Enabling Student SuccessApple and Higher Education





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Overview

For more than 40 years, Apple has focused on creating and building products that support education. Quite simply, education is part of our DNA. It's a core value that we care about deeply and view as a basic human right.

We've learned that higher education leaders are increasingly focused on student success as the foundation of their strategic vision. They're defining success holistically to include both personal and academic growth, with the goal of preparing students for their future careers and life journeys.

Today's leaders recognize that providing equitable access to tools and resources is a critical step in enabling student success. This has become even more important with the rise of hybrid and online learning environments.

Many higher education leaders are developing strategic initiatives centred on providing Apple products to all students and faculty. Distributing Apple technology helps ensure equitable access to powerful tools that support a holistic approach to student success. This document is intended for higher education leaders who are interested in exploring how Apple products can help them create amazing experiences focused on student success.

"We want to level the playing field and place student success at the centre of everything that we do. Apple technology in the hands of all students, faculty and staff helps us to do that."

Dr. Eli Capilouto, President, University of Kentucky



Defining student success

Most higher education institutions define success based on the goal of ensuring that students graduate and are well prepared for life. Outcomes and indicators of this success could include student retention, educational attainment, academic achievement and holistic development, which are key focus areas for intellectual, emotional, social, ethical and physical development.

Achieving this holistic success requires supporting students both personally and academically. This can be challenging in a world where the modern campus experience includes in-person, online and hybrid environments.

Many colleges and universities are providing all students with Apple devices — such as Mac and iPad — to help ensure equitable access to tools and resources. The goal is to reduce technology costs, promote career readiness through digital skills development, optimize the overall student experience and provide a sense connectedness to the institution.

"Through the Digital Wolf Pack Initiative, we provide our students with the best available technology to increase their digital literacy and enhance their success in the classroom, so they are prepared for the new economy."

Dr. Brian Sandoval, President, University of Nevada, Reno

Spotlight O-

University of Nevada, Reno | Digital Wolf Pack Initiative

- The University of Nevada, Reno created the Digital Wolf Pack Initiative to support student success and enhance students' ability to learn new technologies.
- Apple technology helps power this vision by providing all students with a common learning platform in the form of iPad Air, Apple Pencil and Apple Smart Keyboard Folio.
- Access to Apple technology bridges the digital divide many students face. It also helps to ensure that every student has the tools and skills development resources they need to succeed.
- Faculty are given the same technology, which enables them to personalize the learning experience. It also allows them to promote the mastery of specific course content and expand students' digital skills.
- The annual NevadaFIT program is a key component of the success of the Digital Wolf Pack Initiative. This program offers students a one-week academic course at the start of the fall semester that focuses on iPad training and is enriched with peer mentorship.
- Ninety-eight percent of students who received an iPad through the initiative said that it's a valuable tool for their education.



Delivering great student experiences

College and university are a self-directed journey of discovery for students — for how they learn, who they want to be and what they're capable of accomplishing. Apple products are designed to give students everything they need to learn, express their creativity, explore their passions and create meaningful work.

Apple products are great for students. Here's why:

They're powerful enough for any workload. No matter the major, Mac and iPad can more than handle it. They come with the latest high-performance processors and are compatible with the apps professionals across every industry use most.

They're compatible with the tools students rely on. Mac and iPad easily run Microsoft 365, Google Workspace for Education, Adobe Creative Cloud and other education and productivity software. Students can leverage both existing institutionally supported software and assignment-specific apps to create, innovate and learn.

They work together seamlessly. With hardware and software designed for each other, every Apple device is intuitive and easy to use. Apple products are great on their own and using them together allows students to do even more — making it easier for them to stay productive, capture and organize ideas and collaborate with classmates.

They come with built-in Apple apps. Mac and iPad give students everything they need to connect and create — right out of the box. Pages, Numbers and Keynote help students collaborate with classmates and create beautiful, professional-looking documents. Messages, FaceTime and Mail help students stay connected with friends on campus and with family back home. And iMovie, GarageBand and Photos help them express their creativity.

They're designed to last. The sturdy aluminum unibody designs are sleek, durable, reliable and ready to hold up to the rigours of college and university life. And they're backed by world-class support, so students can rest assured that they're covered if they need it.

They include powerful privacy and security features. Apple takes a comprehensive approach to privacy and security. Apple products are engineered to keep personal information safe and to protect students' privacy by giving them full control over their information.

"Mac and its ecosystem of apps are truly designed for musicians, filmmakers, photographers, designers and all kinds of people, with the idea that they're going to be creating and collaborating."

Bradley Hughes, Director School of Music Production and Sound Design for Visual Media, Academy of Art University **They're accessible for everyone.** Every Apple product has built-in assistive technology to give all students — including those with vision, hearing, mobility and learning differences — the opportunity to learn, create and do what they love. Students can edit a video without using a mouse or trackpad, build a presentation without seeing the screen and take a perfect group selfie just by hearing how many faces are in the frame.

They're a launch pad for digital skills development. The intuitive design of Mac and iPad makes it easier for students to build a range of digital skills — from learning to build apps in Swift and developing podcasts in GarageBand to managing their time in Calendar and Reminders. These skills will serve them not only academically, but also in building career readiness.

They're easy to manage. Mac and iPad are incredibly efficient and effective to distribute and manage. Tools like Apple School Manager and mobile device management solutions help ensure that student devices are secure, private, accountable and running smoothly.

Good tools improve the way we work. Great tools improve the way we think. This is why students find it easier to cultivate their interests, talents and creativity with Apple.

"The Spartan Innovation
Academy has been a
transformational program
for our campus community.
The academy allows for
Spartans to connect, create
and communicate and has
fostered ingenuity between
our students, faculty and
staff. The program allows for
our students to have access
to cutting-edge technology
that they can use during their
academic journey and into
their professional lives."

Dr. Javaune Adams-Gaston, President Norfolk State University

Spotlight O

Norfolk State University | Spartan Innovation Academy

- Norfolk State University is the largest HBCU in the Commonwealth of Virginia. Spartan Innovation Academy was launched in 2021 to connect students to their studies on and off campus.
- Spartan Innovation Academy is powered by iPad Pro with Wi-Fi + Cellular, Apple Pencil, Apple Smart Keyboard Folio and AirPods Pro to promote seamless access to academic activities, enhance professional development opportunities and align to university retention efforts.
- Students also have access to MacBook Pro computers, depending on their majors, as well as iMac in the Innovation Center, which supports an innovative and entrepreneurial ecosystem in collaboration with the City of Norfolk and entrepreneurial organizations.
- Apple technology enhances Norfolk State's participation as a community coding centre in HBCU C², a national
 teaching and learning initiative that helps HBCUs bring coding and creativity to the campus and community using
 Apple's Develop in Swift program. HBCU C² strives to help build a skilled and diverse workforce for high-demand
 technical and creative careers.



Building a model for success

The traditional model of expecting individual students to provide their own technology has led to inconsistent and, at times, inequitable experiences.

When a digital initiative places the same Apple products in the hands of all students, institutions can deliver a consistent approach to technology that creates one seamless experience for its entire community. This expands the possibilities for faculty and staff to innovate, build and deliver consistent learning experiences for all students.

"iPad has become one of our most valuable tools," says Dr. Donna Henry, chancellor at the University of Virginia's College at Wise. "With more than 80 percent of our students receiving financial aid, our iPad initiative levels the playing field for our students. Faculty and staff are excited to implement projects that create community, enhance academic engagement and help our students develop technological skills to meet changing workforce demands."

To get the most out of their initiatives, higher education leaders say they focus their efforts on two main areas:

- · Creating an engaging learning environment
- · Supporting holistic student success

Creating an engaging learning environment

Today, the concept of an engaging learning environment has broadened far beyond the walls of traditional classrooms and lecture halls to all aspects of the student experience. Faculty who have successfully used technology to build rich, flexible learning environments have noted the need to retool their pedagogies to make them highly student centred. This means designing content and coursework that engages students and meets them where they are.

"There's a big opportunity to develop faculty on how to use technology from a student's perspective," says Dr. Nicole Kraft, associate professor of Clinical Communication at The Ohio State University. "This way, we can challenge students' creative brains in a way that's interesting to them — so they ask questions, make mistakes and really learn."

Katrina Carter-Tellison, vice president for Academic Affairs at Lynn University, expands on this sentiment: "With our iPad program, we haven't changed the curriculum or the readings, but our approach is different. It's more experiential. Now students are experiencing the readings the way they want to — whether it's through apps, alternative videos or explanations by our own faculty. There are multiple ways for students to understand and comprehend works."

"iPad helped us transform our approach from a faculty-centred environment to a student-centred environment that is equitable, relevant and affordable."

Dr. Ricky Ford, President, Northeast Mississippi Community College



Northeast Mississippi Community College | Smart Campus Initiative

- Equity, accessibility and affordability are the heart of the mission for the Smart Campus Initiative at Northeast Mississippi Community College (NEMCC). Over 90 percent of their more than 3600 students receive financial aid.
- To support the mission and level the playing field, NEMCC provides iPad and digital textbooks to all.
- A key success factor is NEMCC's commitment to developing a robust training program for their faculty and staff that's rooted in best practices for student-centred learning.
- Faculty champions have established a train-the-trainer model for professional development to help educate and inspire peers on how to design engaging learning materials. This approach also facilitates buy-in from faculty who continue to innovate using iPad in pedagogy and within hybrid learning environments.
- Over the past seven years, the college has seen an increase in student success (the percentage of students scoring
 A, B, or C in class) from 72 percent to 80 percent. They've also seen an increase in student classroom engagement,
 a decrease in student course material costs of over \$7 million and steady student enrolment, even as other colleges
 have experienced a decline.

Supporting holistic student success

Although academic success is important in student life, it doesn't account for the entire college journey. Many nonacademic elements of the campus experience are essential to holistic student success.

At Hiram College, for example, learning extends far beyond the campus as students participate in internships, field research and service projects. Students receive an iPad Pro with a preloaded suite of educational apps, Apple Pencil, Smart Keyboard Folio and a pair of hiking boots to promote access to both technology and nature in an effort to establish a healthy, productive life balance.

Across many higher education institutions, technology plays a big role in supporting the nonacademic elements of the campus experience. This includes everything from how students register for classes and access health, wellness and advisory services to how they discover extracurricular activities that best align with their passions and interests. It can be challenging enough to help students navigate these countless services when they're physically on campus, but it becomes even more important — and more difficult — in a hybrid or fully online environment.

Many leading institutions are solving the challenges of virtual learning environments by building custom and innovative apps on Apple's developer platforms — iOS, iPadOS, macOS, watchOS and tvOS. This allows students and faculty to continue discovering and engaging with all the support services and broader experiences that their campuses have to offer. Some colleges and universities outsource the development of these apps to outside companies. Others buy customizable off-the-shelf solutions from companies that specialize in higher education, such as Ready Education and Involvio.

Some universities have taken this a step further and are using their app development centres and internal talent — for example, faculty, staff and students — to build their own solutions. With Swift, Apple's easy-to-learn coding language, they're building robust apps to address important campus and community concerns, such as mental wellness, food insecurity and campus security, to name a few.

For example, The Ohio State University provides every student with the opportunity to learn how to solve real-world problems by building apps using Swift. One of their success stories is Ohio State: Wellness, a student-led app design that provides the entire community with a wellness tracker, resources for mental health and ways to access support immediately.

"Apple has even given us the tools to start building our own applications that allow our students to directly play a role in the migration to competency-driven education."

Dr. Hannah R. Smith, Assistant Dean for Academic Strategy and Operations, Jefferson College of Nursing

Spotlight O

Jefferson College of Nursing | JeffLEARN Initiative

- The JeffLEARN (Lead Engage Advance Reimagine Nursing) Initiative at Jefferson College of Nursing in Philadelphia, Pennsylvania, equips all students, faculty and staff with iPad Pro and Apple Pencil.
- iPad was chosen to provide students with access to the same tools and apps they'll use as future healthcare professionals.
- Apple Professional Learning provided tailored training to inspire faculty and spark new ideas and learning models for engaging students.
- Faculty use built-in iPad apps such as iMovie and Keynote to produce engaging synchronous and asynchronous course content, tips and multimedia resources that they share with each other.
- More than 85 percent of faculty and staff are certified in Apple's free professional learning program, Apple Teacher, which helps educators build skills on iPad and Mac.
- Faculty have also established a steering committee to solicit and address student feedback as part of their commitment to continuous innovation in nursing education.

"We share the most compelling stories of how our faculty are creating innovative learning experiences across all departments — from creative arts to computer science and nursing. It's a great way to celebrate successes with our students, alumni and staff, and it helps inspire and motivate our community to continue to innovate."

Dr. Ryan A. Neal, Provost, Anderson University

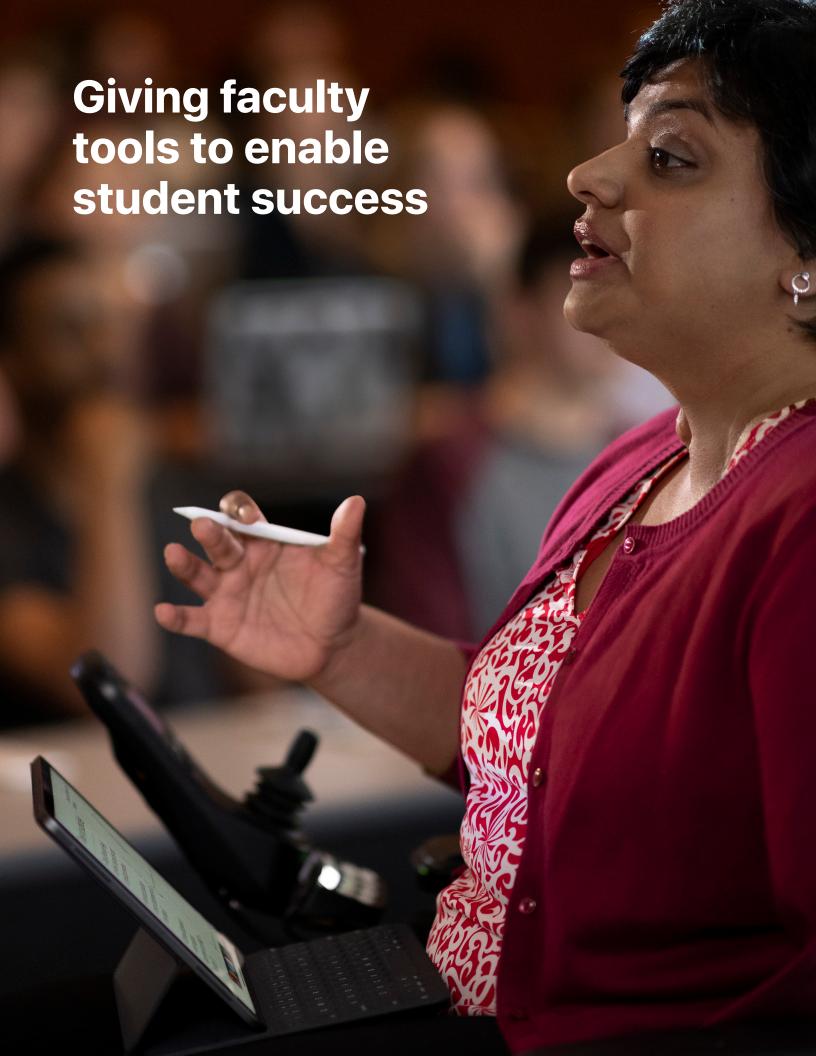
"We are deeply committed to and focused on our students. Because of the foundation we have in place with Apple technology, we can do really creative and innovative things for our community, including ensuring flexible access for all students to academic advising, counselling, mental health resources, tutoring and student events."

Dr. Terry Murrell, President, Western Iowa Tech Community College

Spotlight O-

Western Iowa Tech Community College | Culture of Innovation

- In 2017, Western Iowa Tech Community College (WITCC) set a strategic goal to use mobile technology to create an engaging and equitable learning environment for students, faculty and staff.
- Students played a significant role in the technology decision. During the pilot, they were issued a PC or a Mac. WITCC assessed the feedback and impact along multiple dimensions. Students overwhelmingly chose MacBook and cited creativity, productivity and preparing for future careers as reasons for their choice. Learn more >
- WITCC distributes nearly 9000 Apple devices each year to both credit and noncredit students, faculty, adjunct instructors and employees. Apple technology is central to their operations, which has redefined traditional teaching paradigms and shifted day-to-day operations, including replacing traditional phones with Zoom and AirPods Pro.
- IT shifted their existing deployment from PC to Mac, which resulted in a cost-neutral initiative overall. Over four years, the school saw a 62 percent reduction in desktop support, a drop in laptop support from 4.5 hours to 3 minutes per year, and a reduction of more than two million pages of printed paper.
- Leadership credits the MacBook program as a significant reason for increased student engagement, which resulted in a 30 percent increase in graduation rates since 2013, making WITCC the top diploma-awarding community college in lowa.



Giving faculty tools to enable student success

We believe that advanced technology in higher education makes it easier for institutions to execute their academic vision of success. We're seeing colleges and universities use Apple products to build seamless technology-based communities that help eliminate barriers between students, faculty and staff. This makes it much easier for faculty and staff to do what they do best — teach, innovate and inspire — from anywhere.

Apple technology empowers faculty and staff with the best tools to do their best work. Here's why:

Compatibility. Mac and iPad are compatible with apps and workflows that faculty and staff depend on every day, beginning with built-in apps — such as Pages, Keynote, iMovie, Mail, Calendar, Notes, Reminders and Messages — and extending to third-party apps — such as Google Workspace for Education, Microsoft Office, Canvas, Dropbox and the entire Adobe Creative Suite. These apps and software are not only the foundation of innovative assignments and activities in higher education, but they're also the same tools that many students will use in their future careers.

Flexibility and reliability. Apple products are great for classrooms, lecture halls, study areas and more. With AirPlay, educators and students can quickly connect an Apple device to Apple TV wirelessly, turning classrooms and lecture halls into vibrant and engaging learning spaces. And for online learning environments, the ability to share screens and see students' faces in stunning high definition makes virtual classrooms seamless and more personal.

Research. Apple products are also powerful tools for conducting cutting-edge research, including collecting data, performing advanced analytics and designing solutions to some of the world's greatest challenges. From experimenting with innovative ways to grow food to researching some of the world's most challenging diseases, higher education faculty are using Apple technology and apps to drive change that positively impacts people's lives.

Colleges and universities that have successfully created engaging learning environments, as described in the previous section, tend to have three key components in common: robust professional development for faculty, flexible engagement tools and a focus on continuous innovation.

"Apple technology has helped us to miniaturize our innovations, and make them user friendly and affordable for everyone. That's incredibly powerful."

Dr. John Volckens, Professor, Department of Mechanical Engineering and Director for Energy Development and Health, Colorado State University



Colorado State University | Energy Institute

- With Apple technology, researchers at Colorado State University's Energy Institute are building scalable solutions to help tackle health issues related to air pollution.
- Dr. John Volckens and his team of engineering students are creating technologies that empower people from asthma sufferers to first responders with information to improve their health and wellness.
- Apple technology is at the core of their innovations. Using the power of Mac, they create, design and build personal, wearable air sensors that "breathe in" and measure the user's air quality.
- Volckens's students develop custom iOS apps on Mac using Swift that interpret data from the sensor and make that data accessible on iPhone, so individuals and families everywhere can make better, more-informed decisions about their environment and health.
- Learn more about how Dr. Volckens and his team of grad students are making a difference.

Robust professional development for faculty

Leading higher education institutions recognize that professional development and training are key to supporting faculty in making the shift to student-centred instructional models. Faculty inevitably have different skill levels, and successful initiatives include formal professional development to share best practices and provide training on how best to engage students in a variety of settings. Though instructional approaches may vary by subject matter, course size, engagement modality and other factors, training likely needs to include considerations such as:

- Synchronous or asynchronous: Does the content need to be live, or is it suitable for on-demand learning?
- In person or online: What are best practices for creating an engaging online learning environment? How can faculty create a seamless transition between in-person and online experiences in a hybrid environment?
- Class structure: When is it best to pivot between large groups, small groups and one-to-one settings? How does this impact the optimal instructional model?

"iPad is a lifesaver for us — it provides us with everything we need. Within our on-campus, hybrid and online environments, we are able to teach music lessons, hold studio classes and recitals virtually, and see assignments through to completion."

Daniel Mason, Professor of Violin, College of Fine Arts, University of Kentucky

Flexible engagement tools

In addition to training faculty on how to develop engaging content, successful initiatives also explore new tools to improve the distribution of faculty content and encourage interactive learning experiences. This could include an emphasis on creating more interactive content for asynchronous learning, or just experimenting with more interactive tools for video conferencing and real-time group engagement.

Many of these tools exist within a learning management system (LMS) or third-party app such as Canvas. Faculty might need to experiment with new tools to discover what works best for their unique situation.

Focus on continuous innovation

Driving innovation in today's learning environments is an iterative and interactive process that requires a growth-oriented mindset of continuous improvement. We're seeing leading institutions deploy mentorship programs and feedback loops with faculty and students to capture insights, measure impact and innovate the overall learning experience.

"Bowdoin has long been committed to providing students access to the resources necessary to excel in and beyond the classroom. Our Digital Excellence Commitment levels the playing field for all students and ensures that they have the tools and opportunities they need to learn and lead in our increasingly digital world."

Michael Cato, Senior Vice President and Chief Information Officer, Bowdoin College

Spotlight O

Bowdoin College | Digital Excellence Commitment

- Bowdoin College's Digital Excellence Commitment (DExC) was created to level the playing field so that every student fully benefits from the technology that plays an essential and growing role in the learning experience at Bowdoin.
- DExC provides all students with a 13-inch MacBook Pro, an iPad, an Apple Pencil and access to a full range of course-specific software designed to advance learning and inspire innovative teaching.
- DEXC builds on the success of the MacBook component of the Geoffrey Canada Scholars program, which helps
 students thrive regardless of their economic backgrounds. DExC is also the next iteration of Bowdoin's iPad initiative,
 which was developed to ensure that every student has consistent access, dependable support, a shared learning
 experience and the tools they need to collaborate, innovate, and succeed.
- The iPad initiative has improved students' learning experience in many ways, including by giving students and faculty
 the ability to take handwritten notes; perform visible live calculations, graphs, or sketches on a shared whiteboard;
 compose non-Roman alphabet script (whether for displaying, collaborating, or correcting); record lectures and videos
 or capture images with an enhanced camera; experiment with interactive 3-D instructional models; and move to
 electronic lab notebooks in specific disciplines.
- The breadth of the iPad initiative's benefits has spanned the curriculum, across an array of courses and disciplines. The school continues to offer iPad and Apple Pencil, and has expanded computing capabilities with MacBook Pro.



Apple support and resources

We recognize that implementing an institution-wide strategic initiative requires significant work. We have a number of services and resources to help you throughout your journey, including professional learning support, device deployment and management tools and financial services. Here are just some of the ways we can support you to ensure a successful implementation with Apple products:

Professional learning

Apple Professional Learning Specialists. These educators are uniquely qualified to demonstrate how to best use Apple products for learning and teaching. They coach, mentor and support faculty in advancing their technology skills with an emphasis on innovation — to engage students in deeper learning.

- Apple Professional Learning Specialists provide leadership and planning support, professional learning plans
 to match learning goals, research-based strategies for learning with technology and hands-on instructional
 coaching and mentoring.
- Coaching sessions can include learning about technology and content resources, co-creating exploratory learning experiences, modelling in-class lessons and collaborative reflection and additional pedagogical considerations.

"Apple's professional learning specialists helped our faculty to adopt the core principles of student-centred learning and engagement, which is critical to our initiative. By embedding a specialist within our team, we significantly accelerated that process."

Dr. Scott Bevins, Associate Provost for Information Services and CIO, The University of Virginia's College at Wise

Device deployment and management

Apple School Manager. Apple products are designed to make it easy for IT teams to manage, purchase and distribute them.

- Apple products can go straight to your users no system imaging required. With Apple School Manager, users
 simply open the shrink-wrapped box and connect to the internet, and their devices will auto-enrol in your mobile
 device management (MDM) system with zero-touch deployment from IT. And after auto-enrolment, users can easily
 set up their devices by themselves.
- Apple School Manager makes it easy to buy apps and books in bulk for iPad and Mac. You can search for content, purchase licenses with your education volume discount and instantly view important information — including all assigned and available licenses — all in one place. Your institution retains app licenses and can easily reassign apps among all your devices and users.
- Easily send content directly to iPad and Mac with MDM. If your MDM solution provides a self-service portal, you
 can allow users to install additional apps and books from a pre-approved selection that meets your curriculum
 goals and your standards for security and privacy.

Apple Professional Services. With the goal of providing excellent support and achieving self-sufficiency, Apple Professional Services helps institutions plan, integrate, and deploy Apple technology through a comprehensive array of offerings. These include in-depth technical services, project management, coaching for on-device management, assistance with deploying iPad or Mac or even full-time Apple personnel dedicated to a project.

Financial services

Apple Financial Services. Our Apple Education Finance Program can help you build an affordable financing plan that supports your teaching, learning and research goals. Discover how to maximize your budget so you can ensure that your students, faculty and staff all have the same access to the best technology.

"Apple's finance and leasing program helped us discover and create a custom, flexible roadmap that provides our entire community with the latest Apple technology. It's given us a pathway to follow and afford for many years to come."

Chris Boniforti, Chief Strategy and Technology Officer, Lynn University



Taking action

Technology is fundamental to how we learn, connect, communicate and create in today's world. Our goal is to offer the best products, platforms and support so that your institution is equipped to achieve its goals and missions.

Let us be a resource to connect you with the leaders, faculty and staff mentioned in this document so that you can have discussions directly with your peers. And please feel free to share relevant parts of this document with your colleagues to begin conversations around creating new initiatives that will help you achieve your goals.

"By implementing the Digital Student Universe — where every student has the same powerful mobile technology used in the industries they are preparing for — we are committing to the idea that it no longer matters what kind of technology our students can afford. We are bridging the gap of digital equity and access for a modern education."

Dr. Tony Allen, President, Delaware State University "Our vision for a technology-rich and innovative learning environment is being realized with the integrated use of Apple iPad and other tools and applications across the college. The call is to prepare our students with the competencies for 21st-century citizenship, including digital and information literacy, high-level communication and collaboration and creativity."

Dr. Marie Ann Marino, Dean, Jefferson College of Nursing

The data shown in this document is self-reported by the institution — Apple was not involved in the gathering or analysis of the data reported, nor has any knowledge of the methodology used. This document highlights the results or trends that institutions using Apple products have observed, along with anecdotal accounts that communicate the positive impact iPad is having on instruction in the classroom.