students time but also money in tuition costs -- $150 per student on average over the course of enrollment at an institution, according to the report. Implementing an algorithm, and the data collection it would require, would come at a cost to colleges, but Bergman said the process doesn't need to be pricey. If high school transcripts and other data were easier to access, "costs could be driven way down."

Cullinan doesn't believe running an algorithm for each student is scalable across community colleges. However, algorithms could help college leaders assess what metrics are most likely to place students in college-level courses and could be used to build better, multifactor placement systems, he said.

Relying on more than exams to place students is already a trend, noted Sarah Ancel, founder and CEO of Student-Ready Strategies, an education consulting firm that partners with colleges to help them serve nontraditional students. She noted that colleges are increasingly using multiple measures to determine the right track for students.

"Colleges across the country have begun using multiple points of reference, and relying on more predictive measures than stand-alone exams, to ensure many more students have access to college-level math and English courses," she said in an email. "When all students have access to college-level courses, colleges eliminate the risk of discouragement and attrition often faced by students who place into developmental education."

Algorithms could be a powerful tool, Ancel added, but they should be "equitably designed." For example, she raised concerns about including standardized test scores as a metric.

"There is ample evidence of inequities in access to test preparation for standardized exams, as well as skewed test results based on race," she said. "During the pandemic, there were glaring inequities in who was able to take the exams at all."

She believes using algorithms could mean low performance on any measure will bring the overall score down, which risks sending more students to remedial education than if each metric were considered independently. Her alternative suggestion was a placement system with multiple ways to access college-level courses.

"There is ample evidence of inequities in access to test preparation for standardized exams, as well as skewed test results based on race. During the pandemic, there were glaring inequities in who was able to take the exams at all."

The authors of the working paper acknowledged some researchers have concerns that algorithms can perpetuate racial or socioeconomic biases in the data used. They noted that while the algorithm did not close gaps in access to college-level courses, it also did not exacerbate them. The algorithm boosted placement rates in college-level classes across groups.

Notably, placement rates for Black students into college-level English increased relative to white students, and placement rates for women into college-level math rose relative to men. Hispanic students' placement rates in college-level math and English increased as well, though the increase for math courses was less than for white students.

"If anything, our algorithm generally improves equity across groups typically underrepresented in college-level courses," Bergman said. "So, in this instance, administrators should favor this approach for both equity and efficiency." ■

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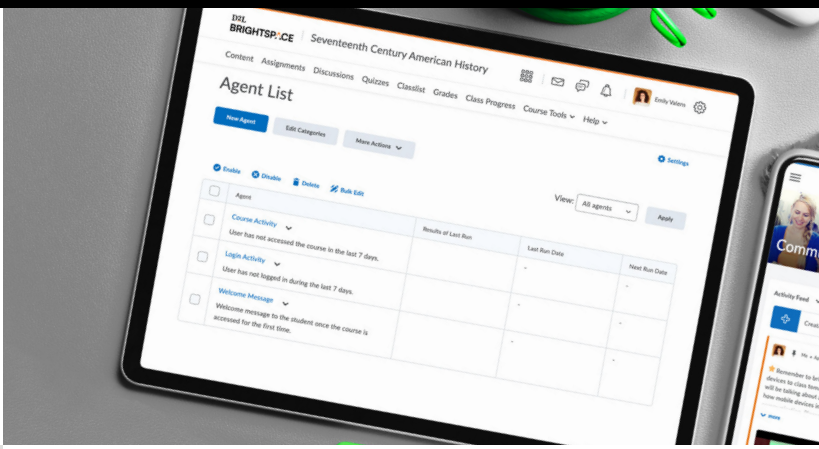

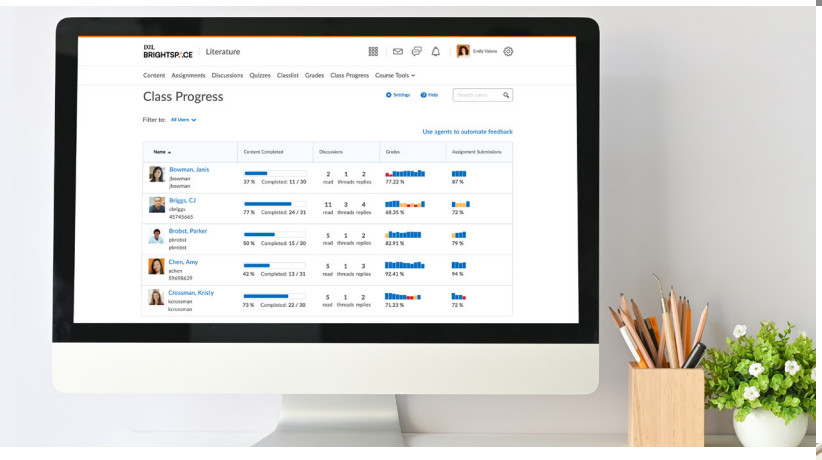

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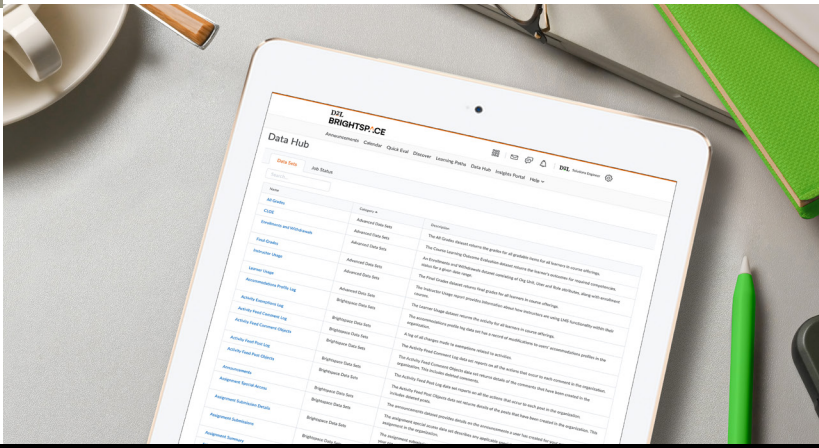

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'Big Data on Campus'

Authors discuss new book, which addresses the best way for college and university leaders to use data when making decisions.

By Rick Seltzer // November 10, 2020

Amid the periodic enthusiasm for data's ability to revolutionize the way colleges and universities work, it can be easy to forget that having more data available doesn't necessarily translate into leaders making better decisions on campus.

It's a point Karen L. Webber and Henry Y. Zheng make early in their new book, *Big Data on Campus* (Johns Hopkins University Press).

"Despite some newfound emphasis on data analytics, most higher education officials are not yet adept at using analytics to support institutional decision making," they write.

The book is targeted at administrators, institutional researchers, technology workers and graduate students. But it's a useful primer for anyone seeking to understand how higher education leaders can use the large amounts of data that are available on campuses today -- as well as how many are coming up short, plus a host of concerning issues surrounding the appropriate use of data.

Chapters cover topics ranging from principles of good practice to why data analytics can inform admissions decisions to decision making itself. Webber, a professor of higher education at the University of Georgia, and Zheng, senior associate vice president for strategic analytics at Ohio State University, edited the book and contribute in several of its chapters. The result is a range of case studies, examples and checklists for those who want to look around them and see how data can be harnessed at their own institutions.

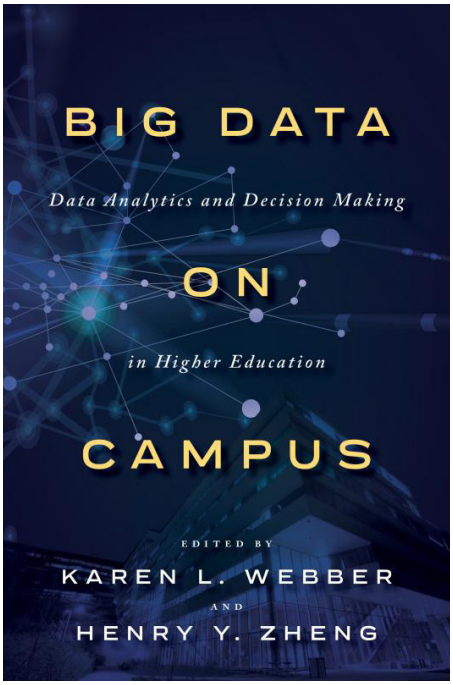
Webber and Zheng emphasize several elements that need to be in place before smart data-informed decision making is possible on campuses: people, technology, process and culture. One of the key lessons to remember from a book about data is that the human element can't be ignored.

"Along with more data comes the need to use contextualized knowledge of the higher education organization and analytics strategies that account for the unique situation or population under study, and everyone must be mindful of privacy, ethical, and overall responsible use of the data," Webber and Zhen write.

The two editors combined to answer questions about the book via email. Their responses, which follow, have been edited lightly for style and clarity.

Q: Do you want everyone who reads the book to walk away with one or two key ideas?

A: Gosh, it's hard to pick just two. It's exciting to see the application of



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data analytics growing in higher education, and we are buoyed by the ways in which some of the techniques related to data analytics can improve student, faculty/staff and organizational success. If we had to choose:

The ways in which we've thought about the use of data in higher education decision making [have] evolved over the past couple of decades. There's an important distinction between data-informed and data-driven decision making. Whereas data-driven decision making (DDDM) lets the data speak for itself, data-informed decision making (DIDM) considers the context in

which the decision is being made. We believe that analytic results are best when the information is examined within the specific situation or context, and that means that in some cases, the algorithmically generated answer or prediction with the highest accuracy rate may not be the best answer for the situation at hand.

The use of data analytics to build strong and long-lasting data-Informed decision making requires certain kinds of people, technology and processes. It requires senior leaders who have the vision for data-informed decisions as well as knowledgeable and skilled data analysts, software engineers, data visualization specialists and staff who can communicate the findings. It requires devoting capital to a strong infrastructure of advanced technology, and it requires a coordinated campus plan that values the use of data (that has structures in place to ensure appropriate data use and is mindful of security and responsible use).

We have to add a third (although not new to our book). Data is only helpful when it is transformed into useful information. Acknowledging the context is essential.

Q: Early in the book, you discuss how organizations can be data rich but information poor -- and how they don’t always know how to turn large amounts of data into action. Can you suggest any steps to help college leaders make the jump?

A: Indeed, collecting large volumes and varieties of data [is] possible today; storage in a campus-based architecture or the cloud is relatively easy and less expensive than in the past. This tempts us to collect data for the sake of collecting without having a thoughtful plan for how, when and for what purpose it will be used. An important part of a strong and comprehensive data governance plan includes identifying which data will be used to address certain institutional questions. Start by refining the questions that relate to institutional goals and then identify relevant data that will help to answer those questions.

> “Despite some newfound emphasis on data analytics, most higher education officials are not yet adept at using analytics to support institutional decision making.”

Q: You outline elements that affect data-informed decision culture in higher ed: people, technology, process and culture. Is one more important than the others, or does one need to be in place first?

A: For optimal and effective implementation, all … are needed. Perhaps, though, it starts with leaders who have a strong vision. These leaders have the ability to apportion resources for the skilled staff (or ensure training to get staff the right set of skills), who can then identify the complement of technology needed. Leaders with vision initiate the processes because they realize that actions build culture. Leaders with a vision also realize that not all activities will be perfect, so they understand and allow for bumps along the way, knowing that building a data-informed culture doesn’t happen overnight and requires multiple efforts from many angles.

Q: As technology makes more information readily available for longer periods of time, tension exists between users who want to control their own data -- their own stories about themselves -- and organizations that engage in mass collection of data. If that tension continues, does it have implications for how colleges and universities need to approach big data?

A: Yes! This is such a critical question, thank you for asking. In today’s higher education world with the volumes and richness of data, no one unit can easily (nor perhaps should) handle all data requests. It is reasonable and appropriate to have select data users in a variety of offices on campus (such as admis-

sions, financial aid, advising, HR, academic dean’s offices), however, it is critical that users receive thorough training on the definitions of the data and any contextual facets that are possible. In most cases, working with other senior colleagues on campus, knowledgeable leaders of institutional research offices should remain central in establishing user training, select data sharing, and ensuring data security through a strong and comprehensive data governance plan.

Q: Could predictive analytics represent an identity crisis for a sector that considers itself a driving force for opportunity and social mobility?

A: The nature of predictive analytics requires the use of previous data to make predictions about the future. Before a predictive analysis can be done, the analyst must consider if and how the previous data will introduce bias. If we’re interested in diversifying the kind of students in higher education with students that were not represented in previous cohorts, then the use of predictive analytics may not help us achieve the goals of greater access for underrepresented students.

Q: It seems that using data well requires a large number of resources, both staffing resources and financial resources. Do you have any ideas on how small institutions with limited resources might be able to overcome this fact?

A: Data-informed decision making is a key to effective institutional management. Start small; prioritize tasks or areas of focus that align with the institution’s mission. Finding small successes and building a culture of data-informed decision making will help each institution, large or small, move forward to better decisions.

Q: Was there anything you wanted to put in the book you couldn’t fit?

A: A few things:

- We intentionally kept the focus primarily on U.S. institutions. However, we acknowledge there are a number of institutions across the world that are ahead of the U.S. in their initial use of some aspects of data analytics in higher education learning and administration, in particular learning analytics.
- Many other examples of data analytics are available, and we learn of more each week. We already have some and can’t wait to gather more case examples to share. We’re also eager to get a better idea on which ones are yielding the greatest benefits. What works for one institution may not work as well at another. That may relate to the student population or the culture (and the value seen for data-informed decisions) or both.
- The use of learning analytics that capture multiple data points about an individual student to gauge performance and success, broadly, represents a fundamental shift in the use of data for student success. Prior models typically reported data in the aggregate and were careful to not provide information about individual students. However, many of today’s early-alert warning systems seek to gather a variety of data points for student performance at the individual level, often so that faculty members or advisers can help students improve before the end of a term. While the potentials of these alert systems can indeed help, they also have the potential to label individuals which can lead to unintended (negative) outcomes. It’s a fine line to walk. (We are not the first to acknowledge this change, but it’s a point well taken.)

Q: What did I miss in these questions?

A: Although the current challenges with the COVID-19 pandemic have forced us to shift our focus to immediate needs, we hope that we don’t lose sight of the larger goals and purposes of higher education that include developing a cultured, creative, racially and gender diverse population filled with students who will become our nation’s future leaders, thinkers, entrepreneurs and builders of the economy. How can we in higher education ensure our continued movement forward? Data analytics holds great promise for many areas within higher education and now more than ever, the use of data analytics to make data-informed decision is an important key to our future. ■

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Data Collection Comforts: Most Students Trust Their Colleges

Students don't know a lot about what their colleges are doing with their data, and experts say institutions must help them think more critically about data privacy. Here's how.

By Melissa Ezarik // August 17, 2021

The graduate students in Carrie Klein's higher education administration courses are well aware that the colleges and universities where they work collect and use data about their undergraduates. But when Klein asks them to estimate how much data they'd be likely to gather about an individual student on a typical day on campus, they're usually way off.

The day-in-the-life module lists activities a student might go through, including parking, going to class, hitting the gym, checking email, logging on to the learning management system, dropping in to see an adviser, stopping at the health center, participating in an event and using an ID to buy lunch and later get into a residence hall.

The question: How many data points were collected?

The typical response: fewer than 20.

The right answer: 40 or more.

"These are grad-level courses for folks working on campuses, and sometimes they aren't even aware of how much data is being collected, or how they can inform student success initiatives," says Klein, an affiliate faculty member at George Mason University.

In small teams and then in a larger group, her students discuss the exercise and how colleges use student information. Location data, determined by IP address at system log-in time, tends to surprise people the most, explains Klein, who's on staff at SHEEO, the State Higher Education Executive Officers Association, as a senior policy analyst.

VERTIGO3D/E+ COLLECTION/GETTY

About five years ago, she asked undergrads about personal data being collected and found these students, too, "were fairly unaware," says Klein. "Regardless of population group, we tend to underestimate what's being collected about us."

The latest Student Voice survey from *Inside Higher Ed* and College Pulse, presented by Kaplan, found most students are unaware of just how much data their institutions have about them, but they also are not overly concerned about it.

While four in 10 think it's important for their college to have a data privacy policy, only about one in 10 is aware of such a policy and has read it. When any privacy policy is presented, Klein notes, "How many of us blindly click just to get access to information we need?"

The 2,286 undergraduates from

120 colleges and universities surveyed tend to be more concerned about the way technology companies such as Google or Facebook, and social media or other mobile apps, handle private information. Just 14 percent are not at all concerned about privacy as related to tech companies, and 10 percent have that trust in app developers.

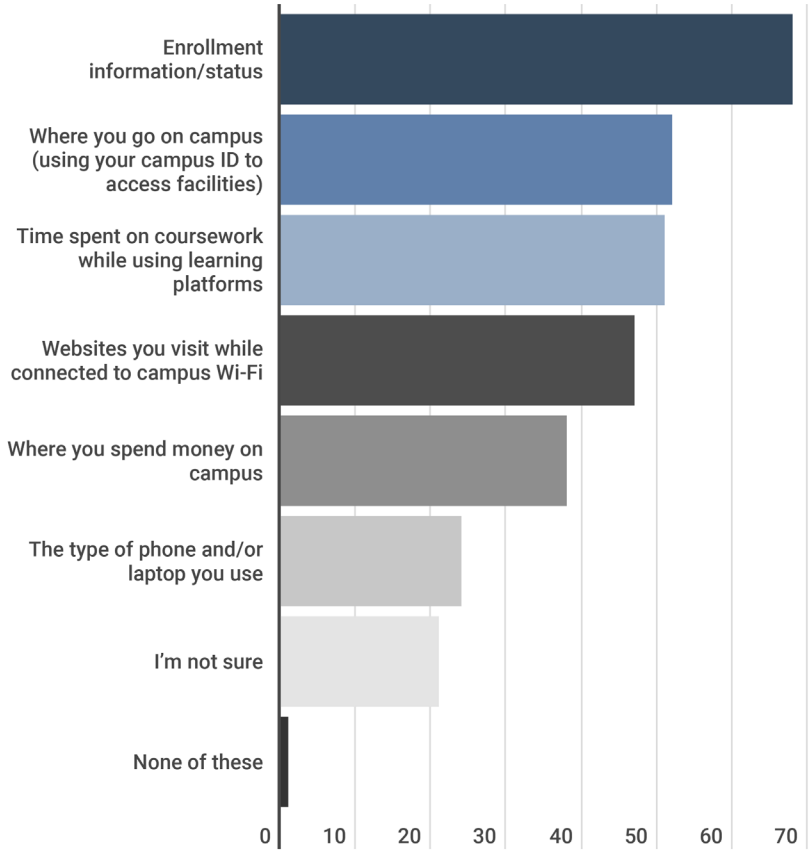
When asked about data their colleges likely collect about them:

- More than half of students have no concerns about how their attendance (66 percent), grades (55 percent) and enrollment (51 percent) data are handled.
- Less than half have no concerns about how their course engagement behavior data (47 percent) and financial information (46 percent) are handled.
- Eighty-five percent of students find it very or somewhat acceptable for their colleges to send alerts and reminders when assignments are due.

"Students seem less concerned if the institutional behavior can be linked to academic help seeking," says Michael Brown, an assistant professor of higher education and student affairs at Iowa State University. With Klein, Brown has researched and written about student privacy policy documents and come up with an inclusive approach to policies that govern learning analytics use. "When I interview students, they assume the institution has an ethic of care," he says. "Maybe [college leaders] don't always do the best thing, but at least they have good intentions."

What Data Is My College Collecting About Me?

Information students think their institution collects



Source: *Inside Higher Ed* / College Pulse survey of 2,286 college students; explore the data here.
Presented by: Kaplan

In Pegah K. Parsi's experience as UC San Diego's inaugural campus privacy officer, students think, "My institution is doing good in the world. They're not monetizing my data." After a recent large data breach, students said things like, "I don't have buying power, I don't have money. What do I care that my data was breached?"

In her three-hour "privacy 101" workshops and other efforts, Parsi will explain the broader perspective of the harm that compromised data can cause, she says. Maintaining data privacy "is not just for people who have money, not just for people who are powerful, people who are whistle-blowers, people who are criminals, or people who are VIPs."

Parsi's first impression of the Student Voice data is the "huge knowledge gap for students. But it's not that different from what we see in society." When consumers don't understand, they'll express an "I'm not concerned" viewpoint.

Students may also simply not feel empowered to do anything about their concerns, Parsi adds. "It's like telling someone to handle their privacy with respect to Google. How do I push back? Can I turn down their privacy statement? Can I negotiate? No, I can't." An 18-year-old may think their entire life is already on the internet, or that the odds anyone would choose them to harm are too slim.

Have students -- who all have at least heard about Zoombombing of online classes at this point -- grown more concerned about their data since the pandemic started?

Autumm Caines, an instructional designer at the University of Michigan at Dearborn whose work has included a co-authored *Educause Review* article on how colleges can help students question their data privacy, hopes so. "Any time you use anything digital, you're creating more digital exhaust and a deeper digital footprint," she says. "All of that is data that can be collected, stored, hacked, leaked and misused. I like to think that students are making these connections."

Following are nine ways higher ed institutions can help students think more critically about data use and protection.

1. Communicate about any existing data privacy policy.

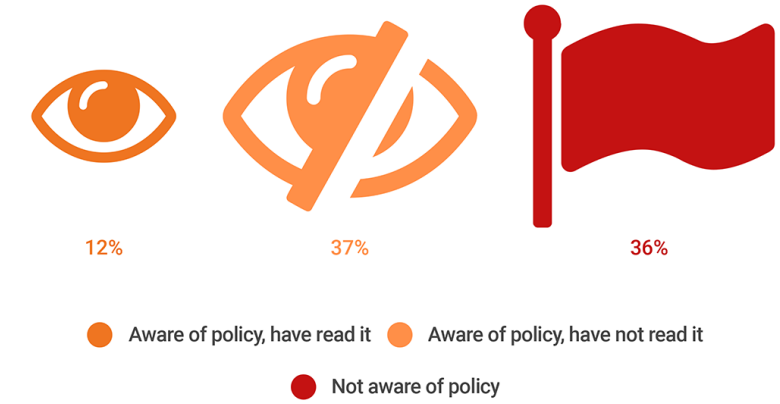
As the Student Voice survey found, awareness of such policies and their content is weak. Just 12 percent of respondents know of a policy and have read it. Students at two-year colleges (250 students in the survey sample, and with an average age of 25) are twice as likely as those at four-year institutions to have done so.

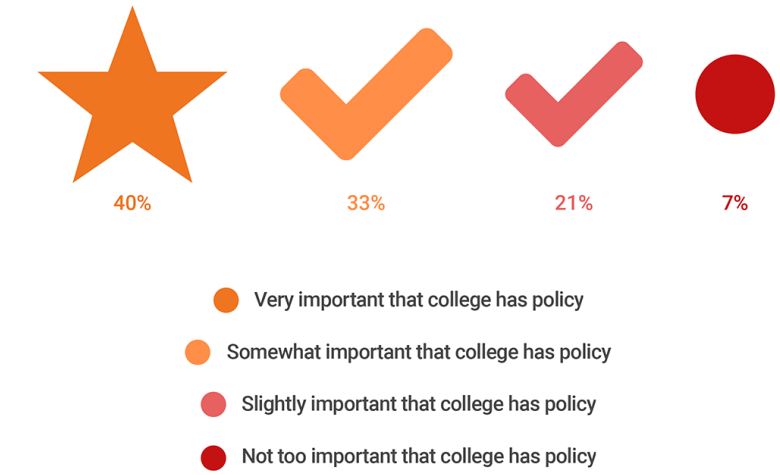
"If students need a scavenger hunt to know where to find the policy, [efforts] probably need a little more work," says Jennifer Bell-Ellwanger, CEO of the Data Quality Campaign, which recently developed a resource to help higher ed leaders ensure student data remain secure and are properly used to help students succeed.

Klein agrees more policy visibility is needed. "It's often just on the IT website, or institutional research website -- not where students are going frequently," she says, adding

Student Data Privacy Policies

How much students are aware of such policies at their college versus how important they think they are





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Presented by: Kaplan

that a policy's placement is as important as the policy using accessible language.

Institutions without a clear privacy policy are behind the times, says Parsi. "It's a disservice. It's no longer 1997, when FERPA [the Family Educational Rights and Privacy Act] was probably covering the things you are doing."

> "It's kind of a special breed of people who can understand the teaching and pedagogy side, the tech side and the ethical and legal side [of data privacy]. You need a unicorn."
>
> --Autumm Caines, University of Michigan at Dearborn

2. Assemble (or strengthen) a data privacy team.

Higher ed is paying a lot of attention to privacy, particularly since the European Union's General Data Protection Regulation was adopted in 2016, but it's also a hot topic in U.S. legislative circles. Bell-Ellwanger is aware of seven current provisions and bills related to postsecondary education data. Institutions not yet focused on privacy need to catch up.

Hiring a campus privacy officer is one recommended move. Parsi, who has been with UC San Diego for over three years, is part of the Educause Higher Education Chief Privacy Officers Community Group. She has gotten the sense that institutions employing an administrator with her title are often "still in the evolving stages, where somebody found the need for a privacy officer and then slapped that hat on someone whose role was something else," she says. University counsel and records retention leaders often become the someone. That reality makes sharing across institutions, such as in the Educause group, especially crucial. "We all literally steal from each other," Parsi quips.

At the University of Michigan and elsewhere, many people across the institution are involved in student data privacy, but including a chief information security officer on the team "allows for these units to collaborate together and have that common voice," says Ravi Pendse, vice president for information technology and chief information officer. Sol Bermann, Michigan's CISO, "works in close partnership with me to ensure that we are sending a consistent message: 'We take your privacy seriously. We respect your data and are going to be good stewards of your data,'" says Pendse. An advisory council, which includes students, works to help ensure new technology rollouts include details about data privacy impacts, he adds.

Caines sits on a privacy group at Dearborn that has representation from her teaching center, IT and the library. "It's kind of a special breed of people who can understand the teaching and pedagogy side, the tech side and the ethical and legal side," she says. "You need a unicorn." Her group is in the process of developing a pamphlet for the campus community on data privacy, including advice for faculty on keeping terms of service in mind when adopting new tech tools for use in courses.

3. Ensure you have data about your data.

Parsi's first steps in her new role involved "figuring out everything we're doing with student data," she says. After that general inventory was complete, her team could move toward more transparency and choices about data collection and use.

When Pendse began work in his role at Michigan in 2018, he "started asking questions as simple as 'where is our data?'" he explains. "It was a loaded question. Some data is centrally available; other data is dispersed across campus." Data analytics and use are very important to supporting instruction, and his team knew that building data transparency and trust would be required in that endeavor. This year, with input from focus groups and panel discussions, they launched the ViziBlue Student Data Dashboard to give students information on what types of data, across eight categories, are collected on them and how they are used and shared.

It's just the kind of tool one survey

respondent, at a private university in North Carolina, would probably appreciate. "I don't know where I would look to find out what [my university] collects from me," wrote the student, who expressed concern about internet search history and unencrypted website use data.

4. Allow data use opt-outs.

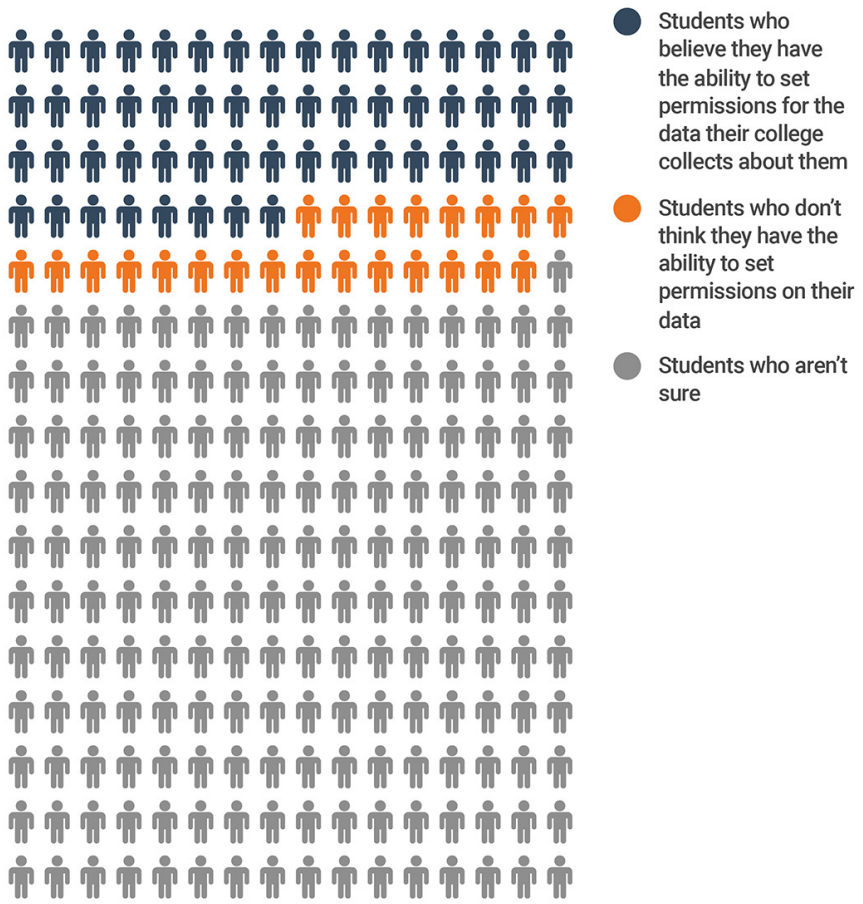
The Take Action section of each ViziBlue category allows students to view their personal data and, in some cases, opt out (or in). For example, website users can opt out of their data being used by Google Analytics.

Parsi is working to standardize the opt-out process at UC San Diego, and initial stages of any project involve discussion about whether it's mandatory and if there are parts where people can make choices. "Where it makes sense, let's give them the option," she says.

"Students should feel empowered to take ownership of their data, especially in understanding how it's being used for their education experience," says Bell-Ellwanger of DQC. That includes what's being used within the institution plus what a third-party vendor can access.

Brown of Iowa State believes students should have the chance to proactively enroll in early-warning systems, even though most would "enthusiastically embrace" the benefits of this technology. "People respond better to nudges when they know they're going to get nudged," he says. And if a third-party provider isn't willing to configure its product so that users can control their representation, he adds, maybe that product isn't needed.

Perception of Control Over Data Collected by Colleges



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5. Aim high on data privacy policy development.

When Brown and Klein studied institutional privacy and data policies, they found antiquated conceptions of data as static records, little regard for how third parties might use or commercialize student data, and language that doesn't clearly communicate student rights or institutional responsibilities, as they explained in their article on how to govern learning data.

"Transparency doesn't always mean a 20-page paper," says Parsi. "That's like privacy by obscurity." Instead, she prefers privacy policies that are clear, meaningful and not filled with legalese.

UC San Diego includes students on data subcommittees, such as one that's creating guidelines about student data in research, answering questions such as whether a researcher can use a class list to recruit study participants or send a survey to the entire student body.

Subcommittee participation involves becoming more educated about data. Students need that, "but this isn't meant to be a paternalistic kind of thing," Parsi says. "Half the time the high-level administrators need to be educated about it as well."

> Students need data privacy education, "but this isn't meant to be a paternalistic kind of thing. Half the time the high-level administrators need to be educated about it as well."
>
> --Pegah Parsi, UC San Diego

6. Ensure questions get answered.

Students should know, from reading a privacy policy as well as more directly from educators and staff, whom they can turn to with questions.

Since, as Klein notes, "it can be daunting for students to reach out," any faculty or staff member they trust enough to approach should be able to help them find out more.

A college whose leaders feel confident their workforce has been educated about data privacy might develop a privacy champions program, embedding the area into every unit through a touchpoint person, says Parsi, adding that her institution and many others aren't there yet. "Even in privacy officer roles, we are still learning. The landscape changes so rapidly, I'm going to have to look up the law like everyone else."

Staff in IT, the registrar, student affairs and student success areas must especially be prepared to field data questions, Brown says.

7. Educate early and often.

Orientation may seem like a good time to introduce privacy policy and practice, but experts advise caution. "I worry about it being crammed into an orientation, another 15-minute talk you sit through," says Caines. "This area runs the risk of becoming a box that gets checked."

She and others suggest folding discussion about data collection, use and choices into a first-year seminar course. At Iowa State, Brown could envision the topic becoming part of its one-credit introduction to the library course, where "you're talking about information literacy anyway."

Messaging at Michigan is multimodal, with video, social media content and events (such as a screening and discussion of the documentary *The Social Dilemma*), says Pendse. "We don't miss an opportunity to engage people on privacy and security. We want our students to be informed leaders."

During Parsi's privacy workshops, open to the campus and broader public, participants seem highly engaged in her comparison of the privacy and environmental movements. In the early stage of the environmental movement, individuals questioned how one person changing behaviors could actually make a difference, particularly given that the burden of changing one's behavior was immediate while the outcomes and benefits would not be felt for decades, she explains. Tackling the "data issue" may seem insurmountable -- and very inconvenient -- for a single individual, but a single student with knowledge and a question could wind up shaping a university's work on data privacy for years.

Student Voice survey respondents expressed concern about location tracking based on Wi-Fi connections on campus and about biometrics being used for access to campus resources. In addition, only one in four students thinks it's OK for colleges to track the websites they visit while on campus Wi-Fi. So these areas may be ones to focus on in education initiatives.

"There can be real value in [biometric technology]," says Bell-Ellwanger. Survey respondents may have found it less acceptable because it's new and unfamiliar.

As one student from a public university in Colorado put it, "Collecting biometrics to allow access to things seems a little sketchy. My main concerns would be how they kept the data, that they don't sell the data, that the data stays on a very secure server and that the data is only accessed when required by

law or by need of some other system in the network."

One Texas public university student sees no gray areas on this sort of data. "I don't want to be tracked in any form," the student wrote. "It's not their business to know where I am or what I'm doing or if I've been vaccinated." (Sixty percent of respondents, however, believe it's at least somewhat acceptable for their college to know their COVID vaccination status.)

8. Consider data privacy statements on course syllabi.

Klein's students at George Mason can't miss the privacy statement included on the syllabus. It begins with an explanation of her commitment to protecting their privacy by using only university-approved course technologies and adhering to FERPA guidelines through limiting student data use to legitimate educational purposes. She asks students to commit to three basic standards to protect their peers' privacy as well as their own, and then suggests they consider five questions about how their personal data are used and protected by the institution. Finally, the statement invites students to reach out with any questions and ends with a promise to help find answers to questions she can't answer fully.

The idea came from Caines's *Educause Review* article, which laid out a sample syllabus privacy statement developed collaboratively by about 40 attendees during an ed-tech conference session. "Having a privacy policy for institutions as a whole takes resources. You need educated people to talk about the laws and put it together," says Caines. Including a syllabus statement would require faculty to take some time to educate themselves about privacy law but seems manageable. "It's about getting the student to question who has your data and how it is stored," she says. "The focus is on the questions, not the statement."

The underlying goal is helping to create active, engaged citizens of society, Caines says. If a syllabus statement doesn't seem quite right, she suggests that instructors embed discussion about privacy within assignments. Such content could be a natural fit for courses in computer science, about the internet or technology in society, and in cybersecurity programs, she adds.

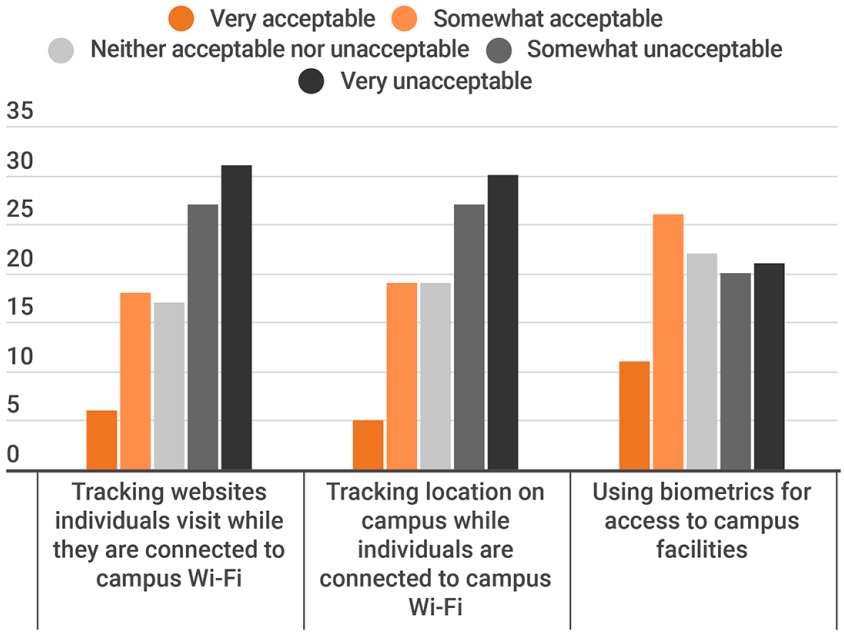
At UC San Diego, says Parsi, an entire English course was built upon privacy-related readings, and each quarter she's invited to lecture in a business school course for future CPAs. "It fits in to so many things."

9. Choose technology and tech partners wisely.

Only one in four Student Voice survey respondents finds it acceptable for colleges to share data about them with third parties like education-related companies. And several commented with concerns over institutions selling their personal data to third parties for profit. Colleges and individual professors are,

How Students Feel About Location Tracking

Is it acceptable for colleges to have information on websites visited and campus movement?



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however, thinking more critically about student data privacy when selecting tech tools.

At Iowa State, faculty members looking to use a new application or tool in a course must send IT information about where it's going to be used, by whom and for how long, plus how the developer collects and stores user data, says Brown. "Working with a company that won't make the technology transparent should be a red flag."

The DQC's new privacy resource advises higher ed leaders and educators to ensure vendors and contractors understand and adhere to institutional data privacy policies and procedures. "We think this is an area that needs to be unpacked quite a bit," Bell-Ellwanger says.

The college often ends up with negotiation power, explains Parsi. "Sometimes we're the big fish dealing with a small shop out of the garage." Yet she acknowledges that colleges don't generally have enough resources to evaluate every single thing for risk, and "privacy questions might go unasked and unanswered." She will look for areas truly in need of further review, such as when sensitive data are involved or the provider would be creating a profile behind the scenes about somebody and potentially sharing or selling the data.

Brown says he's aware of institutional agreements with TurnItIn and Proctorio that vary in terms, with some colleges prohibiting the companies from collecting student data.

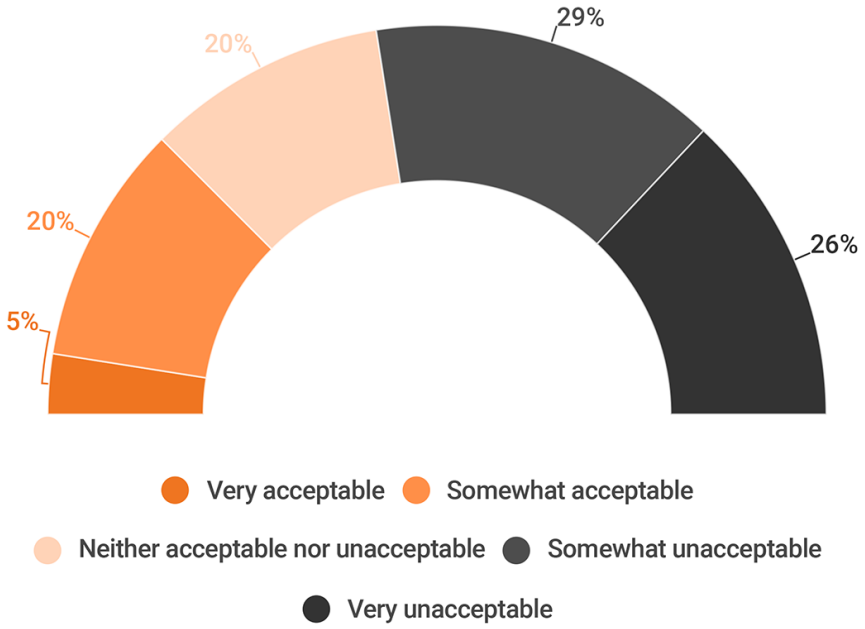
Caines has been looking at fourth-party relationships, or partnerships between two vendors. Michigan strongly recommends instructors not use remote proctoring, but a major textbook provider had partnered with an online proctoring provider, meaning everyone with a textbook from that publisher automatically had proctoring as well. "It was a shock to me and other learning designers," says Caines, who co-wrote a blog post about it. "Vendors talk to one another and nobody at the institution knows."

Providers, meanwhile, are unlikely to be shocked about agreement negotiations. "As they've done business with more higher ed customers, these things come up," says Pendse. "Most in the industry are expecting to have that conversation." ■

Colleges Sharing Personal Data With Third Parties*

How acceptable or unacceptable this action is, from the student perspective

* "Education-related companies" noted as examples



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VIEWS

Toward Ethical and Equitable AI in Higher Education

While AI-assisted education technologies offer great promise, they also pose a significant risk of simply replicating the biases of the past.

By Dan Knox and Zach Pardos // January 27, 2022

As the higher education sector grapples with the "new normal" of the post-pandemic, the structural issues of the recent past not only remain problematic but have been exacerbated by COVID-related disruptions throughout the education pipeline. Navigating the complexity of higher education has always been challenging for students, particularly at underresourced institutions that lack the advising capacity to provide guidance and support. Areas such as transfer and financial aid are notorious black boxes of complexity, where students lacking financial resources and "college knowledge" are too often left on their own to make decisions that may prove costly and damaging down the line.

The educational disruptions that many students have faced during the pandemic will likely deepen this complexity by producing greater variations in individual students' levels of preparation and academic histories, even as stressed institutions have less resources to provide advising and other critical student services. Taken together, these challenges will make it all the more difficult to address the equity gaps that the sector must collectively solve.

While not a panacea, recent advances in artificial intelligence methodologies such as machine learning can help to alleviate some of the complexity that students and higher education institutions face. However, researchers and policy makers should proceed with caution and healthy skepticism to ensure that these technologies are designed and implemented ethically and equitably. This is no easy task and will require sustained, rigorous research to complement the rapid technology advances in the field. While AI-assisted education technologies offer great promise, they also pose a significant risk of simply replicating the biases of the past. In the summary below, we offer a brief example drawn from recent research findings that illustrate the challenges and opportunities of equitable and ethical AI research.

Machine learning–based grade prediction has been among the first applications of AI to be adopted in higher education. It has most often been used in early-warning detection systems to flag students for intervention if they are predicted to be in danger of failing a course, and it is starting to see use as part of degree pathway advising efforts. But how fair are these models with respect to the underserved students these interventions are primarily designed to support? A quickly emerging research field within AI is endeavoring to address these types of questions, with education posing particularly nuanced challenges and trade-offs with re-

spect to fairness and equity.

Generally, machine learning algorithms are most accurate in predicting that which they have seen the most of in the past. Consequently, with grade prediction, they will be more accurate at predicting the groups of students who produce the most common grade. When the most common grade is high, this will lead to perpetuating inequity, where the students scoring lower will be worst served by the algorithms intended to help them. This was observed in a recently published study out of the University of California, Berkeley, evaluating predictions of millions of course grades at the large public university. Having the model give equal attention to all grades led to better results among underserved groups and more equal performance across groups, though at the expense of overall accuracy.

While addressing race and bias in a predictive model is important, doing so without care can exacerbate inequity. In the same study, adding race as a variable to the model without any other modification led to the most unequal, and thus least fair, performance across groups. Researchers found that the fairest result was achieved through a technique called adversarial learning, an approach that teaches the model not to recognize race and adds a machine learning penalty when the model successfully predicts race based on a student's input data (e.g., course history). Researchers also attempted to train separate models for each group to improve accuracy; however, information from all students always benefited prediction of every group compared to only using that group's data.

> "Researchers and policy makers should proceed with caution and healthy skepticism to ensure that these technologies are designed and implemented ethically and equitably."

These findings underscore the challenges in designing AI-infused technologies that promote rather than undermine the student success objectives of an institution. Further work is needed to develop additional best practices to address bias effectively and to promote fairness in the myriad of educational scenarios in which machine learning could otherwise contribute to the widening of equity gaps.

The State University of New York and UC Berkeley have launched a partnership to take on these challenges and advance ethical and equitable AI research broadly in higher education. The first project of the partnership will be applied to the transfer space, where we will be quantifying disparities in educational pathways between institutions based on data infrastructure gaps, testing a novel algorithmic approach to filling these gaps and developing policy recommendations based on the results. While this project represents an incremental step, we look forward to advancing this work and welcome partnerships with individuals and organizations with similar interests and values. ■

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Higher Education Has a Data Problem

Unable to piece together all the different indicators, colleges and their instructors struggle to glean real wisdom, let alone adjust to a student's needs, write Cathy O'Bryan and Bhavin Shah.

By Cathy O'Bryan and Bhavin Shah // September 8, 2021

The truest measure of any technology's value is the return the consumer gets on their investment. On behalf of their students, colleges and universities are today spending billions on new digital tools designed to propel the rapid shift to remote and online learning. But up to this point, the returns have fallen short.

According to a new survey, many students have begun to doubt the underlying value of a degree, with fewer than one in five responding that the learning experience is worth the cost. Today, professors, administrators and their private-sector technology partners need to find better ways to harness the range of new tools at our disposal to improve students' learning and educational experiences in real time.

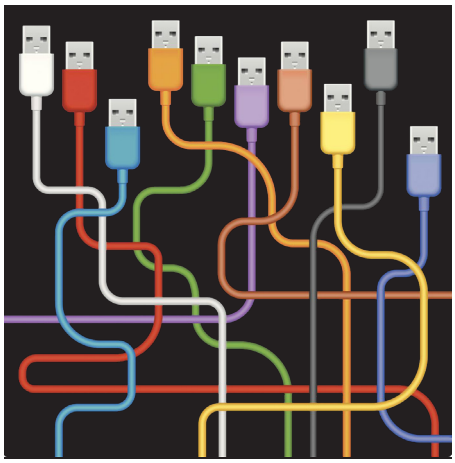
Never before have colleges and universities needed to demonstrate so clearly the value of what they provide students. That's in no small part because higher education institutions now compete more directly with each other on educational efficacy. During the "sage on the stage" era, marketing materials and glossy brochures often highlighted campus life. That's no longer the only salient criterion. Students are now more prone to judge professors and institutions on the basis of whether they will come away having attained knowledge and skills relevant for their long-term career success.

The good news is that, to a degree unavailable just a few years ago, technology and the data it generates hold the potential to empower instructors to give students feedback not only when a course is completed but also while they're engaged in their studies, enabling them to glean more from the learning experience. But to maximize the return from those digital tools, those shaping and using technology need to think proactively, intentionally and creatively about how data are generated and how they are best integrated into instruction.

Using the Wisdom Gleaned From Data

Professors today are inundated with technology equipped with the potential to help them hone their craft. For example, if a technology can cull through quiz results to identify which concepts remain hazy in students' minds, instructors can quickly discern which of their various lesson plans is most effective.

But perhaps more important, technological tools, if properly conceived and used, can now deliver small (personalized) data to help instructors flag students who are struggling to understand the coursework, stay engaged or maintain their motivation. For instance, online homework assignments should be able to reveal who is lost in the material without requiring instructors to invest hours analyzing individual submissions. The data generated from in-class activities like quizzes, polls and discussions should provide insights into student comprehension and levels of participation. Attendance records can pinpoint which students are buckling under their course load. And if all these varied and various data points are considered together, they should provide actionable information.



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In other words, if created and collected conscientiously, data can help educators intervene in short order by helping them discern when to assign a tutor, recommend a remedial reading or simply invite a student to revisit a core concept during office hours.

But therein lies a challenge: when educators use multiple tech tools, they contend with the challenge of managing and understanding siloed, disaggregated data. As a result, instructors receive only fragments of the overall picture, leaving many to feel overwhelmed by multiple dashboards and reports. Unable to piece together all the different indicators, instructors struggle to glean real wisdom, let alone adjust to a student's needs. In an environment where they compete directly with each other on how much students learn through their coursework, colleges and universities cannot afford that lost opportunity.

Taking a Holistic View of Student Performance

Some institutions have begun tackling this challenge with their outside technological partners. Braiding together disparate sources of student-centered data, they are collaboratively finding ways to produce holistic views of each student's engagement and performance. What's more, they're almost immediately finding that a comprehensive data picture can quickly provide a profound value-add for administrators focused on bottom-line educational results.

Key to their progress, however, is the cooperative nature of the partnership. Neither university administrators nor their technological partners can do it alone. If they are going to serve students and instructors to the fullest degree, vendor partners need to produce reliable data, and institutions need to aggregate them.

> By unlocking the power of digitized information to elevate learning experiences, administrators and educators can deliver meaningful value to learners.

Over the past few months, Top Hat and Unizin, a technology consortium of higher ed institutions, have collaboratively developed a rich data integration of Top Hat's digital courseware platform into the Unizin Data Platform, or UDP. Using data standards, the integration combines data generated in Top Hat with the unified, commonly modeled teaching and learning data that the UDP aggregates from other learning tools, including learning management systems. Suddenly, instructors have had at their fingertips comprehensive data capable of pointing them to better educational interventions for each student. As Bart Pursel, Pennsylvania State University's assistant director of teaching and learning with technology innovation, recently explained to us, the data integration project "gives professors a more complete picture of the student journey so that they can conduct timely and targeted outreach." And that's exactly the point.

When Penn State instructors and administrators first moved to remote teaching at the start of the pandemic, the university relied heavily on its learning management system. But in short order, administrators realized they wanted instructors to engage their students not only through the LMS, but before, during and after class, as well. So, they turned to Top Hat to help them build interactions and engagement directly into existing elements of each course -- lectures, digital textbooks, class discussions and more. The challenge, absent the partnerships between the university and Unizin, would have been weaving data from the various technological interventions together. By using the UDP, however, learning in Top Hat and the LMS could be captured with comprehensive data capable of painting complete portraits of individual student journeys, empowering instructors to adjust to each student's successes and struggles.

The Top Hat-Unizin collaboration has enabled us to validate a number of hypotheses about how institutions, educators and tech-

nology companies can work most effectively to create, collect and use learning data that enables instructors to support better learner outcomes. They include:

- **Institutions must design their data strategies with actionable insights in mind.** The purpose of an educational data strategy is to inform effective course design and instruction in the immediate term. There's no sense collecting data that don't bear on the meaningful decisions that instructors make when working to support individual student success and deliver personalized learning experiences at scale. Developing a strategy also clarifies what kind of learning data you require and why.
- **Vendors must focus on producing high-quality data designed to solve a problem.** Partner vendors must think about generating data from the perspective of the needs of the instructor, instructional designer and other stakeholders. That is, they should view the data they generate with an eye toward improved teaching and learning experiences. Valuable data must be: 1) comprehensive, describing everything relevant to addressing a need or problem, 2) correct, accurately reflecting student performance and 3) complete. Vendors should also analyze and process data in a responsible way and ensure security and privacy are part of the design process.
- **Institutions and vendors must work together to guarantee students derive value from their education.** The temptation when trying to derive wisdom from data is to ask at the outset what precise data are already available and then make do. That's a mistake. Rather, institutions like Penn State and its partners, such as Unizin and Top Hat, should first define the problems they need to solve -- and only then should they begin to focus on how to create and leverage data toward that end.

Despite emerging concerns that higher education is not worth the cost, studies prove that college degrees will remain a key differentiator in the marketplace for tomorrow's high-paying jobs. Technology is poised to help institutions of higher education deliver, but to take advantage of that opportunity, universities and their partners need to do more than collect data for long-term evaluation. By unlocking the power of digitized information to elevate learning experiences, administrators and educators can deliver meaningful value to learners. Together, they can keep students motivated and highlight how their learning journey will help them succeed beyond their college experience. ■

Bio

Cathy O'Bryan is CEO at Unizin, where she leads a consortium of higher education institutions that are dedicated to providing learning analytics at scale that can be used to improve the instructional and research missions of the academy. Bhavin Shah is chief technology officer at Top Hat and drives product innovation to support higher ed institutional leaders as they respond to the rapidly changing and evolving expectations of today's students.

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Democratizing Data With an Equity Lens

By sharing the right data, higher ed leaders can use the collective expertise on their campus to identify and dislodge barriers to student success and advance equitable outcomes, writes Jeff Gold.

By Jeff Gold // November 16, 2021

Over the past year, colleges and universities have gained valuable experience collecting, analyzing and disseminating data. They initiated much of this work in response to the devastating impact of the global health crisis and the need to develop centralized dashboards to monitor the well-being of their campus communities.

But while institutions published many of those dashboards with the singular goal of keeping the public informed of conditions on the ground, some efforts have also leveraged data to determine how to better support students in the virtual learning environment—addressing such topics as food and housing security, mental and emotional well-being, and technological needs. This data collection and analysis continually pointed to one truth: to make impactful decisions, you need to gather information that you can understand and trust.

As campuses progress through this academic year, the challenges that our students are facing continue to be no less daunting than when the pandemic began. At a time when pernicious and long-standing racial and socioeconomic inequities have been laid bare, higher education leaders must provide their campus communities with disaggregated equity data that empower faculty, staff and administrators to better support students from all backgrounds in realizing their true potential. By democratizing student equity data and disseminating them throughout the arteries of their college or university, higher education leaders can enlist the collective expertise of the campus community to identify and dislodge barriers to student success and advance equitable outcomes.

As part of systemwide work under Graduation Initiative 2025, the California State University system is working to close equity gaps and improve graduation rates across its 23 campuses through its Student Success Dashboard. With over 20,000 annual visits, the dashboard has helped our system's community address critical equity-focused questions such as: How many additional students of color need to graduate to eliminate the equity gap? Which academic behaviors have the most differentially positive impact on retaining first-generation students? Are students achieving junior status at equitable rates? The dashboard answers such questions with data-informed insights at the campus, college, department and course level, thereby empowering everyone in the CSU community to be agents for equity-minded change.

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We have already seen meaningful improvements. For example, a faculty member at Cal Poly Pomona tapped into data for her department and discovered that none of its transfer students were graduating within two years. She also found an equity gap in course grades among students of color. With that knowledge, she implemented small learning groups and began offering supplemental instruction for her course. Those interventions helped transfer students improve their grades and stay on track for graduation while also narrowing the GPA gap between students of color and their peers by 0.3 grade points—a 75 percent improvement.

Another professor at Sacramento State University learned through the dashboard that 32 percent of psychology majors left the depart-

ment within four years—and the rates were even higher among students of color and those receiving Pell Grants. Digging deeper into the data, she uncovered an introductory course that approximately 10 percent of her students were consistently failing. Accessing these data helped the professor redesign the course and develop a more engaging, student-centered learning experience that both enhanced academic rigor and improved learning outcomes.

Such interventions illustrate the value of not only disseminating relevant and actionable equity data, but also making sure they are widely accessible across campuses. Sharing anonymized student data with faculty, staff and administrators can better inform pedagogy, strengthen how faculty mentor students and guide staff across all disciplines to adjust practices to better support students.

For years, higher education professionals have understood the fundamental importance of accessing and analyzing data such as enrollment trends, graduation rates and even fundraising targets. We must now place at least as much emphasis on nuanced data that are specifically targeted at closing equity gaps. Working together, we can hold a mirror to our own practice and collaboratively identify opportunities to enhance student support.

We in higher education are at a distinct moment, with the pandemic inviting a new wave of innovation and creativity in how we approach student success and equity. Indeed, for many of us, eliminating equity gaps is the calling of our time. By sharing equity data broadly among all members of our campus communities, we can build a collaborative culture that is laser-focused on addressing equity across our institutions. ■

“By sharing equity data broadly among all members of our campus communities, we can build a collaborative culture that is laser-focused on addressing equity across our institutions.”

Bio

Jeff Gold is assistant vice chancellor of student success initiatives, research and innovation at California State University.

Read Original Article ▸▸ https://www.insidehighered.com/views/2021/11/16/using-data-dislodge-barriers-equitable-student-success-opinion

The Power of Transfer Student Data

Successful transfer partnerships rely on data to create a culture of continuous improvement.

By Tania LaViolet // November 24, 2021

Data are most compelling when they're used to tell a story. So let's start with one of my favorites.

When it comes to transfer champions, Robert Templin is one of the greats. While president of Northern Virginia Community College—NOVA—one of the largest community colleges in the country, Bob advocated for increased and more equitable opportunities for transfer students. He brokered programs like Pathway to the Baccalaureate, designed to catapult students of color from modest means to economic mobility and security. He understood the importance of transfer, in part because he had been a transfer student and experienced the transformative power of the pathway firsthand.

One year, Bob had a special guest at NOVA's commencement ceremony: the new president of George Mason University, NOVA's main transfer partner. Bob wanted to make a lasting impression about the importance of community college transfer to the university, so he asked the new president to shake the hand of every Mason-bound graduate. It was an important moment in cementing what would become one of the most successful transfer partnerships in the nation. A few years later, on the eve of Bob's retirement from the NOVA presidency, George Mason returned the favor, hosting Bob at the university's commencement. The George Mason president asked graduates to stand if they had transferred from NOVA. Bob will never forget the thunderous sound of thousands of people rising to their feet, the unassailable symbol of their success, diversity and sheer numbers on display for all to see.

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What does this story have to do with data? Both presidents knew the power of these gestures because they both knew the numbers.

The most successful transfer partnerships often rely on data to make the case for investment, set strategic direction and create a culture of continuous improvement. Unfortunately, most institutions can't rely on federal or state-level requirements to guide reporting of even the most basic community college transfer measures. For instance, even when states report transfer student outcomes, those data are often unavailable disaggregated by race, ethnicity or income. Leaders need to invest their time, influence and resources to enable the necessary internal processes, infrastructure and capacity to get this fundamental information.

The investment level may differ—assigning staff to create a manual patchwork of data from different institutional or state-level sources, hiring vendors to organize basic data, or forming a major data-sharing agreement with high-tech dashboards among transfer partners.

To help guide those investments, at the Aspen Institute College Excellence Program, we synthesized four ideas from our "Tackling Transfer" report on evaluating transfer:

1. **Know the basics.** How many of your students are current or prospective transfer students? How many transfer and/or graduate with a bachelor's? How long does it take, and how much does it cost to complete their degrees? What proportion of your enrollments and completions relies on transfer pathways? Where are there inequities by race and ethnicity, income, or other student subpopulation? Every community college and university leader should have the answers to these questions.
2. **Set goals and use them as a framework to audit transfer data needs.** According to the leaders and practitioners we've worked with, sometimes the challenge with transfer data is that the data aren't collected. For instance, some community colleges do not ask about bachelor's intent, while some universities do not include key identifiers for community college transfer students in their student information systems. Even when the data are not yet available, setting longer-term transfer goals can provide a helpful framework for institutional research analysts to understand whether their institution's data collection, entry and warehousing systems would support the evaluation of desired outcomes. Examples of state-level goals can be found in this report.
3. **Turn transfer student experiences into data.** Qualitative data from transfer-specific student focus groups and surveys provide essential information about transfer student experiences. The qualitative assessment is essential to interpreting the outcomes data and how they relate to transfer practice and policy.
4. **Create spaces for key stakeholders to engage with the data.** This step is too often underappreciated. Leaders should invest in building routine, structured venues where staff, faculty and advisers—both within and across partner institutions—can examine transfer student success and equity data and connect them to practice reform. Benchmarking those data against clear and measurable goals helps set the expectation that transfer practice and policy reform is data-driven. These routines are essential to a continuous improvement mindset.

One last idea is to use transfer data to tell transfer stories, just like the one I started with. We don't have to look far to find stories of transfer students using their talents in extraordinary ways or find accounts of transfer students getting snared in the complexity of systems not designed for them. Both sides need to be told. Data demonstrate that these are not random anecdotes; these stories belong to the 80 percent of entering community college students who want a bachelor's degree. If anyone needs convincing, ask the transfer students in your graduating class to stand. You probably won't be able to count them, so make sure your team has collected the data. ■

Bio

Tania LaViolet is a director at the Aspen Institute College Excellence Program.

Read Original Article ▸▸ https://www.insidehighered.com/blogs/tackling-transfer/power-transfer-student-data

How to Tackle Inequity in Higher Education Head-On

Clusters of institutions are collaborating to achieve lasting change in the key areas of affordability, teaching and learning, and holistic student support, writes Julia Michaels.

By Julia Michaels // January 5, 2022

The pandemic has illuminated the challenges facing college students who are low income, first in their family to attend or a member of a racially minoritized group. From affordability to improving the learning environment to supporting students outside the classroom, the long-standing issues facing such students have been magnified. It's not just hard to afford college. It's difficult to stay enrolled and learn while juggling a myriad of academic and personal concerns.

Higher education is at a critical turning point. The pandemic and a long-overdue racial reckoning have highlighted the urgency of tackling head-on the structural barriers driving inequity. While colleges and universities have been grappling with these challenges for some time, the pandemic and racial reckoning have expanded the scale of what's needed and accelerated the timeline for change.

I'm hopeful we can make significant progress because, as executive director of the Association of Public and Land-grant Universities' Powered by Publics, I've seen 125 public universities from across the country come together to build a better system over the past three years. Those universities are using the science of continuous improvement to innovate and test new ideas for improving their affordability, teaching and learning, and holistic student supports. Clusters of institutions in the network are collaborating to achieve lasting change in those three areas. We certainly don't have all the answers, nor do we think those areas are the only drivers of inequity. But we do strongly believe that by transforming them, we can achieve significant strides in boosting college access and completion.

Affordability. We know affordability isn't just a gateway issue for students; it's a core component of the student journey from enrollment to completion. The pandemic has unearthed the scale of financial precarity facing many students and shown how those financial challenges so vividly translate into academic challenges, ultimately magnifying inequities. Taking this broader view, Powered by Publics recently undertook research with participating universities that examined creative approaches to affordability—from emergency aid to institutional debt forgiveness to open educational resources and other affordable learning materials.

Education-related expenses are just one part of the affordability picture; we know students face a variety of cost barriers, including childcare, housing and transportation, among others. Leading higher education institutions like those in Powered

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by Publics are committed to making college more affordable—in terms not only of the direct educational costs like tuition and fees but also those unexpected costs such as a stolen laptop, unexpected car repairs or a rent increase that can easily knock a student off their path to a degree.

For example, Virginia Commonwealth University has taken a student-centered approach to affordability by talking directly with students about their needs and re-engineering processes, policies and systems in response. When administrators heard that many students felt there were too many fees, the university consolidated course and program fees dramatically. The university established formal feed-

back mechanisms to keep information flowing, such as its Student Financial Services Advisory Board.

Teaching practices and the learning environment. This area plays a major role in student success as well. A group of Powered by Publics institutions in the initiative's Big Ten Cluster recently undertook an in-depth examination of the share of the institutions' students, disaggregated by a host of characteristics, that had received a grade of D, F or withdraw in key gateway courses, such as Introductory Calculus or English Composition. The analysis revealed higher DFW rates among first-generation students, Pell-eligible students, minoritized students and male students compared to the average DFW rate for the course. Following the examination of clusterwide trends, the institutions are now bolstering work to share data with instructors in real time, with the aim of strengthening institutionwide support for those students—and ultimately achieving universal success—in such foundational courses.

The University of Nebraska at Lincoln, for example, used DFW data to measure the impact of an active learning initiative in its mathematics department. It also hired a dedicated faculty director for undergraduate analytics to support each department at the university in analyzing their DFW data with a particular focus on equity.

Holistic student supports. Powered by Publics institutions are also working to provide to address the hurdles students face outside the classroom. Take the credits students lose when transferring institutions, for example. For the nearly 40 percent of students who transfer institutions, lost credits can add semesters of coursework and tuition costs—even leading some students to leave college altogether without a degree in hand. With a disproportionate share of low-income and minoritized students transferring, credit loss can compound existing inequities in college completion rates.

To address this challenge, Powered by Publics is supporting the examination of transfer-credit efficiency at five public colleges and universities in North Carolina. That research will help us better understand the barriers facing transfer students and catalyze action to remove them.

We know institutions must do better to help students overcome these challenges and provide a welcoming environment where students can learn and thrive. If "every system is perfectly designed to get the results it gets," as Paul Bataldon once observed, we need to redesign the system. The pursuit of equity is a journey for generations—we'll never be done—but we must step up the pace. The universities in Powered by Publics are leaders committed to ensuring every student succeeds. By doubling down on affordability, teaching and learning, and holistic student supports, the higher education sector can build momentum for transformation—and never go back to the old, far from ideal, normal. ■

Bio

Julia Michaels is executive director of the Center for Public University Transformation at the Association of Public and Land-grant Universities.

Read Original Article ▸▸ https://www.insidehighered.com/views/2022/01/05/ways-some-colleges-are-tackling-inequity-higher-education-opinion

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