



Serving the Unique Needs of Adult Learners

Project Kitty Hawk meets the challenge of helping the University of North Carolina System attract more adult learners





Is there an enrollment cliff around the corner? It's a question on the minds of colleges and universities around the country. During the pandemic, higher education saw [an 8 percent dip in enrollment](#) that, to a large extent, hasn't recovered. It has many administrators wondering how to fill the gap caused by a drop in attendance.

In the United States, more than 39 million adults have some college experience, but no degree. Adult learners, the population older than the traditional 18 to 24 year-old college student, need different support and more flexibility than their younger counterparts. Adult learners are an underserved population that colleges and universities should pay more attention to, especially in the face of declining enrollment. Talent shortages in the technology and healthcare sectors due to workers not having the necessary skills presents a significant opportunity for additional enrollment, if colleges and universities can appeal to adult learners.

Finding a match between supply and demand

The state of North Carolina's educational attainment goal is to have two million residents with a degree or high-quality credential by 2030. To help the state reach this goal, the University of North Carolina System (UNC System) knew it needed to take a new approach to better serve the adult learner population. Project Kitty Hawk was funded by a \$97 million investment from

the state to help the UNC System reach more adult learners, and thus help the state meet its educational attainment goal.

Project Kitty Hawk is a non-profit affiliated entity of the UNC System created to partner with institutions within the UNC System. As a tech company, it enables the institutions it partners with to bring more degree programs online. These programs have a specific focus on adult learners.

President and CEO Wil Zemp describes Project Kitty Hawk as a tech company providing services to the institutions "allow[ing] them to meet their mandate and mission when it comes to adult learners." Project Kitty Hawk developed a state-of-the-art digital platform, built on Amazon Web Services (AWS), for UNC System institutions to use to bring degree programs online. From the student's perspective, they are taking courses through the partner institution, but behind the scenes, they're using the Project Kitty Hawk platform.

Starting out, the Project Kitty Hawk team embarked on months of research into the needs of and challenges experienced by adult learners. "We're working in partnership with each school on what that experience needs to be," says Zemp. "We're very privileged to be granted the trust with this amount of money, and so we've got to be very transparent. But also, we've got to move very, very fast to bring more adult learners into the UNC System, which will help the state meet its educational attainment goal."

Services include managing student enrollment, assisting the institutions with credit transfers, offering student coaching and career services, and recruiting for faculty members. Project Kitty Hawk is also focused on workforce development, and it invites feedback from employers across multiple industries, such as healthcare and technology, to influence curriculum development. By doing this, university programs can maximize tuition assistance and upskill or re-skill workers to meet talent acquisition needs. They also collaborate with employers to ensure the curricula and programs at the partner institutions meet market demands.

In October 2023, Project Kitty Hawk launched its first online degree program – a Registered Nurse (RN) to Bachelor of Science in Nursing (BSN) program with North Carolina Central University (NCCU), a Historically Black Colleges and Universities (HBCU) institution in the heart of Durham – with many more programs slated to launch in 2024 with NCCU and another institution within the UNC System. The existing curricula and program offerings have been “re-imagined” with a best-in-class online experience in mind, coupled with new information gathered from interviews with employers across the state. The early results have been encouraging, as the number of students within this RN to BSN program powered by Project Kitty Hawk is double compared to previous iterations of the program.

Project Kitty Hawk’s technology systems, created by AWS, are built on an integration platform that features robust data management and analytics capabilities — reducing the burden of managing the services needed to host online academic programs. The Project Kitty Hawk digital platform brings together a broad range of AWS Cloud technologies, including data lakes, analytics, visualization services, and an event-driven integration infrastructure that seamlessly connects best-in-class EdTech products into a single, managed integration for Project Kitty Hawk’s customers.

During the research phase, one of the demographics examined was military-affiliated learners across North Carolina. At Fort Liberty, about 7,000 service members transition out of the military every year with many looking for a new career for their post-service life. This population faces pressures to find new jobs with families to support. As Zemp points out, taking

classes at 10 a.m. on Tuesdays and Thursdays is a mismatch of need.

“We want to provide the institutions with another pathway,” he says. “Where the folks can take asynchronous classes and continue to be productive workers.”

The technology powering Project Kitty Hawk

Much of Project Kitty Hawk’s success hinges on the technology and, specifically, the student experience. “It needs to be situated in a way that’s intuitive,” Zemp says. “We take equity architecture and technology very, very seriously. We looked at the opportunity of having no tech debt and building from scratch.” In an institution, technical debt can occur when new technology is built on an existing, outdated infrastructure. Over time, problems caused by foundational technical issues are exacerbated.

Project Kitty Hawk collaborated with AWS to

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build the platform. The process involved diving deeply into the personas of the adult learners and acknowledging that for most adult learners, the experience of what an 18-year-old goes through in college doesn’t match up with the needs of an adult learner. This is often due to work obligations or family obligations conflicting with the necessary course work, even if they know a degree could benefit them long-term. It was also identified that adult learners often don’t understand the first steps in enrolling, don’t understand their options, and aren’t sure how they’ll pay for college. On the institution side, a lack of tools, methods, and staff limit the ability to reach this potential student base. Project Kitty Hawk and AWS began with a



“Working Backwards” engagement to envision a future state and identify what the success of the program would look like: What adult learner possibilities would exist with the addition of Project Kitty Hawk’s technology that otherwise wouldn’t exist? How would adult learner lives be improved?

AWS provided Project Kitty Hawk with best-in-class data analytics. Over time, as the data grows, the analytics will enable everyone interacting with the data to serve students better.

Working Backwards is Amazon’s process of discovery and invention that define and maintain focus with the end customer in mind. This process, guided by AWS Digital Innovation (DI) leaders, enables organizations to think big and innovate to develop a new product or service that solves a customer’s mission-critical problem or opportunity. The end result was alignment on the future state the team was working towards, an outline of the technical requirements, and

solutions that would meet the needs of the adult learners and the UNC System.

“The technical parts of the process are taking an idea and trying to build it out as a proof of concept and ultimately as a production solution,” says Mark Hampton, executive education advisor at AWS. “And testing it every step of the way to make sure that it achieves the intended outcomes.”

The answers lie in data

Project Kitty Hawk’s overall project success is tied to the success of the programs geared toward adult learners. “There’s a lot of benchmarking that can happen across student types and faculty types that can be useful to the [UNC] System... so that it can make decisions about resources,” Hampton says.

AWS provided Project Kitty Hawk with, what Zemp describes as, best-in-class data analytics. The analytics have some baseline metrics built on best practices, but Project Kitty Hawk can tailor and customize the analytics. Over time, as the data grows, the analytics will enable everyone interacting with the data to serve students better.

Hampton notes that institutions are increasingly relying on data to power student success efforts. “We have, in many cases, all of the answers we need to student successes in our own history,” he says. Examples include learning management systems and assessing if students watch an entire

online lecture or are completing all coursework. Over time, that data can predict student success with a particular course. Other data includes course loads in the first semester, down to the specific courses taken, as a predictor of overall student success.

However, institutions also need to be vigilant about the sensitivity of student information and the need for data privacy. Hampton notes that institutions need to be keenly aware that, “Biases, discrimination, and other unfavorable outcomes can be perpetuated if what we’re doing in the future is based on what we did in the past.” While there’s value in information, institutions should analyze it with a healthy amount of skepticism and question past outcomes.

As the data grows over time and with the right approach to its sensitivity and proper analysis, it gives institutions the ability to help future students succeed.

The next generation of learners

The World Economic Forum estimates that more than 60 percent of workers will require retraining between now and 2027. In North Carolina, this has already started to play out with frustrated employers who can’t find employees with the necessary skills to innovate and be productive to the levels needed.

“The mythology about automation taking jobs... the data is just not there,” says Zemp. “But what we do know is that automation affects jobs and causes folks to have to re-skill and re-credential. The institutions don’t have the capabilities and the processes to keep up with that.”

Project Kitty Hawk is a “North Carolina solution to a North Carolina problem,” Zemp says. He added that colleges and universities need to find a way to support and help adult learners and not hinder them based on schedules, lack of staff to answer questions, or a byzantine administrative process.

“Roll up your sleeves, get with the faculty, find out what they need or don’t need from technology,” Zemp suggests. “And it’s a very, very unique solution for what you’re in, but we are completely open source with what we’re doing, very transparent. If we can apply these best practices and lessons learned...then we can really change some folks’ lives.”

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If you’d like to explore how your institution more effectively reach student populations through cloud technology or how to engage the AWS Innovation Team, [contact us](#).

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