**brightspace**™
by D2L

# Shining a light on student success

*Predictive analytics impact student retention, engagement, and graduation rates at Georgia Southern University*

# Overview

If only we had a crystal ball to predict a student's success in their academic career. Despite the focus on college readiness, educational institutions still struggle to provide the individual attention students need to stay on track toward graduation.

According to Tinto's (1975) Student Integration Model (SIM), students who persist and succeed in college are those who can integrate successfully into an institution's social and academic environment. Those students who are more likely to struggle and fail to persist are those who do not attempt or achieve social and academic integration.[2]

But how does an educational institution identify those at-risk students early and streamline delivery of interventions?

Georgia Southern University (Georgia Southern), the state's largest and most comprehensive center of higher education south of Atlanta,[3] has turned to the Brightspace Student Success System™ to help answer this question. It is using Brightspace's predictive analytics and data visualizations to identify at-risk students early and pave the way to improved student success.

## AT A GLANCE

**Client**    Georgia Southern University

**Students**  20,500

**Faculty**   834 full-time

**Level**     Post-Secondary

**Solution**  Brightspace Student Success System

## CHALLENGE

- Identify at-risk students earlier and get them the right intervention
- Move the needle on student retention and graduation rates
- Overcome faculty skepticism about validity of predictive analytics

## SOLUTION

- Leverage predictive analytics to spot patterns of behavior and anticipate student outcomes earlier
- Leverage data findings to provide students with resources needed to be successful

## RESULT[1]

- 53,000 data points gathered on 3,155 students to date with Brightspace Student Success System
- Able to predict a student who would obtain a passing final grade with 82% accuracy at the course midpoint and with 87% accuracy by the 16th week of a course
- Provides richer, empirical data to faculty and academic advisors allowing them to engage in smarter intervention planning on behalf of students

# Challenge

**EMBRACING BRIGHTSPACE FOR A VARIETY OF INSTRUCTIONAL MODELS**

A Brightspace user since 2009, Georgia Southern adopted the learning management system (LMS) as part of a state-wide initiative and to this day maintains a pioneering role within the state with respect to LMS technology.

Georgia Southern is a 'traditional' kind of university and is still reliant on classroom-based instruction. But it has embraced the Brightspace platform for a variety of instructional delivery models from augmented experience, to flipped classroom, to online learning.

Every course selection at Georgia Southern has a Brightspace presence and most university faculty are using the LMS in some capacity with five out of six faculty using the LMS for online course delivery, grade books, or to house foundational course content.[4]

**A QUEST TO IMPROVE GRADUATION RATES**

"We have been hovering in and around 80% for first year retention and our five year graduation rate is in the mid to high 40s," explains Dr. Steven Burrell, VP of Information Technology at Georgia Southern. "The impetus for improvement came from the Governor's office as part of the University System of Georgia's Complete College Georgia program. It is an initiative aimed at producing 250,000 more graduates in upcoming years. One strategy we considered was to change admission requirements, but we have limited ability to move that needle. So we asked ourselves, is there another way to qualitatively improve student success?"

# Solution

**BETTER PREDICT, MEASURE AND GUIDE STUDENT PERFORMANCE**

The answer was found within the Brightspace platform– specifically the Brightspace Student Success System– through a predictive analytics tool that would allow Georgia Southern to pull data gathered within the LMS to better predict, measure and guide student performance.

"We have excellent dashboards that reflect what has happened, but until the Brightspace Student Success System, we had little ability to be more proactive versus reactive," says Dr. Burrell. "Brightspace allows us to identify with high accuracy what will happen as a course is underway, and predict a student's final grade at the course midpoint. If a student is struggling in the course, the idea is that we can identify them and invoke some intervention on his/her behalf and help the student successfully complete the course."

Dr. Burrell approached Dr. Christine Ludowise, Associate Dean of Georgia Southern's College of Liberal Arts and Social Sciences to become the first of the University's colleges to adopt the Brightspace Student Success System.

**STUDENT ANALYTICS OFFER THE 'SECRET SAUCE'**

The College of Liberal Arts and Social Studies teaches core curriculum courses such as English, Psychology, and History. It also has a Bachelor of General Studies degree program delivered online. "We were still facing a degree of skepticism from our faculty and knew that in order for the Brightspace Student Success System to be effective, we needed to have a reasonably high use of the Brightspace platform," says Dr. Burrell. "We knew that the use of Brightspace among students in Bachelor of General Studies online program would be high. Dr. Ludowise, her faculty, and her students could help us to determine if the solution did indeed have the predictive 'secret sauce' we were seeking."

"Our program attracts non-traditional students who have had their academic career interrupted and who have returned to school through the online program," explains Dr. Ludowise. "Retention is a concern, and as the online degree is fairly new (instituted in 2011) we wanted to do it right from the beginning. Our online student population is served at a distance. There are many that our instructors never see face-to-face. Analytics provide us with a place to look for patterns in students. We know if a student is not showing up for class, not turning things in for one course, it is likely happening in many classes. The Brightspace Student Success System gives us the ability to look at student performance and activity and spot difficulties early on so that we can work with them to get them the resources they need to be successful."

## *Solution continued*

Dr. Jonathan Hilpert, Associate Professor, Educational Psychology, Department of Curriculum Foundations and Reading piloted the Student Success System within his Learning Theories course. "Some of my faculty colleagues were unconvinced of the usefulness of predictive analytics, fearing the standard error would be too large. I had a different mindset. Without further testing how could we know?"

Hilpert provided a baseline of data from five previous semesters to Burrell's IT team, and together, they ran an analysis on the current course. By the time students were about 10 weeks into the course, the Student Success System was predicting final performance with 70% accuracy.[5]

"I was really impressed, and I'd take these numbers," says Dr. Hilpert. "Of course there are outliers, and the system won't make decisions for you. But it will help you make decisions to benefit your students. If I had access to this kind of data in the classroom all the time, I'd definitely use it."

# Result

## AMAZINGLY CLOSE

The Georgia Southern team has been surprised by the patterns of behavior the Brightspace Student Success System is revealing. Of the 53,000 data points gathered to date on 3,155 students, the tool is able to predict a passing final grade with 82% accuracy at the course midpoint. With accuracy improving as students progress through the course, the system is able to predict with 87% accuracy by the 16th week of a course.[6]

"As we gathered to look at student grades and contrast them to the predictive analytics we were amazed how close we were. Some of our faculty were struggling with the concept of predicting student performance, but the more time we have, the more refinement we achieve and the closer we are getting," says Dr. Ludowise.

## LIKE TURNING THE LIGHTS ON IN A DARKENED ROOM

"Without these kinds of analytics, I like to say we are walking into a dark room filled with data with a spotlight. We can only focus on something narrow. The Brightspace Student Success System allows us to turn the lights on in the room to give everyone the ability to see the greater picture. The quality of our interventions will be much better, and we can more effectively move the needle on our retention and completion rates," says Dr. Burrell.

"Since we adopted the Brightspace Student Success System, every semester our advisors receive emails from students saying, 'I graduated because you helped me identify where I was struggling and gave me the help I needed to be successful.' Using predictive analytics in combination with our other advisory analytics makes a huge difference in our students' retention, engagement and graduation rates," says Dr. Ludowise.



Correlation of Final vs Predicted Grade By Course Week

[6]Ibid.
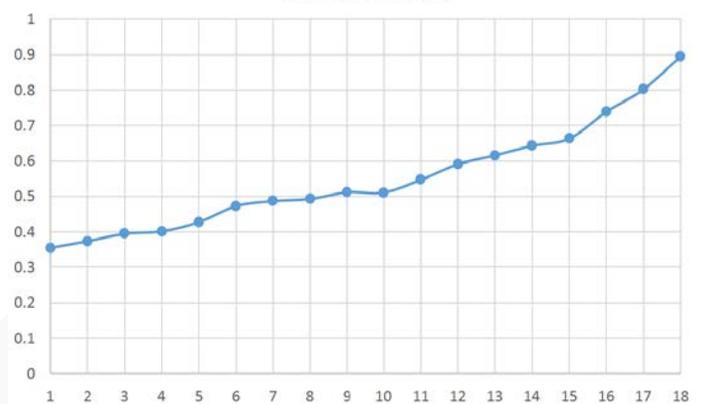
# About D2L

D2L is the software leader that makes the learning experience better. The company's cloud-based platform—Brightspace— is not a common one-size-fits-all learning management system (LMS). It's easier to use, more flexible, and smart. With Brightspace, you can personalize the experience for every learner to deliver real results. The company is also a world leader in learning analytics: its platform predicts learner performance so that you can take action in real time to keep them on track. Brightspace is used by learners in higher education, K–12, and the enterprise sector, including the Fortune 1000. D2L has operations in the United States, Canada, Europe, Australia, Brazil, and Singapore. | www.brightspace.com

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