Accelerating Student Success though the Power of Collaboration and Innovation

NACADA Annual Meeting • Friday, October 7th, 2016
The University Innovation Alliance
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The University Innovation Alliance (UIA) is dedicated to expanding opportunity and improving our nation’s economic potential by helping more students from all socioeconomic backgrounds graduate from one of our nation’s leading public research universities. Our eleven member institutions are working together to develop, scale, and share innovative solutions that help students overcome academic, financial, and personal obstacles to success and earn a high-quality college degree from a major research university. As key student success champions, academic advisors are at the heart of the large-scale student success projects pursued by the UIA.

Since launching the UIA in September 2014, the Collaborative has succeeded in moving from three to 10 campuses that have adopted and deployed cutting-edge predictive analytics programs to help identify and intervene with students at risk of dropping out of college. Advisors’ input has been front and center. Cross-functional teams at each institution are continuously learning from each other’s successes and challenges as they implement predictive analytics systems and incorporate data insights into advising practice, each customizing their approach to the local campus culture and advising structure.

Three UIA institutions who were already utilizing predictive analytics led the way during the 2014-15 academic year: Georgia State University with EAB’s Student Success Collaborative, Arizona State University with their homegrown eAdvisor platform, and UT Austin with both Civitas and a homegrown four-year graduation rate model. After learning from their peers, Oregon State University decided to adopt the Student Success Collaborative from EAB, the same as GSU.

Currently, all the UIA institutions are engaged in a study on academic advisement funded by a First in the World Grant from the Department of Education. Monitoring Advising Analytics to Promote Success, (MAAPS) is a four-year multi-institution project that is dedicated to validating the effectiveness of technology-enhanced proactive advisement and predictive analytics in increasing retention, progression and graduation rates for low-income and first generation undergraduate students. Across the country colleges and universities are adopting technologies that enable them to use analytics to improve academic advising. UIA institutions are collaborating on the use of these innovative platforms to increase student success.

UIA Member Institutions:
- Arizona State University
- Georgia State University
- Iowa State University
- Michigan State University
- Oregon State University
- Purdue University
- The Ohio State University
- UC Riverside
- University of Central Florida
- University of Kansas
- University of Texas at Austin
Overview of Predictive Analytics

Predictive Analytics platforms utilize historical academic data to make predictions about future academic performance. The information is then used to empower students and educators to make decisions that will improve academic outcomes and increase student retention, progression and graduation. Predictive analytics offers a way for students and advisors to look at how similar students have performed in the past in order to avoid challenges in the future. Did the student get a poor grade in a key, pre-requisite course? Based on predictive analytics, an academic advisor can reach out proactively to help a student and point him to University resources, rather than having a reactive conversation once additional problems start to occur. Advisors can inform student academic choices with data rather than relying on their intuition alone. They can be reach out proactively at the first sign a student may experience trouble instead of waiting until after trouble threatens to undermine progress toward degree.

Predictive Analytics in Advising at Georgia State University

Through the use of predictive analytics and proactive advising interventions, Georgia State University has been able to increase semester-to-semester retention rates by 5 percent and reduce time-to-degree for graduating students by more than half a semester. This means that 1,200 more students are staying in school every year saving Georgia State University students more than $12 million in tuition and fees compared to the graduates just a couple of year ago. In 2012, Georgia State implemented EAB’s Student Success Collaborative (SSC). The platform uses 12 years of GSU historical data—160,000 student records and nearly 3 million grades—to create predictive analytics for how each current student will fare in any major and most courses that we offer. The system tracks students’ decisions and academic performances—from the courses the students register for to the grades they receive—in live time, and alerts go to advisors when a student goes off path. Our advisors then intervene proactively to connect students with university resources and to provide them with the information that they need to make adjustments and to get back on path for graduation. Last year, more than 50,000 individual student visits with advisors were prompted by these alerts. Below find several keys to the successful implementation of predictive analytics at Georgia State.

- **Have a clear objective when evaluating vendors and products.** Georgia State wanted a product that would allow advisors to intervene on the basis of actionable academic information. The goal an institution has for adopting a product and how an institution intends to use it should structure the adoption decision. Be sure the product meets the identified objectives.

- **Leadership matters.** Support for the use of predictive analytics included the President and the Provost of the University. This kind of support facilitates buy-in for large-scale advising improvements. Lack of support by senior administrators makes integration of predictive analytics more difficult.

- **Evaluate how advisement culture can be changed to support predictive analytics.** When Georgia State University implemented the SSC, the University also changed from a decentralized to a more centralized model of academic advisement. The University also went to a professional advisor model. When adopting new technologies, it is important to consider how the technology will be used and what structures are needed to support the effective integration of the new advisement tools.

- **Identify and train necessary skills.** The use of predictive analytics may require the acquisition of new skills in order to effectively implement predictive analytics at scale. Georgia State re-worked the job descriptions and qualifications for academic advisors to include the use of technology and proficiency in the interpretation of data to ensure a good match between advisor abilities and job expectations. It is important to communicate new job expectations to current staff and to give them opportunities for training so that they can effectively utilize the new tools.
- **Create a group of super-users.** It is helpful to create a group of advisors who are expert in the use of the campus predictive analytic platform. This can substantially increase and ease adoption at the University. These experts can be used to train others, trouble-shoot the product, and identify ways to integrate predictive analytics with academic advisement to improve student success.

- **Engage the campus community.** Implementing the SSC involved University administrators, deans, department chairs, faculty, advisors, the registrar’s office, IS&T, Human Resources, other units and students. All parts of the University academic community must be engaged in order to be successful. Georgia State University was able to implement large-scale change in academic advisement by identifying the goal of improving academic advisement through the use of predictive analytics and then working with each constituency in the University community to identify how it could contribute and support the goal. The University sought the feedback of faculty and administrators at key points in the process and their inclusion created support for its implementation.

### Predictive Analytics in Advising at Oregon State University

Although Oregon State University sought to implement the same predictive analytics tool as Georgia State University, the planning team knew that they would need to adapt the implementation process and the tool to their own institutional context and advising culture, which is significantly different from Georgia State. Oregon State University utilizes a decentralized advising model with each college (and in some cases, each department) coordinating and funding their own academic advising unit while Georgia State utilizes a model that centralizes academic advisement through the end of the junior year. Oregon State advisors were also already frequently utilizing a degree checklist and shared notes system for their appointments (Ellucian’s DegreeWorks), which the campus planned to continue alongside the new predictive analytics platform. Several elements assisted OSU in successfully adapting and implementing predictive analytics.

- **Don’t reinvent the wheel.** Whenever possible, OSU tapped existing committees to contribute feedback and expertise to the project rather than creating new groups. Examples include soliciting feedback on the tool and advisor training from the Advising Technology Committee and seeking advice from the Diversity in Advising group when deciding whether to incorporate demographic information into the tool.

- **Build on past successes.** OSU modeled their implementation of the Student Success Collaborative off of the recent (c. 2010) successful implementation of the DegreeWorks system.

- **Create campus-specific resources.** The product owner and UIA fellow created OSU-specific resources for advisors, such as a user’s guide, featured stories about how advisors are using the tool, and a private discussion board for sharing ideas and community building around usage of the platform.

- **Select the right product owner.** OSU selected a product owner from the exploratory advising unit who frequently works across all of OSU’s academic colleges and was already well-respected by the advising community. This framed the implementation as an institution-wide effort which was necessary to gain buy-in from the college-based leadership and advisors.

- **Maintain frequent communication with stakeholders.** The planning team provided status updates to the campus leadership (vice provosts, deans, institution-wide committees) as well as the academic advising community on a regular basis.

- **Retain department and college autonomy in decision-making.** The product owner and UIA fellow facilitated sessions with groups from each college including associate deans, department chairs, head advisors, and advisors to assist colleges and departments in making decisions about how to customize the platform for their degree programs. Such broad involvement increased knowledge of the tool as well as buy-in for utilizing the tool.
Select and engage academic advisors as campus experts. Following the full campus rollout, OSU selected two academic advisors through an application process to complete an intensive training series and test out new outreach strategies with their advisees. These two advisors will then host a workshop for the rest of the academic advising community teaching what they learned. As compensation, they each receive a small professional development stipend ($250). OSU found that academic advisors gained more in learning from their peers and could more easily translate the training to action.

However successful, change cannot be accomplished by a new technology alone. The Student Success Collaborative predictive analytics implementation is one part of a campus-wide movement to a more proactive and comprehensive advising approach at OSU. Other parts of this movement include increasing advising capacity in part through new hires and providing more professional development and collaboration opportunities for advisors, especially around supporting students from diverse backgrounds. Technology tools can help facilitate and support such changes but the tools don’t create the change by themselves.

Six Lessons Learned from Implementation and Collaboration

1. Utilize local experts to deliver information and trainings. Administrators, faculty members, and academic advisors were more engaged and open to learning about the Student Success Collaborative when the information was delivered by a local expert (a well-respected advising administrator) than when presented by outside consultant from the technology vendor. The local expert understood the campus culture and could address unique questions and issues that arose.

2. Keep the technology team involved throughout the project. OSU found it helpful to have their technology team (computer programmer, business analyst, and student data expert from the Registrar’s Office) involved throughout the implementation process rather than only through the system set-up and pilot testing. They assisted (and continue to assist) as minor technological issues were discovered in the latter phases of implementation.

3. Consider where the new predictive analytics tool will fit in the existing advising technology landscape, including looking ahead to future upgrades to existing tools. Advisors in the OSU pilot group expressed concern about technology fatigue (too many different systems to use; too little time for actual conversations with their advisees with so many technologies involved). In response, the product owner developed a document to be shared with advisors during the trainings that clearly outlined the tasks to which each advising tool was best suited.

4. High tech can enable high touch academic advisement. The use of technology can increase the level of personalized academic guidance a student receives. Even at large, public, research institutions such as OSU and GSU, the high-tech use of predictive analytics in academic advisement can facilitate greater and more timely interactions with students. It gives students at big schools the kind of attention that was once only possible at college and universities with smaller enrollments.

5. Improving academic advisement helps students and helps the institution. The Georgia State experience demonstrates that student success programs done well more than pay for themselves. For each 1 percentage point that Georgia State increases its overall retention rates, an additional $3.1 million in tuition and fees are generated. This revenue growth has more than covered the costs of the student-success investments that Georgia State has made.

6. Learn from a network of peers. When OSU encountered problems, the UIA fellow reached out the implementers at peer institutions (such as Georgia State and others in the UIA that were using the Student Success Collaborative) to learn how they had handled that particular challenge. Georgia State also benefits from these collaborations. It shares its expertise in predictive analytics but becomes part of a network of experts on student success initiatives in which it can learn in other areas.