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Enterprise Case Study: Democratizing Data to Increase Student Enrollment

How Coppin State University increased new student enrollment with analytics

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Summary

Catalyst

High school graduates in the US can choose to continue their education at one of thousands of institutions across the country. However, the prospect of graduating with huge debts has meant that applicants have become more discerning.

For institutions, it is not sensible to assume that students will enroll in sufficient numbers, and many institutions do not coordinate their operations sufficiently to provide them with the best chance of filling their classrooms. Coppin State University provides an example of how democratizing data and investing in analytics can increase freshman enrollment and student success.

Ovum view

Coppin State University had been using business intelligence tools and analytics since 2004. However, it was the appointment of a new president that truly changed the university's culture. The president enforced data-driven decision-making and the policy of data democratization, which eliminated siloes, encouraged transparency, and created a collaborative and open culture. In addition, Coppin State University partnered with Blackboard – an education technology company that was responsive to the university's needs as it strived to be responsive to the needs of its stakeholders – and provided training programs that brought together a range of functional practitioners who provided context for end users.

However, for the university to attract more students, it took more than an investment in analytics. This hinged on a culture where data transparency became the norm, with strong leadership, well-designed communication and training, and a maturing relationship between business and IT executives, and with Blackboard. In Ovum's view, as institutions are increasingly being held accountable for student success, the arguments for developing a data-driven culture and strategically leveraging analytics become more compelling.

Key messages

- Democratizing data means that people trust the findings and are more likely to engage in data-driven decision-making.
- Coppin State University implemented a top-down approach to leveraging data and analytics to increase new student enrollment and support student success.
- Coppin State University eliminated siloed data efforts by involving all internal stakeholders and creating a student success council.
- Blackboard became a partner to Coppin State University in its mission to democratize data and have all internal stakeholders focused on increasing student enrollment and success.

Recommendations for the higher education industry

Recommendations for institutions

Get data governance right from the outset

Many data-related projects fail because insufficient time and effort is invested in the raw data itself. Although the analytical dashboards will enable users to "slice and dice" the information, without commonly understood definitions, users will be comparing apples with oranges. After designing the permission levels for altering the master data set, institutions need to agree on a common set of definitions for common activities such as enrollment. Only once there is commonly understood vocabulary can the projects proceed to designing tools to interrogate the data.

Analytics should not be used for punitive measures

Given the turbulent nature of higher education and pressures to increase outcomes, faculty may be concerned that analytics projects are tools to scrutinize faculty performance and justify redundancies. Institutions should explain the project's objectives at the earliest possible opportunity, followed by the types of data that are being included and, perhaps more importantly, excluded. The data should be used to understand a student's background and how they progress through the institution, and to therefore inform how the institution encourages different members of the community to enroll. Although Coppin State University's strategy was to democratize data by opening it up to a wider audience, it came with responsibilities to avoid anarchy. Institutions should still monitor how the data is being manipulated and what data sets are extracted.

Create a student success council

A key element of embedding analytics across the institution is ensuring that stakeholder groups have input into how it is delivered. The implementation of analytics across Coppin State University needed both the buy-in and participation of many different departments. The university established a student success council, which included not just the president and the CIO but also representation from academic affairs, faculty, admissions, student government, student affairs, and marketing and communications. The cross-functional team had the right people in the room regardless of their department's place in the institution's structure. As a result, they were able to make sure the data definitions and filters made sense, and to make recommendations for continuous improvements to the Blackboard solution.

Recommendations for vendors

Make the heavy-lifting stage as painless as possible

Often, institutions have to sell the solution internally, and faculty and staff can be skeptical about the project timeline. Vendors should aim to complete the data extraction exercise rapidly so that they are in a position to show basic dashboards to end users (managers, administrators) as quickly as possible. A successful show-and-tell exercise with end users will allay concerns and buy time for the remainder of the project. The upfront investments will mean that there is more time to focus on data validation.

A consultant should be more than a tech geek

There are very few institutions with sufficient resources to build a full-time analytics department, which deans, provosts, and administrative staff need in order to use the platforms themselves. Vendor account representatives must have regular meetings with institutions and understand the role the solution has in running the institution. The account teams need to be able offer advice regarding the overall process, not just provide technical expertise.

Make tools user- and cost-friendly

Not all staff members will embrace an analytics solution, and costs will be another barrier to adoption. The solution needs to be user-friendly so that both a data scientist and occasional user in the communications department can extract the information they need. Delivering a user-friendly solution will make the business case for investment much easier.

Provide a platform for data and analytics discussion in the community

Vendors must make a commitment to support analytics customers by creating a community in which institutions can collaborate around data and analytics in higher education, and share best practices. This is significant because the industry needs vendor partners that focus not only on their products but also on building a community in which institutions can share good practice, in turn driving a better return from student success and analytics activities.

Understand the business of higher education as well as technology

Vendors should be able to put technology into the business context. The solution should not be about technology but how it supports the running of the institution. If vendors create and disseminate valuable, relevant, and consistent knowledge that provides solutions to the challenges in higher education, then institutions will see that vendors share their goal of moving the needle for their faculty and students. At the end of the day, the vendor name and technology need not always be front and center. Rather, it is the knowledge, experience, and advice that vendors can provide that holds much more value.

Leveraging analytics to reverse falling enrollment levels

Setting the business context

Increasing student enrollment in the face of demographic shifts

The higher education industry has many similarities to consumer goods markets. The customer has plenty of choice and is free to exercise this choice as they see fit. However, choosing a higher education institution has more impact in the longer term for students (gaining qualifications that will help them get a well-paying job) than their choice of mobile phone contract.

Well-regarded brands can charge a premium, and have to take steps to cope with high demand, while challengers need to devise innovative ways to maintain a foothold. Ivy League institutions are less concerned with enrollment numbers, and instead they focus on managing demand levels. In addition, their balance sheets are underpinned by alumni endowments. Other revenue streams include attracting overseas students and investing in residential facilities to differentiate the institution.

More specific promotional tactics for the institution include engaging with guidance counselors (to direct prospective undergraduates to the institution) and improving its profile on college comparison sites such as College Confidential, as well as on social media platforms. In addition, institutions need to use open days to enable prospective students to sample campus life.

However, to generate visits and online traffic, institutions need to identify potential students and take steps to recruit them. The starting point should be the current intake and the local community. Institutions need to understand the aspirations and academic qualifications of the current intake and identify equivalents in the local area.

Furthermore, institutions need to broaden their horizons and look to boost enrollment numbers by promoting themselves to local high school graduates. They must also recognize the broader role they play in providing their local economies with graduates that match the prevailing needs of local companies.

Coppin State University is committed to providing access and diverse opportunities for students

Coppin State University is unique in that it plays a key role in educating the residents of Baltimore, Maryland, throughout their lives by operating a childcare center, an elementary and middle school, and a high school. The institution describes its student intake as multigenerational and looks to differentiate itself by serving the needs of nontraditional students, as well as those straight from high school and community colleges. According to the 2010 census, of Baltimore's population of 621,000, 52.6% had completed high school and 25% had a bachelor's degree.

Coppin State University also works with local businesses and governmental and nongovernmental agencies to understand what it needs to do to provide graduates that meet their workforce demands, and thus strengthen the economic development of Baltimore. More recently, the university began expanding its enrollment numbers by tailoring courses and programs so that working adults could gain new skills and qualifications.

Enrollment at Coppin State University fell by 5.3% from 2011 to 2012, and by 6.8% between 2012 and 2013. Focusing on recruiting older students alleviated some of the pressure, but the institution needed new ideas and leadership to stop the falling enrollment numbers. Not having deep pockets meant the university had to find innovative ways to attract students.

Coppin State University leveraged its assets and set goals to improve student enrollment and success

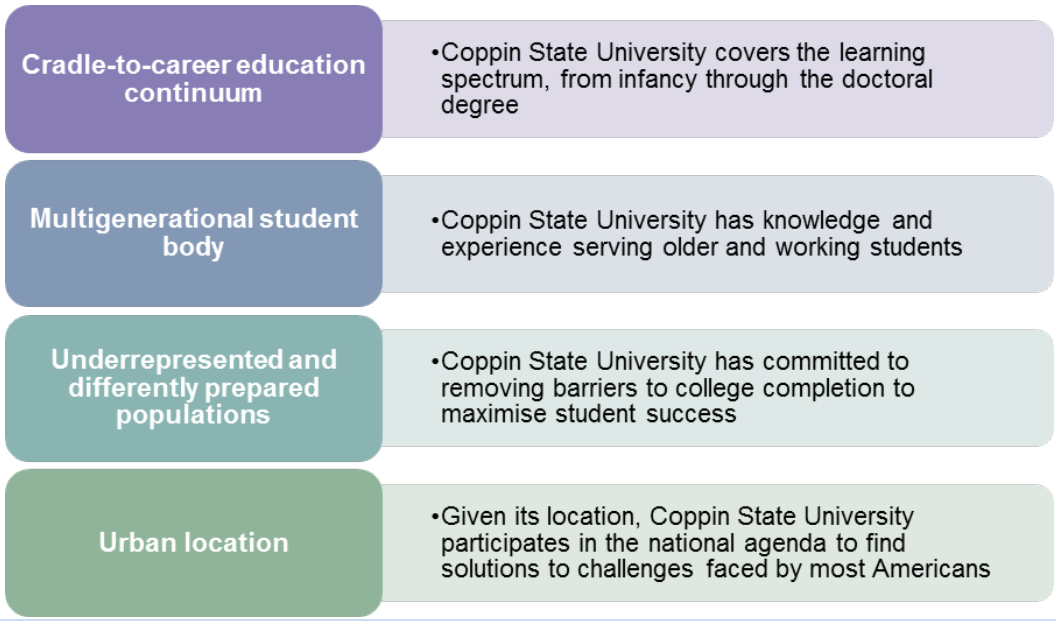
A number of factors were adversely affecting the numbers of students commencing their studies at the institution each fall, including limited financial support for students and a drop in the number of 18-year-olds in the local area. Another factor compounding this was the fact that Coppin State University competes with 12 other institutions to attract local students. Put simply, it was a buyer's market, with a dozen institutions competing for a falling number of students. Coppin State University's key assets were attracting students from different age groups and backgrounds and supporting individuals' educational needs throughout their lives (see Figure 1).

The university's goal was to enable its students to graduate in four years or less, and to help them succeed in their careers. This could have been achieved only by designing courses and policies that supported student learning both inside and outside of the classroom. Technology had a role in providing the IT infrastructure to support student learning, and it was the application of analytics that

would enable Coppin State University to attract students and help them to be successful. To deliver on all of its objectives (see Figure 2), the institution developed a campus-wide culture of continuous excellence by leveraging the use of descriptive and analytical data.

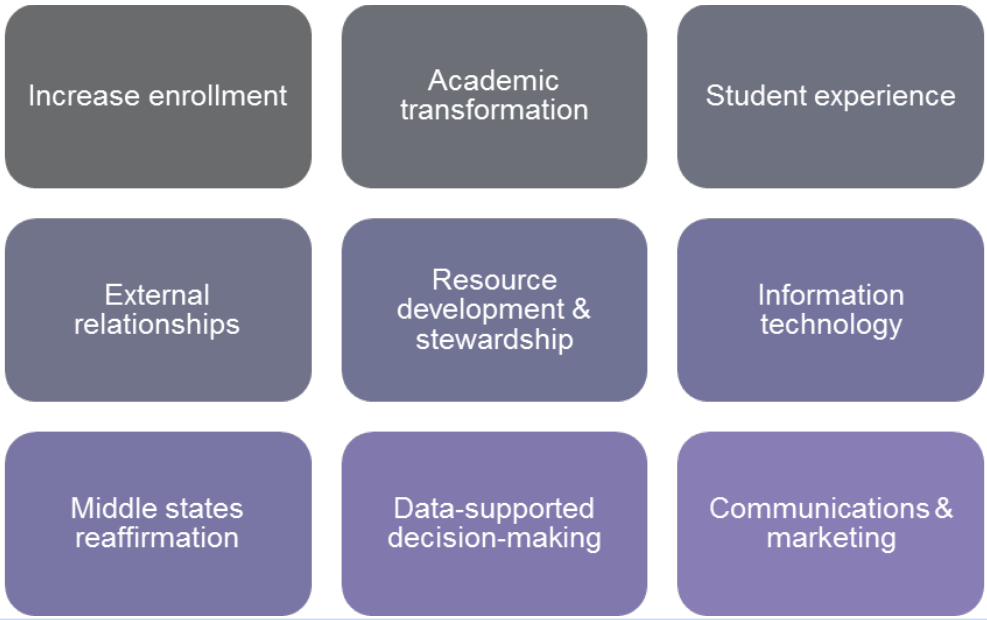
Coppin State University's leadership (cabinet) decided that campus data concerning items such as financial aid and financial management would not be part of the process. Only data related to student success would be involved. It was also decided at the outset that there would be no exceptions, with data from all the colleges and programs being included. This step would eliminate silos and avoid haggling over access, which meant that everyone had all the applicable data at their disposal. Moreover, the shared governance model meant that students, student affairs, accounts, marketing, communications, and finance teams could use the same data sets. The portal had between 100 and 150 users, which was a fourfold uplift compared with before the project started. Some of the deans, chairs, and faculty were hesitant at first, and the OIT (Office of Information Technology) partnered with one of the deans as a champion and ran "myth-busting" sessions to demonstrate the veracity of the data and benefits of removing silos.

Figure 1: Coppin State University key assets



Source: 2017 Mission, Vision, and Goals, Coppin State University

Figure 2: Coppin State University goals



Source: 2017 Mission, Vision, and Goals, Coppin State University

The role of the Office of Information Technology (OIT) in solving the problem

Existing landscape and solution selection

To some extent, Coppin State University had been using analytics since 2004, but in that time the IT department had experienced some issues with deployment. The IT department decided to improve this by promoting the use of analytics on campus.

All of the university's data was housed in its PeopleSoft enterprise resource planning (ERP) system. Coppin State University was using iStrategy for the analytics components and ProClarity (a Microsoft subsidiary company) as the third-party business intelligence (BI) tool. When iStrategy was acquired by Blackboard (and became a part of the Blackboard Intelligence suite), Coppin State University had some concerns that it would not be a priority for Blackboard. However, Blackboard quickly built a close working relationship with Coppin State University and alleviated those concerns. The partnership was, in fact, extremely positive for both the university and for Blackboard. Coppin State University needed an intuitive and cost-effective system, and Blackboard needed to demonstrate to the market that iStrategy would be high-priority, and that its customers would not be left in a state of flux following the acquisition. The university felt that iStrategy/Blackboard Intelligence would be stable and user-friendly for both faculty and back-office staff.

Bringing the strategy to life

Coppin State University's president became a catalyst for change, and was the greatest advocate of data democratization and the use of Blackboard Intelligence at the institution. As a result, staff were unable to ignore the initiative, when it had support from leadership. Policy decisions would not have been taken without reference to the data, which meant that individual colleges could not exclude their data sets. The CIO is a cabinet member and accordingly attends its meetings – which does not happen at every institution – to eliminate siloes and have an open discussion about the project from

both a business and a technical perspective. Following this executive buy-in, the first task was to confirm data definitions. Put simply, Coppin State University needed to have a common understanding for terms such as "officially active" or "enrolled," to make it easier to communicate across the institution.

Once the system was up and running, the IT department implemented a training program. The training involved scheduled sessions with departments, which were followed up with refresher sessions. For Coppin State University, the key to a successful training program was having members of each functional area to help contextualize the software for the users, rather than making the sessions all about the technology. The IT department then focused on supporting power users who would be helpful in spreading the use of data. Given the internal resource constraints, the university purchased Blackboard's professional services to help with the implementation. As a result, the key milestones of the project occurred much faster.

Additionally, Coppin State University created a student success council, as a subset of the shared governance council it had in place, to ensure all stakeholders had input into the project, and had the ability to interrogate the data.

Outcome assessment

Coppin State University had experienced success increasing its enrollment by targeting older students. However, it was after the arrival of its new president in July 2015 that the institution experienced a dramatic upturn in new student enrollments. The university had made investments in BI tools, and there was a vast amount of data for stakeholders to look at and leverage. However, not all departments were accessing the dashboards. The president has successfully instilled a culture at Coppin State University that enforces that institutional decisions cannot be made unless they are supported by data, especially when it comes to student success. Furthermore, by publishing a vision document that outlines the focus on enrollment, academic transformation, and student enablement, with data and analytics at the heart of the decision-making process, the university is achieving its goals.

In 2016, there was a 50% uplift in freshman enrollment following years of decline. This was the result of democratizing data to have all stakeholders focused on Coppin State University's ultimate goal, which was to increase student enrollment and success. The implementation of iStrategy/Blackboard Intelligence resulted in a fourfold uplift in the number of users accessing the portal. Both faculty and staff are now leveraging Blackboard analytics because they have confidence that the data is accurate, and has been provided by the entire institution.

Today at Coppin State University, data utilization frames each policy conversation, and decisions at the institution are not made without consulting the underlying data. Students are also able to utilize the data to inform their own success, and the university is offering drop-in sessions to demonstrate how students can interpret the data. Since the initial deployment of Blackboard Intelligence, Coppin State University has added the Financial Aid and Finance modules in addition to Student Management. Moving forward, the university aims to leverage analytics to control operating expenditure, and to reallocate more resources to student success.

Lessons learned

Hire forward-thinking leadership

Leaders need to not only be the catalyst for change but also continuously demonstrate their commitment to the plan with their actions. The president is the key user of the Blackboard portal. This reinforces the strategy on an ongoing basis.

Break down siloes

For democratizing data to work, leaders need to remove silos at the first opportunity. This step should be aligned with updating data governance policies to allay lingering concerns regarding how the data is stored and used. By having no exceptions to the rule, leaders can focus straightaway on what the data is showing rather wasting time negotiating access and dealing with data anomalies.

Include CIOs in cabinet meetings

If data is going to be at the heart of policymaking, then the CIO needs to be in the cabinet meetings. This not only is a symbolic measure but also enables the CIO to capture concerns and recommendations. Having an IT perspective in cabinet meetings also means that plans are based on the realities of the department's resources and capabilities.

Find a champion for data and analytics usage

Have data analytics champions across the institutions to make analytics part of employees' daily lives. Advocates and power users within departments will embed the culture change locally.

Do not neglect the data-definition stage

It is easy to focus on the analytical tools, but without commonly understood terms, projects will be doomed to fail. This is an essential step because the data will be utilized across the institution, and all users need to be confident that data sets are comparable.

Involve multidisciplinary teams when delivering user training

Having multidisciplinary teams involved in delivering user training makes the sessions practical and not just about the technology. The IT staff can deliver training that instructs users in how the solution works, but having the support of practitioners brings the sessions to life by explaining how its application will improve trainees' working lives.

Appendix

Methodology

Ovum Enterprise Case Studies leverage in-depth interviews with key enterprise stakeholders as well as a review of any available documentation such as strategic planning, RFP, implementation, and program evaluation documents.

Further reading

Finding Insight in an Ocean of Data, IT007-000942 (April 2017)

"An increase in student attrition reinforces the need for a robust student success strategy" IT0008-000307 (March 2017)

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