Making the Most of a Healthy Change in Education

The Emerging Student Success Platform

A White Paper by Dr. Mark David Milliron
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Foreword
By Former NC Governor Bev Perdue

In the 1850's, a British doctor named John Snow used rudimentary survey and mapping techniques to trace London's cholera outbreak to a single well – saving lives and giving rise to the field of epidemiology. In the modern era, advances in data science and the application of technology have ushered a sea change in how public health experts think about the questions they are asking, as well as the data they use to answer those questions.

In higher education, it is easy to feel like we are closer to Dr. Snow's level of analysis than modern epidemiology. The problem in higher education, as in public health, revolves around both access to data and using it responsibly to seek clear answers to the right questions. As it turns out, some of the questions policy makers and higher education leaders are asking may not be the right questions at all — and may lead to suboptimal results. For example, by asking, "How do we enroll more students in higher education?" policymakers unintentionally incentivized enrollment but not completion, leading to more students with some debt and no degree.

Mark Milliron has been taking on these challenges in higher education for decades. In 1995, he began his work in my home state of North Carolina, helping lead a rural community college in the Blue Ridge Mountains. From that small school, he launched a career that has spanned K-12 and higher education, including a front row seat on healthcare's data driven transformation during his tenure as Vice President of Education and Medical Practice at the SAS Institute — a global analytics firm based in North Carolina. Drawing upon his years of experience, Mark identifies important connections between epidemiology and higher education analytics – and both the risks, and opportunities for higher education to learn from public health. This includes moving beyond the backwards-looking or postmortem data so often used for accountability purposes and toward new data sources that provide rich, actionable insights that can be used to tailor support for each student.

We know that providing students with support along their postsecondary journey is important, not only for individual students, but also for society as a whole. Epidemiology has a 150-year head start on higher education analytics, but we can't afford to take that long to make the changes our students need. Luckily, by learning from the related changes in healthcare, we don't have to.

A Healthy Move

Fifteen years ago, the world of healthcare was coming to grips with a data dilemma beginning to drive real change. For example, in the world of global health, new ways of exploring data began turning longstanding policy, practice and funding approaches on their head.
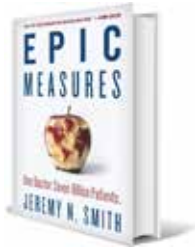
US ranked as only 37th best country in terms of health outcomes.

The work of physician-economist, Christopher Murray rocked the global health community by introducing new ways of collecting and analyzing data on diseases like smallpox, diabetes, malaria and polio. His book, *Epic Measures* challenged conventional wisdom about what caused death, illness and shaped quality of life – and identified unintended consequences that forced hard conversations and inspired change.

At the time, Murray's method for measuring the impact of health threats, what they termed Disability-Adjusted Life Years (DALYs), ranked the United States 37th worldwide in the health outcomes. He discovered that while a global emphasis on pediatric health increased the likelihood that children survived to age five, all too many then died in their teens from unrelated causes. Put simply, their data showed that our funding and disease-fighting priorities were not optimized to address national challenges and the unique needs of individuals.

The rise of electronic medical records also played a role in rethinking policy and practice in public health. Our formerly paper and software-siloed systems were, for the first time, beginning to be collected and connected in digital data stores. Strategic digitization helped researchers, hospitals, states and countries pull massive data sets together and tell more comprehensive stories about the health challenges people were facing.

As these data were analyzed, studies began to show that medical and medication errors were among the leading causes of injuries and deaths in the United States — more so than major diseases and workplace accidents. Some studies collectively ranked errors as the 3rd leading cause of death in the United States.

Watching the healthcare world wrestle with these data was daunting. Many professionals were almost progressing through an Elisabeth-Kübler-Ross-type cycle of death and dying as they took in the studies and the resulting changes: denial, anger, bargaining, depression and acceptance. Leading voices began to emerge arguing for different approaches to health and wellness and a renewed focus on fundamental safeguards. One best-selling book, *The Checklist Manifesto: How to Get Things Right*, stirred the field even more, with a data-driven argument that patient health and wellness would be better served by a comprehensive focus on fundamentals safeguards like washing hands and correctly placing central lines, than advanced research on heart disease and cancer.

Making clear the need to focus on logistics and process.

Practitioners will tell you that the last 15-20 years have been a whirlwind, but a worthwhile one. Data made the case for insurance coverage for preventative medicine and procedures. Doctors and patients now have more data and information at their fingertips than ever before to guide their healing and improve their wellness. Of course there are challenges. But, few doctors or patients would want to go back to the dark ages of only 20 years ago.

Higher Education's Healthy Move

In many ways, higher education is wrestling with its own data dilemma – and we're beginning to see the seedlings of change. Like healthcare, the last decade in higher education has seen a rising tide of data that is beginning to turn assumptions (about effectiveness and operations) on their head. We've all seen the reports. More than 40 percent of those that are starting in higher education are leaving without a degree. More than 31 million Americans have some college and no credential. Student loan debt is now larger than all consumer debt combined, larger than all mortgage debt combined — and it can't be discharged with bankruptcy.

Over 31 million Americans have some college and no credential.

– National Student Clearinghouse Research Center

Massive equity gaps also persist. Low-income students are up to eight times less likely to earn a credential than high-income students. This means that a low-income student is now more likely to leave a higher education pathway with debt than with a degree.

Adding to the challenge, data now suggests that 'best practices' aimed at tackling inequity may actually be making things worse. For example, as it turns out, developmental or remedial education just isn't working for most students. For decades, we forced millions of students to take placement exams, shuffling them into sub-college-level course sequences that were giving them a single-digit chance of ever completing a credential.

We've learned that an overreliance on enrollment data as a measure of higher education health was actually hurting institutions and students. In our quest to maximize enrollments and expand access, policies like "late enrollment" increased student numbers, but failed to impact learning and completion. Last in, first out was a dynamic that almost all faculty saw happening, but they were powerless to change it.

In response to the frustration around the lack of progress on these issues, new measures around learning, persistence and completion have been proposed – and change is beginning to take hold. Large-scale student success initiatives like Achieving the Dream, Completion by Design and the Red Balloon Project are gaining momentum. The White House convened completion summits and more than 30 states adopted some form of performance-based funding in a quest to find better measures of success. Foundations like the Lumina Foundation for Education and the Kresge Foundation have outlined big goals and are funding ambitious projects.

Rising to Our Healthy Challenge

Although we are flooded with new insights about student and institutional outcomes — and unprecedented energy to address these challenges through national, state, association and institutional efforts — we are being held back.

The field is being flooded with best practice suggestions based on broad assumptions about the challenges and the solutions.

Like healthcare, we are experiencing mass digitization. Our student information, HR and finance systems have been integrated; learning management systems have been launched; customer relationship systems leveraged; and even digital texts, online games and engaging interactivity are on the rise.

And yet our ability to pull these data streams together and leverage the best of data science to really understand what's working and what's not is hamstrung. We lack an integrated data platform that can responsibly and strategically integrate disparate systems to tell a coherent story about student success or failure on their learning pathways.

In the absence of specific data we may be jumping into generalities... that are based on everyone and relevant to no one.

The great irony is that this challenge coincides with loud calls for more and better data from higher education's accountability complex (e.g., accreditors, trustees, foundations and government agencies). And therein lies risk. Because all-too-often we are encouraged to look the wrong way: backward.

Most institutions will tell you they are swamped with more, and more frequent, calls for reports on past performance than ever before. They just can't keep up. In the medical world, they would argue that we seem obsessed with autopsy data — dissecting the stories of students who are no longer with us — rather than using our energy to focus on data during the operation, or better yet, diagnostic and predictive data that could help our students avoid challenge altogether. It is an obsession with reporting that leaves us even more focused on challenge rather than success; much like healthcare once focused on sickness, to the exclusion of wellness.

What's worse is that in the absence of an integrated, responsible and comprehensive approach to analytics, the field is being flooded with best practices based on broad assumptions about both the challenges and the solutions. A new playbook to address retention and completion problems emerges like clockwork at nearly every conference. These suggestions are often useful and directional, but because they are general guidelines, they lack vital context and specificity.

In his must-read book, *The End of Average: How We Succeed in a World that Values Sameness*, Harvard professor and high school dropout, Todd Rose, argues that in the absence of more precise and specific data about individual students, we often jump to generalities and broad swath solutions that hold the potential to do more harm than good. Left unchecked, we career toward major policy, practice and funding changes — even student-level outreach strategies — that are based on everyone and relevant to no one. In many cases, we're adopting what could be important and impactful practices, but we really don't know, because we don't have data to inform, instrument, tune, test and measure the impact of our seemingly unending stream of initiatives.

In a world where initiatives abound and outcomes stagnate, students and eager professionals (faculty, advisors and administrators) are frustrated. They are ready for better and richer data that can support their work.

They live in a world where technology provides smart recommendations and personalized solutions. And they feel like they are going back in time as they interact with higher education's dated systems. Work, play and even healthcare are making the most of data. Why not higher education? Students know we are using their data to inform accountability efforts and government reporting. But they are rightly asking, "Can you use the data *about* me to *help* me?"
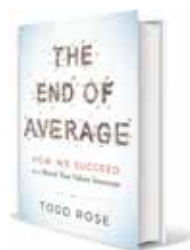
Work, play and even healthcare are making the most of data. Why not education?

Today's students deserve real-time and useful data to help them make better choices. Coaches, advisors and faculty deserve better information to personalize the experience as they teach and reach students. If we're going to make the most of this opportunity for "healthy change" in the field of higher education, we need to bring our disparate and disconnected digital systems together with a new vision and purpose: a student success platform.

A Healthy Development: The Student Success Platform

Passion and purpose abound in the initiatives and innovations aimed at helping more students succeed in higher education. What is in short supply is a scalable data architecture to responsibly inform, instrument, implement and test the impact of our work.

At their core, student success platforms should help institutions integrate and derive meaning from an ever-growing array of sources. Student information systems, learning management systems, card swipe, tutoring center, digital curriculum, advising support systems and student surveys all hold the potential to generate insights to inform practice, and improve outcomes. But decision making based on reports from disconnected systems creates missed opportunities and unintended consequences. Taken together, they tell more coherent and complete stories about opportunity, risk and impact – and how students succeed and face challenges on their pathways.

The challenge and opportunity is about much more than connecting and cleaning the data that matter. It's about the responsible application of modern data science to build predictive models that are institution-specific, and take into account the multiplicity of student needs and experiences. The failure to do this work thoughtfully and responsibly creates risk of investment in misguided initiatives — and the potential to miss many, if not most, of the students at risk. In our work, we have seen institutions expend time, energy and resources on data-based strategies that use triggers or alerts of expected risk founded on best-practices or general guidelines (e.g., GPA zones or academic probation status), but miss over 80 percent of the students likely to leave. A recent story on National Public Radio's *Marketplace* described findings from our most recent Community Insights Report, which showed that the majority of students who leave do so in good academic standing.

In our personal lives, we have come to expect and value personalized, context-specific guidance. We expect precise directions with real-time traffic updates from Google Maps and personalized movie recommendations from Netflix. Indeed, these businesses would fail if they relied on one-sized-fits-all recommendations. The world of healthcare is learning that patient-specific holistic approaches matter, especially when it comes to improving wellness and tackling risk early. It's the same in the world of education. Using general approaches to data holds the potential to ensure that we miss our best opportunities to do our best work with students.

Civitas Learning's **Four Pillars** of a Student Success Platform

At its best, a Student Success Platform (SSP) should empower your institution and your students to make confident decisions that optimize opportunities to succeed.

PILLAR I

The SSP unifies and derives data from across your institution to create a clear view of the current (and future) state of your institution and your students.

PILLAR II

The SSP serves as the lifeblood of the student support ecosystem at your institution – your people, your processes, your technology – giving you a scalable platform for innovation.

PILLAR III

The SSP nurtures a personalized connection between your institution and each student you serve.

PILLAR IV

The SSP helps you shine a bright light on what's working and what's not in your policy, practice, initiatives and outreach so you can precisely allocate your time and resources to do the most good.

Healthy Outcomes Ahead for Higher Education

To make the most of this moment, we need to work together to design and implement student success platforms that matter — and learn together about how best to use them. We need to learn together about what is really working and what isn't and for whom. We need to learn together about how we — like the world of healthcare — adopt a "do not harm" approach with these platforms. No tracking. No dream killing.

In addition, we need to adopt a "student's ability to benefit" perspective. Because, in the end, it's their data. It should be used to help them strive and thrive, not fuel reports that are meaningless to the choices they are making today, choices that might make or break their chance to cross the stage at commencement.

Like healthcare, we are poised to significantly change things in higher education. It's likely we will look back in ten years and make the argument that we never want to go back to our dark ages. If we work together to harness the opportunities around this work and embrace innovations like student success platforms, we can help millions of students learn well and finish strong on their increasingly vital higher education journeys.

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An award-winning leader, author, speaker and consultant, Mark has worked with universities, community colleges, K-12 schools, foundations, corporations, associations and government agencies across the country and around the world.

As Co-founder and Chief Learning Officer at Civitas Learning, he is involved in all areas of the company's development, especially helping catalyze a thriving learning community around analytics and student success initiatives with partner institutions. He serves on numerous corporate, nonprofit, education boards and advisory groups, including the Texas Student Success Council.

Most recently, Mark was named to the 2016 Chronicle of Higher Education List of Top Tech Innovators.

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