

Reimagining Student Success with Data Insights

Colleges discover the value in leveraging data insights and Google's cloud-based solutions



As the saying goes, “unprecedented times call for unprecedented measures,” or rather, extraordinary challenges present the opportunity to be solved through innovative, novel solutions. Challenges that higher education institutions encounter are no exception.

One such example is the [University of Minnesota Rochester \(UMR\)](#), faced with a critical challenge: Too few people statewide are becoming qualified health professionals, and without a solution, the consequences could be dire.

Within the next five years, the State of Minnesota is projected to face a shortage of more than 90,000 health workers due to a combination of an unreliable college-to-clinic pipeline and unplanned interruptions in education. Disparities in educational attainment are a critical element of this challenge. COVID-19 deprived students of the in-person learning experience required to deepen their knowledge of their field and led other students to step away from academics to focus on challenges at home or to safeguard their own health.

The university wanted to create a hands-on, immersive, health care leadership program that was more equitable, affordable, and applicable to the real-world situations students face once they graduate. University leaders and the Mayo Clinic envisioned a shortened, year-round, work-

linked Bachelor’s degree in health science - with the ultimate goal of quickly getting well-educated students into the field upon graduation.

With the leadership and support of University of Minnesota’s President Joan Gabel, yet without a model to follow, Chancellor Lori Carrell at UMR knew she needed a non-traditional, innovative approach to embark on their journey of digital transformation to make their vision a reality. UMR faculty are experienced innovators, as the Rochester campus of the University of Minnesota was launched in 2009 to design new models for student success. Carrell explained that “A reimagined university requires a relentless devotion to the learner, a radical commitment to data driven educational practice and partners who share value but bring distinctive expertise.”

Not a “Cookie Cutter” Approach

For support, the university approached Google with their challenge, and requested expertise around which Cloud solutions could meet their complex needs. Coupled with an extensive lineup of Cloud Services and an innovative human-centered design approach, Chancellor Carrell and her colleagues worked closely with the Google team to craft a customized vision for success. With the goal of improving student outcomes and equipping colleges with

the data insights they require to evolve into more flexible, student-responsive institutions, [Google Cloud’s Student Success Services](#) offers a wide spectrum of services that UMR could tap into, including solutions in areas such as digital transformation of operations, learner insights, and the classroom of the future.

“Customization and a deep appreciation of the unique school context is essential in these types of initiatives,”

says Sandra Nagy, Managing Director at Future Design School, an organization that leads transformative projects in education and served as Google Cloud’s design partner on this project. “We love working with Google Cloud because they know that every institution has different needs and that those need to be understood before any technology is built. Their approach is the opposite of cookie cutter and leads to greater success.”

The University of Minnesota Rochester is acting upon what [a growing body of evidence](#) shows, that academic monitoring and improving student connections can do for student retention. By using data insights, institutions can pinpoint areas to improve student outcomes. According to EDUCAUSE, an organization that advocates for IT solutions at colleges, institutions must focus on student success.

“We’re engaging in more conversations about student success than ever before,” says Steven Butschi, Director of Education for Google Cloud. “If you look at college strategic plans today, you’re more likely



to see an emphasis on student success. Institutions are looking for inexpensive and sustainable ways to use data toward that goal.”

Even as college leaders have come to see the value in technology, they still often

hesitate due to high costs. Google Cloud’s Student Success Services addresses their concerns by offering a wide range of customizable solutions; institutions can choose how many of them they can use.

“It’s like a buffet—we build out the solutions that meet an institution’s specific needs, but it’s important that institutions have an array of options,” Butschi says.

Further explaining “When institutions price the system out by cost per student, the solutions are an affordable resource to pursue. The return on investment is significant because institutions retain more students. Universities tell us the cloud pays for itself because the system lowers attrition rates.”



Customized Services for any Vision

Much of the data that provides a foundation for student success programs remains untapped or languishes in old systems that lack powerful analytical capabilities and the ability to provide meaningful insights to meet the transformational change institutions need. Google Cloud’s Student Success Services, by contrast, represent a chance for a technological metamorphosis through a suite of tools and services that provide insights to unlock students’ potential and keep them on the path toward success.

Institutions like the University of Minnesota Rochester and others, have the freedom to include the services they want while developing their own platforms. Institutions can leverage a range of top-notch services without the high cost associated with unwanted software components. Instead, solutions are customizable to their institution, ensuring that they get the most value out of it.

“This is a very competitive space. One of the advantages we offer is flexibility. Students require access outside the hours of nine-to-five. By delivering those services, an institution can take a major step toward developing equality in learning for people who fall outside the usual channels,” Butschi says.



Services offered by Google Cloud fall into three categories:

Digital transformation of operations

A way to build flexibility and cost effectiveness at scale.

Classroom of the future

How to reinvent collaboration and personalized learning at scale.

Learner insights

How institutions can better understand and serve all types of learners.

In the case of the University of Minnesota Rochester, leadership chose custom solutions in all three areas that are offered as part of Student Success Services. With Google Cloud services, students at the university are “nudged” towards behaviors for academic success such as getting reminders about unfinished assignments and badges as they exhibit mastery of pedagogical competencies. Administrators,

on the other hand, are given access to custom dashboards that provide them a real-time assessment of how students are performing in comparison to other classmates. At the end of the program, Google Cloud’s ability to link students with prospective employers through their classroom of the future solutions will help them get jobs.

The now three-way medical-education partnership has

resulted in [NEXT GEN MED](#), an accelerated program slated to begin in the 2022-23 academic year. It hopes to fundamentally change health sciences education with an integrated, career-connected curriculum supported by a flood of data-driven insights that students can use to improve their performance— both inside the classroom and as vital healthcare workers in their local communities.

Beyond UMR, many higher education institutions have found a multitude of uses for Google Cloud's services, choosing to focus on one set of solutions, further highlighting the flexibility, and customization of the tools:



To provide additional support to their global student body and extend their academic advising services, [Penn State World Campus](#) developed a virtual response system that is equipped to answer basic advising questions, with 90 percent accuracy,—freeing up the staff's 48 advisers to work with students who need more than the most fundamental help.



To engage students through analytics, and provide educators with the opportunity of early intervention, [the University of Michigan](#) built a scalable, open source tool for students to visualize their own learning, named My Learning Analytics, or MyLA. The platform visualizes course data and activities so students can monitor their learning behaviors, and is seen as especially important for first-generation college students who might need an additional measure of direction or help.



To broaden the availability of its [Unizin Data Platform](#) (UDP) to all institutions, Google Cloud has teamed up with Unizin, a nonprofit consortium of 14 leading higher education institutions. Unizin created the UDP, an integration and warehousing solution for data generated by learning tools, to help institutions share and analyze data from Learning Management Systems and Student Information Systems, such as video management tools, proctoring tools, assessment platforms and more. The UDP collects, cleans, models, curates and stores all teaching and learning data to create a holistic view of each student.



Looking to the Future of Education and Beyond

As the need for new success services continues to grow, Google Cloud is designed to expand student-services possibilities. It puts artificial intelligence (AI) to work uncovering valuable insights from institutional data, and then helps academic decision makers find ways to design new personalized solutions around those insights.

“Student success represents a long continuum—everything from helping a student find the right institution, to helping them sign up for the right courses, to linking them with the connections and communities that will help them

thrive,” Butschi explains. “Even beyond that, making decisions on student services involves seeing how they go about learning, or how to pair them with internships or jobs. Then, for lifelong learners, service means letting them know about relevant and newly-available credentials they can take advantage of.”

As the desire for personalized education and support continues to grow, Sandra Nagy, from the Future Design School concludes, “Institutions appreciate flexibility and scalability. They ask, ‘How can we scale and grow this to include other programs?’ We

design solutions that empower ongoing customization, innovation, iteration and integration. The context is ever evolving and so the technology itself needs to support that pace of change.”

With Google Cloud’s wide range of Student Success Services, institutions are able to leverage solutions to draw meaningful data insights that better serve their students, positively impact their local communities with graduates who are prepared to take-on challenges, and still maintain their institution specific experience.

To learn more about how your institution can get started leveraging data insights and AI, we invite you to [register your interest](#) for a design thinking workshop, where you can learn to apply Google’s innovative design principles to develop breakthrough ideas and tackle your specific higher education challenges.

