



What Every Leader Needs To Know About Student Success Analytics

With Linda Baer And Don Norris

This article includes an interview with Dr. Linda Baer, Senior Fellow at Civitas Learning and Donald M. Norris, President, Strategic Initiatives, Inc., and a link to a free download of their white paper: [What Every Leader Needs to Know about Student Success Analytics. Raising The Bar On Student Success.](#)

Raising The Bar On Student Success

The authors explored student success initiatives across the U.S. and found that some institutions are making good use of the plethora of data stored by institutions, but the gap is widening between those out in front in analytics-informed student success and their peer institutions.

“There is a visible shift from using analytics solely to report what has happened as with the performance metrics gleaned from descriptive and diagnostic analytics, to the more insightful and actionable insights and foresight provided by predictive and prescriptive analytics,” said Don Norris.

Norris and Baer sum up the difference in these different types of analytics as follows:

Descriptive Analytics	What has happened?
Descriptive Analytics	Why did it happen?
Predictive Analytics	What will happen if past trends and current behaviors continue?
Prescriptive Analytics	What is the best that can happen and how can we make it so?

“Our communities and our society need more educated people than ever before in history, and yet they are admitting more students than ever before who are deemed to be at-risk,” said Baer. “Fortunately, today with the growing movement in predictive analytics, institutions can use analytics and modeling to bring a more focused lens, and discover where and when specific interventions can truly make a difference.”

The good news, she said, is that ample data is available. “The bad news is the gap between those using analytics well and those not committing sufficient energy has widened, and most institutions now lag behind the rising standards of analytics best practices,” said Baer.

Connecting The Dots

The difference between those succeeding and those lagging extends well beyond established budgets and resource allocations. “Student analytics work has, up until quite recently, been fragmented and siloed, at best,” said Norris. The institutions winning at this by measurably increasing persistence and graduation are working to connect the dots – pulling the various initiatives and pieces together to create an end-to-end system or process spanning the entire student life cycle.”

Cross-functional teams are essential to these efforts and the authors found many examples that were highly effective.

“We looked at Aspen Prize winners that were using analytics well to discover commonalities,” said Baer, “and it’s obvious the important role courageous leaders play. The fundamental difference prize-winning colleges have from other institutions is not necessarily resources, according to Baer. “The winning colleges have courageous leaders willing to take the bold moves needed to expose the insights yielded by analysis that are difficult, uncomfortable, or even embarrassing at first to acknowledge,” she said. They build a culture that supports and nurtures the cross-functional teams.

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The Obligation Of Knowing

“Extensive discussions and debates have swirled around what is being called the obligation of knowing,” said Norris. “Now that we see a student’s likelihood of success or failure, are we willing to take all the steps necessary to provide the right help? Are we even if the steps take us beyond our comfort zone? There is a moral imperative and not everyone is ready to accept it.”

Baer suggests that once leaders acknowledge that data and analytics are important, they must commit to putting the people behind the positions to build out their institutional capacity.

Do they build internally or externally? They need to determine if there are people who can do analytics and predictive work on campus or if they could upskill some people with short course training or longer certificates and degrees. Or, campuses can work with partners to expand their capacities including campuses that could share analytics work and/or work with consultants and student solution tools.

“The single most important thing is to simply start – start building a culture committed to analytics, committed to the truth, committed to leaning into student success,” said Baer. “A small college with limited resources can begin by learning from peers and exploring best practices, then form collaborations or consortiums to buy into economies of scale. They can build capacity by partnering with companies like Civitas Learning that bring in intellectual talent that would be cost-prohibitive for the institutions to add as full-time employees. ”

Norris suggests institutions work to build organizational efficiencies by building toward comprehensive frameworks for student success. Examples he cites includes Arizona State University. “ASU is working hard to connect the dots. They had tremendous leadership in Michael Crow who openly committed several years ago to improving diversity, persistence and graduation rates while increasing enrollments. He uses analytics effectively to get there. ASU has not completely perfected their best practice. This work is expeditionary and iterative. But one of the reasons he’s succeeding is the intentionality of his work and goals. It’s not just about using data – it’s about an intentionality to stick with the commitment,” said Norris.

Baer says following commitment and intentionality, the next step is for institutions to move from their existing use of descriptive analytics into predictive analytics in order to fully optimize their student success work.

Baer and Norris suggest that the platform and work Civitas Learning is doing to create a comprehensive, enterprise-wide analytics approach will be a key ingredient in bringing transformation to existing processes and policies.

Leading Examples

Institutions engaged in this work are often reluctant or reticent at first to begin, according to Baer, because of fear of their data being insufficient or flawed. “In fact, it often is flawed or messy,” said Baer. “But as campuses use their data in this work, these data actually improve through scrutiny and cleansing, so the gains become exponential once an institution starts down this path.”

“By leveraging analytics and data science, leading-edge institutions are raising their aspirations to truly “optimize” student success for individuals or cohorts.” – Baer

“The institutions leading in this work are often utilizing a change management process John Kotter has developed and proven successful to deal with complex, cross-cutting issues that defy management through traditional organizational hierarchies,” said Norris, who cites Kotter’s award-winning Eight Steps Change Process as one of a long list of valuable resources shared in the white paper.

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Analytics Based Interventions To Manage/mitigate Risk

Baer and Norris provide a useful rubric of seven dimensions their research pointed to that leading institutions are using to reduce, manage and/or mitigate risk in their efforts to optimize student success. These include:

1. Managing the Student Pipeline
2. Eliminate Bottlenecks and Barriers
3. Dynamic Interventions to Address Risky Behavior
4. Leverage Individual Planning and Advising/Alert Systems (IPAS)
5. Next Gen Learning
6. Big Data/Big Science
7. Academic and Employability Success

For each dimension the authors explore the interventions in play and the risks mitigated by the leading institutions they studied. With IPAS for example, they list interventions including: individual guided pathway planning; interventions when learners deviate from the success paths as illuminated by predictive analytics; monitoring progress/risky behavior in the full spectrum of curricular and co-curricular areas and intervening when necessary; and combining best practice theory with data science driven interventions. These interventions are effectively reducing deviation from successful pathways, steering learners toward proven pathways ,and adding opportunities for career and employment considerations early in the student pathway and throughout the student journey.

Integrated Planning And Advising

Baer and Norris dive deeper by giving examples of the success of Integrated Planning and Advising Systems (IPAS) drawn from institutions that have experienced significant culture change and performance improvement in building out their analytics framework. These include Sinclair Community College, Valencia Community College, Austin Community College, Arizona State University and Georgia State University. “In the white paper we discuss the benchmarking of the characteristics of these important, emerging systems conducted by ECAR (The EDUCAUSE Center for Applied Research).

They offer a range of services that seek to realize a comprehensive vision of a technology-enabled and integrated digital environment,” said Baer who included the following capabilities:

- Education planning (identifying the degree and the best path to its achievement),
- Progress tracking (asking whether the learner is on course toward degree completion),
- Advising and counseling (offering services such as mentoring and tutoring), and
- Early-alert systems (initiating proactive intervention with at-risk students)

Building Organizational Capacity For Student Success Analytics

Culture of Reporting > Culture of Evidence > Culture of Student Success Improvement.

Norris is quick to point out that student success analytics is a long-term investment. Even those institutions achieving rapid gains through committed work in analytics and partnerships with solution providers view building organizational capacity for analytics as a long-term campaign. It requires evolving from a culture of reporting to a culture of evidence, and finally on to a culture of student success improvement.

“Our research shows us that institutions need help in advancing their student success analytics,” said Norris. “They need to assemble working groups from across the institution that function together to optimize institutional strategy.” He says this can initially cause challenges for universities and colleges that historically have fragmented their efforts. Collaborations and system-wide frameworks can ‘connect the dots’ that reduce redundancy, share perspectives and insights, and best leverage their efforts.

The paper goes on to suggest many activities, approaches and constructs universities and colleges can adopt in their efforts to optimize student success. These also can narrow the widening gap between those leader institutions seeing measurable gains and those not yet integrating analytics into their organizational culture and student success initiatives.

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LINDA BAER



Dr. Linda Baer has served more than thirty years in numerous executive level positions in higher education. She is currently a senior consultant with i4 Solutions. She was the interim vice president for Academic Affairs at Minnesota State University, Mankato. Previously, Dr. Baer served as a Senior Program Consultant in Post-secondary Success with the Bill & Melinda Gates Foundation and as Senior Vice Chancellor of Academic and Student Affairs in the Minnesota State College and University System. She was Senior Vice President for Academic and Student Affairs and Interim President at Bemidji State University. Dr. Baer presents nationally on academic innovations, educational transformation, the development of alliances and partnerships, the campus of the future, shared leadership and building organizational capacity in analytics.

DONALD M. NORRIS, PH.D.



Dr. Norris is President of Strategic Initiatives, Inc. He is a recognized author and master practitioner in strategy, transformation and change management. He has guided dozens of institutions in strategic planning for analytics, connecting the dots, and developing their organizational capacity to optimize student success.

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