



Education Impact Report

October 2024

Eduardo Salcedo (centre) with students at Miami Dade College exploring the Xcode interface.

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Welcome

At Apple, our values shape everything we do. From the technology we make to the impact we have on the world and one another, these values are a testament of what it means to do well by doing good together. And that is reflected in our commitment to education.

Since the beginning, education has been a core value at Apple.

And during that time, we have seen the power of education at work to open new doors of opportunity, teach new skills and give people the tools they need to build a better, more equitable world.

It starts with making tools that are great for learning, both in the classroom and beyond. Every day, teachers and students use our technology to follow their curiosity, express their creativity, and discover the world around them.

But that's just the beginning of our work in education. For decades, we've expanded access by helping learners, educators and families broaden the boundaries of the classroom, serve their communities and realise their full potential.

We do that in three key ways. We empower educators, so they have the resources and tools to maximise their impact. We invest in out-of-school activities, because learning and development can happen anywhere. And we make our work in education a force for equity by partnering with schools and community organisations through our Racial Equity and Justice Initiative.

With this report, we're bringing all those efforts together in one place. That includes our Community Education Initiative, where we partner with schools and non-profit organisations to support coding, creativity and career opportunities in under-resourced communities. It includes our Apple Developer Academies, which bring coding education and skills training to developers and entrepreneurs around the world. It includes free resources — like Everyone Can Code, Develop in Swift Tutorials, Everyone Can Create, Challenge for Change and Today at Apple sessions at Apple Store locations around the world — that help parents and educators teach new skills and people serve their communities. And it includes the more than one million teachers we've reached with programs like Apple LearningCoach, Apple Distinguished Educators and the Apple Education Community.

This report is a testament to the incredible educators, learners, community members and Apple teams who make this work possible. From communities and countries around the world, they have rallied around a simple but profound belief that education is the key to unlocking a better tomorrow.

Meeting these remarkable leaders is one of the great privileges of my job. And what I hear from them — their values, their stories and their commitment to their communities — fills me with optimism for the future.

Tomorrow's coders, creators, innovators and leaders are making their impact known today. At Apple, our focus is giving them the tools to keep going, keep learning and keep creating the change they want to see in the world.

Lisa Jackson



"Education is in Apple's DNA. From our earliest days, we've cared about making the best technology to help students learn, and in the process, discover new things about themselves and the world around them."

Tim Cook
CEO



Our commitment to education

For over four decades, we've worked alongside innovative educators and researchers to understand the role of technology in learning. And together, we've designed products, programs, services and tools for learners of all ages. We know that increased access to education gives people more ways to follow their passion and realise their potential. We're committed to this work because we believe in the power of education to drive equity and opportunity — and have a profound impact on communities around the world.

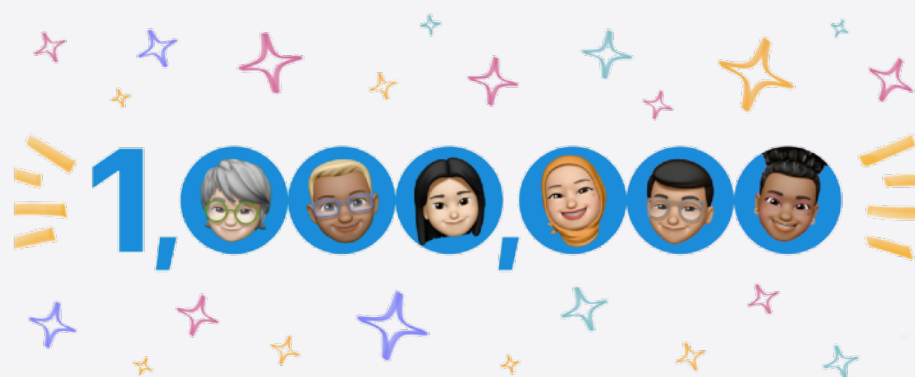
- **1983** Kids Can't Wait
- **1985** Apple Classrooms of Tomorrow (ACOT)
- **1995** Apple Distinguished Educator
- **2007** Apple Distinguished Schools
- **2008** Apple Classrooms of Tomorrow Today (ACOT²), Challenge Based Learning
- **2013** First Apple Developer Academy
- **2014** Apple and ConnectED Initiative
- **2016** Apple Teacher, Everyone Can Code, Classroom app
- **2017** Elements of Learning
- **2018** Everyone Can Create, Classwork app
- **2019** Community Education Initiative
- **2020** Racial Equity and Justice Initiative, Challenge for Change
- **2022** Apple Learning Coach
- **2023** Apple Education Community

Year five student at John Burns Primary school in Wandsworth uses Keynote and Apple Pencil to create a presentation on iPad for history class.

Our impact by the numbers

10,00
teachers

received grant-funded Apple professional learning since 2019.



members in the Apple Education Community, where educators build skills, share inspiration and spark active learning for students and with peers.

Apple has supported

millions
of students and teachers

worldwide through free education programming and resources, including our Community Education Initiative, Everyone Can Code, Everyone Can Create and more.

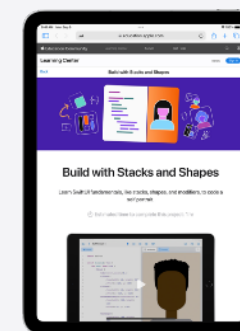


25,000+

students have completed Apple Developer Academy and Foundations programs worldwide.

6,000+

new coding and creativity courses hosted in communities worldwide by Apple education grant partners since 2019.



200+

Apple education grant partners with programming in nearly 2,000 locations worldwide since 2019.

Apple-created learning resources are available in

18

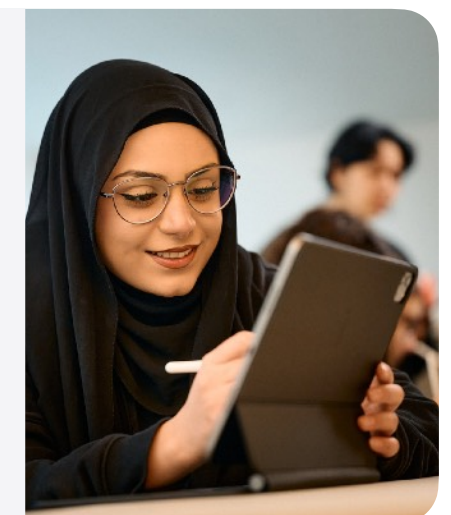
languages, including Spanish, Mandarin, Arabic and four Indigenous languages.

Hello مرحباً
你好 Bonjour
こんにちは
Ciao 반가워요
Hola ஸ்டீ
Osiyo Olá

Learners in

100+
countries

have engaged in Apple grant partners' education programming since 2019.



Supporting learning worldwide

Afghanistan, Khushal Khan, Australia, Allambie Heights, Brunswick, Brunswick East, Burnley, Darlington, East Melbourne, Eveleigh, Kems Creek, Leederville, Marrickville South, Melbourne, Merewether Heights, Nhulunbuy, Potts Point, Randwick, Rosebury, St Kilda, Strawberry Hills, Sydney, The Domain, Belgium, Brussels, Brazil, Rio De Janeiro, Sao Paulo, Cambodia, Pursat, Canada, Akwesasne, Anzac, Baddeck, Cambridge Bay, Dettah, Dokis, Gjoa Haven, Kugaaruk, Kugluktuk, Lethbridge, Moosonee, Ohsweken, Ottawa, Red Deer, Taloyoak, Tsuut'ina Nation, Colombia, Corregimiento, Denmark, Copenhagen, France, Montreuil, Neuilly Sur Seine, Paris, Rouen, Germany, Baumholder, Berlin, Giessen, Kelsterbach, Marburg, Wiesbaden, Ghana, Accra, China, Beijing, Changsha, Chengdu, Guangzhou, Haidian, Hangzhou, Hong Kong, Minhang District, Shanghai, Shenzhen, Tai Kok Tsui – Kowloon Taipei, Taipei City, Wuhou District, Xicheng District, Ya'an, Guyana, Lethem, Hungary, Pilisszentlászló, Szentendre, Iceland, Reykjavik, India, Ajmer, Chennai, Guwahati, Hyderabad, Jayanagar – Bangalore, Koramangala–Bangalore, Kothrud, Mumbai, New Delhi, Pune, Indonesia, Fakfak, North Sumatra, Ireland, Cork, Dublin, Israel, Jerusalem, Reshon Lezion, Tel Aviv, Italy, Firenze, Grugliasco, Milano, Naples, Napoli, Roma, Salerno, Vicenza, Japan, Chiyoda City, Jinsekikogen, Shinjuku-Ku, Tokyo, Toshima-Ku, Kenya, Kauro, Kilifi, Marula Ln, Mito Andei, Nairobi, Kingdom Of Saudi Arabia, Riyadh, Lebanon, Beirut, Liberia, Monrovia, Luxembourg, Luxembourg City, Malaysia, Kuching, México, Ameca, Benito Juarez, Cholula, Ciudad De México, Ciudad Universitaria, Coyoacan, Coyoacán, Cuajimalpa, Guadalajara, Mexicali, Mexquitic, Monterey, Monterrey, Naucalpan, Puebla, Pueblo, Tapachula, Tijuana, Tuxtla Gutierrez, Netherlands, Amsterdam, Den Haag, Haarlem, Romeinenpoort, S-Gravenhage, New Zealand, Hamilton, Northern Ireland, Belfast, Co. Down, Londonderry, Peru, Interoceanica Norte, Moyobamba, Philippines, Quezon City, Mandaluyong, Poland, Warszawa, Rwanda, Kigali, Scotland, Clydebank, Dundee, Finnieston, Glasgow, Milngavie, Singapore, Singapore, The Adelphi, South Africa, Cape Town, South Korea, Pohang, Yuseong, Spain, Madrid, Murcia, Sweden, Stockholm, Tanzania, Dodoma, Thailand, Mueang Pathum Thani, United Kingdom, Ancoats, Birmingham, Bower Ashton, Bristol, Brockworth, Bromley, Bury, Chatham, Churchdown, Coventry, Doncaster, Droylesden, Droylsden, Ellesmere, Enfield, Handsworth, Harold Hill, Kent, Levenshulme, Liverpool, London, Manchester, Middleton, Netherton, Nuneaton, Openshaw, Redcliffe, Reddish, Rotherham, Somerset, Staffordshire, Stalybridge, Walsall, Warwickshire, United States, Ada, Adrian, Agoura Hills, Aiea, Akron, Albany, Alexandria, Allendale, Alpharetta, American Falls, Amherst, Ann Arbor, Antioch, Apex, Arcadia, Armonk, Atlanta, Atlantic City, Auburn Hills, Aurora, Austin, Avery, Bainbridge Island, Baltimore, Bancroft, Baton Rouge, Beaumont, Bellefontaine, Belleville, Bellflower, Bellport, Beloit, Bluejacket, Boise, Boston, Bothell, Boulder, Bowie, Brentwood, Bridgeport, Campbell, Canby, Canfield, Canton, Carson, Cascade, Cedar Park, Center Line, Chicago, Chico, Chillicothe, Cincinnati, Circleville, Cleveland, Clifton, Clinton, Coral Springs, Cordova, Coshocton, Cottonwood, Creedmoor, Cupertino, Custer, Defiance, Delaware, Denmark, Denver, Detroit, Dix Hills, Doral, Dover, Downey, Alto, East Point, Eastpoint, Eastpointe, Eaton, Eben Junction, Edison, El Monte, El Evanston, Ewing, Fairfax, Fairfield, Fairview, Falls Church, Farmington Hills, Franklin, Frankline, Fremont, Frisco, Fullerton, Gainesville, Gallipolis, Galloway, Girard, Gladstone, Glendale, Glenpool, Goldsboro, Gooding, Gore, Grambling, Greensboro, Grove City, Guadalupe, Hadley, Hagerman, Hamilton, Hamilton Town-Hawthorne, Hayward, Hazel Green, Hermitage, High Point, Highland Park, Huntsville, Indianapolis, Inglewood, Ironton, Ironwood, Irvine, Irving, Jackson, Kamiah, Kapolei, Katy, Kearny, Kellogg, Kenton, Kentwood, Keystone Heights, Las Vegas, Lawrence, Leander, Lebanon, Leland, Lewis Center, Lewiston, Lexington Valley, Lomita, Long Beach, Longmont, Los Angeles, Louisville, Ludington, Mansfield, Maple City, Maplewood, Marble City, Marietta, Marion, Marquette, Memphis, Meridian, Mesa, Miami, Middleburg, Middleton, Midlothian, Milpitas, Morgan Hill, Morristown, Moscow, Mountain Home, Mountain View, Mt. Morris, Napoleon, Nashville, New Brunswick, New Haven, New Meadows, New Orleans, North Bergen, North Little Rock, Northampton, Northport, Northridge, Northville, Olympia Fields, Omaha, Oologah, Orange, Orange County, Orange Park, Orangeburg, Orlando, Orofino, Ortonville, Ottawa, Owensville, Owyhee, Pacoima, Palo Alto, Palos Verdes, Paris, Pasadena, Passaic, Paterson, Paulding, Pawhuska, Payette, Penn Hills, Pennsylvania, Petersburg, Pflugerville, Philadelphia, Phoenix, Pickford, Picketon, Pittsburgh, Pittsford, Plainfield, Plainsboro, Playa Vista, Pleasant Prairie, Polk County, Ponderay, Pontiac, Port Huron, Portland, Portola, Portsmouth, Potlatch, Prairie View, Princess Anne, Princeton, Providence, Queens, Racine, Raleigh, Rancho Palos Verdes, Rathdrum, Ravenna, Reading, Redding Ridge, Rensselaer, Rexburg, Reynoldsburg, Richmond, Richmond Hill, Richton Park, Rigby, Rio Grande City, River Rouge, Rochester, Rockland, Roland, Rome, Roseland, Roseville, Roxbury, Sacramento, Safford, Saginaw, Saint Cloud, Saint Louis, Sallisaw, Salmon, Sammamish, San Bernardino, San Diego, San Francisco, San Jose, San Juan Capistrano, San Leandro, San Pedro, Sandusky, Santa Fe, Santa Rosa Beach, Sault Ste. Marie, Savannah, Scarsdale, Scottsdale, Seaside, Seattle, Sebring, Semmes, Seymour, Shorewood, Shreveport, Silicon Valley, Silverton, Skiatook, South Amboy, South Bend, South Coffeville, South Gate, South Orange, South Palm Beach, Southfield, Southport, Springfield, St. Maries, St. Clair, St. Louis, St. Louis Park, St. Louisville, Stafford, Stanford, Staten Island, Statesboro, Stephenson, Sterling Heights, Stilwell, Suffolk, Sugar Land, Suitland, Sun Valley, Suttons Bay, Tacine, Tacoma, Tahlequah, Talladega, Tallahassee, Taylor, Tempe, Toccoa, Toledo, Tougaloo, Traverse City, Trenton, Trotwood, Troy, Tullahoma, Tulsa, Turlock, Tuscon, Tuskegee, Upland, Urbana, Valliant, Van Wert, Venice, Vestal, Virginia State University, Wahiawa, Wake Forest, Warren, Washington Dc, Waterford, Watersmeet, Wayne, Webster Groves, Wendell, West Bloomfield Township, West Chester, West Union, Westfield, Westland, Westville, Whites Creek, Wichita, Wilberforce, Wilder, Wilmington, Wilkinsburg, Wilmington, Window Rock, Wisconsin Rapids, Woodland Park, Wooster, Worthington, Xenia, Youngstown, Ypsilanti, Zion, Vietnam, Dong Da District, Wales, Bridgend, Cardiff, Carmarthenshire, Duffryn, Port Talbot, Swansea, Albania, Argentina, Austria, Azerbaijan, Bahrain, Bangladesh, Barbados, Belize, Bolivia, Bosnia And Herzegovina, Brunei, Cameroon, Chile, Costa Rica, Cote D'ivoire, Cyprus, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, Georgia, Greece, Guatemala, Honduras, Iran, Jamaica, Jordan, Kazakhstan, Kuwait, Lithuania, Macedonia, Mauritius, Moldova, Mongolia, Morocco, Mozambique, Namibia, Nepal, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Portugal, Qatar, Romania, Russia, Serbia, Slovakia, Sri Lanka, St. Lucia, Switzerland, Tajikistan, Trinidad And Tobago, Tunisia, Turkey, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Venezuela, Zimbabwe

In just the last five years alone, Apple has helped education partners provide direct programming for students and educators across six continents. And through our education grant partners’ virtual programming, we’re supporting learners in more than 100 countries.

Educator Development

"Partnering with Apple's Community Education Initiative (CEI) has been a life-changing experience. My teaching skills and the capacity to serve more students has grown exponentially — from 40 students to more than 250 around the globe. I now coach other educators, have earned my master's degree in education and am an Apple CEI Ambassador, an Apple Teacher and an Apple Learning Coach. Thanks to Apple and their support of educators, I have had the blessing to help my students, my campus and my global community, bringing joy and contentment to my mind and soul."

Juan Marquez
Houston Public High School Teacher



Juan Marquez with learners using iPad and robots.

A group of educators are gathered around a large wooden table in a bright, modern room with large windows. They are focused on their Apple iPads, which they are holding in various orientations. Some are looking at the screens, while others are holding them up to take photos. On the table, there are several items including a blue water bottle, a black smartphone, a closed black MacBook, and some colorful sticky notes. The atmosphere appears to be one of collaborative learning and hands-on exploration.

Our focus on educator development

Apple is committed to supporting educators around the world who are inspiring learners inside and outside of the classroom. We recognise that in an ever-changing world, the best educators are continuously innovating to meet the needs of their learners. We offer educators programs that support an ongoing practice for professional learning, such as the Challenge Based Learning framework, that connects learning to real-world application. We use research-based instructional technology practices to help educators throughout their journeys from skills acquisition to innovative teaching practices. And we empower educators with curriculum, personalised coaching, connections with technical experts and tools to maximise their impact.

Launching student success through STEAM explorations

Project LaunchPad Austin — Education Service Center Region 13



Jacob Luévano, Program Manager, Project LaunchPad Austin.

At Apple, we believe coding is a truly universal language that everyone should have a chance to learn. To help more young people develop this critical skill, Apple’s Community Education Initiative (CEI) is supporting Project LaunchPad Austin, which is bringing new coding opportunities to elementary students across central Texas.

Project LaunchPad Austin was developed by Education Service Center (ESC) Region 13 — one of 20 service centres dedicated to supporting Texas’s educational needs. With a focus on under-resourced communities, the program collaborates with districts and schools to bring technology into classrooms and empower students to learn digital skills. To date, it has reached more than 10,000 students, giving them new opportunities to showcase their creativity and problem-solving abilities.

Empowering educators to teach digital skills

One of the project’s key goals is to provide educators with the tools and confidence to lead digital learning initiatives in their schools, districts and communities. This starts with a five- to six-week coaching program at their schools, followed by monthly training sessions to foster continuous growth throughout the year.

After completing the coaching program, educators can check out iPad devices for their classrooms so they can integrate their new skills — and fun new learning activities — into their lessons. Coaches from Region 13 provide ongoing support through virtual meetings and in-person visits, while the monthly training sessions offer educators a platform to share new ideas and skills with peers.

The program also includes school visits from Apple employees who volunteer to mentor students, helping them explore careers in STEAM.

Bringing the program to campuses

Jacob Luévano, program manager at Project LaunchPad Austin, works closely with districts and schools to bring the program to campuses. “This program provides a fantastic opportunity for me to coach librarians and teachers while also modelling lessons directly with students,” he said. “As an educator, it’s hard to ask for more.”

Melanie Erb, a librarian at a local public elementary school, participated in the program. “Implementing Project LaunchPad with the support of Jacob from Region 13 and Apple has been an incredible experience,” said Erb. “In the library, I’ve seen students from every year group eagerly engage with technology, becoming skilled at different apps and even learn to code. This program has really made a difference in how we manage digital learning.”

“This program provides a fantastic opportunity for me to coach librarians and teachers while also modelling lessons directly with students. As an educator, it’s hard to ask for more.”

Jacob Luévano
Program Manager
Project LaunchPad Austin

Impacting student learning

By creating personalised learning opportunities, Project LaunchPad Austin has had a profound impact on students across the state.

Luévano recalls one student who had been facing academic and behavioural challenges. He noticed a profound change once he introduced new STEAM activities. The opportunity to work on iPad and learn new coding concepts sparked the student’s curiosity, and he was often the first to solve the coding challenges. Luévano saw the student’s confidence and enthusiasm for learning increase as he began to master new skills.

Luévano says that this student is just one of many examples of how the program — and Apple’s support for its work — has been transformative for students across the region. “Every learner has unique needs, and it’s been amazing to be able to tailor instruction for each student,” he said. “We’re able to meet students where they are, and the impact has been priceless.”

Advancing creative learning across communities

Apple’s support has enabled Region 13 to respond more effectively to schools’ needs. Over the past two years, for example, the program has prioritised working with librarians and media specialists on elementary campuses. This has allowed the program to expand its reach from individual teachers’ classrooms to entire schools, putting Apple devices

into the hands of more students to foster even more opportunities for creativity and collaboration. And in August 2024, Project LaunchPad expanded into the Houston area to provide its offerings to even more educators, students and communities.

“We believe that an educator’s confidence in their own creativity and ability to code is inherited by their students in a fun and positive classroom setting,” said Sally Partridge, Director of Pathways and Innovation at ESC Region 13. “We’re excited to continue developing educational leaders who share and continue learning with other teachers at their school.”

“Project LaunchPad Austin promotes our goal of providing innovative opportunities for our educators to continue their own learning alongside their students.”

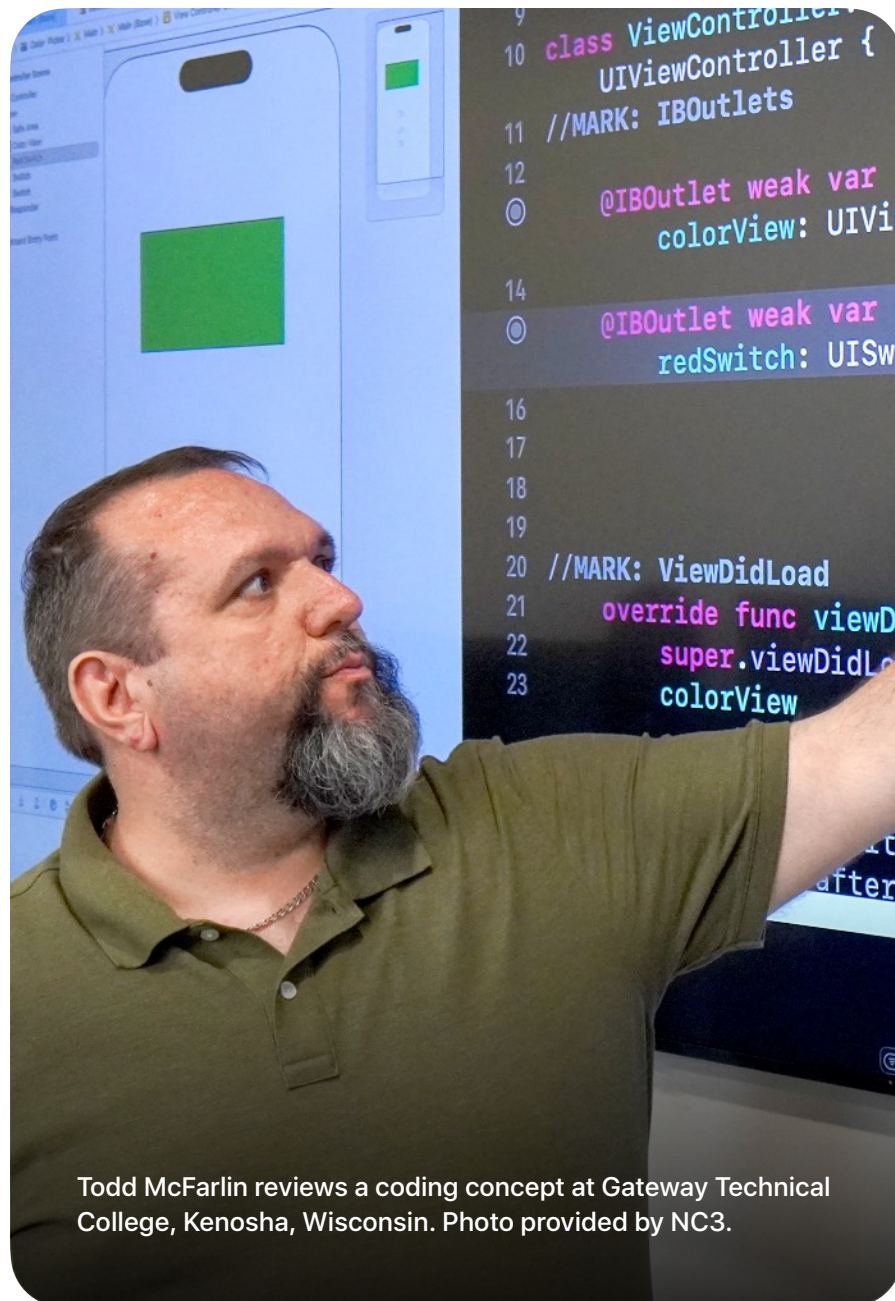
Dr Rich Elsasser
Executive Director at ESC Region 13



Melanie Erb and Jacob Luévano

Transforming careers and computer science education across Illinois

Discovery Partners Institute (DPI), a part of the University of Illinois System, in collaboration with NC3



Todd McFarlin reviews a coding concept at Gateway Technical College, Kenosha, Wisconsin. Photo provided by NC3.

As demand for technical skills in the workforce rises, many primary and secondary schools are introducing computer science (CS) classes to help spark students' interest in the field. In 2022, Illinois enacted a new policy requiring all school districts to offer at least one high school CS course.¹ But the state confronted a challenge: To provide more CS classes, schools also needed more teachers who are qualified to lead them.

Apple's Community Education Initiative (CEI) supports institutions that are working to ensure that more educators are equipped to bring CS to life for students across Illinois. In 2021, Apple partnered with the University of Illinois Urbana Champaign (UIUC) to offer an asynchronous app development course using Apple's Develop in Swift curriculum, providing professional learning and scholarship support for 25 faculty members across two cohorts. Based on the success of the course, Apple then expanded this initiative to other schools across the Big Ten network. And in 2022, support from Apple helped UIUC's College of Education and Discovery Partners Institute (DPI) launch the Teaching Endorsement in Computer Science (CSTed) — a new credential that prepares educators to teach CS.

For Todd McFarlin, a history teacher in Chicago Public Schools (CPS), the credential provided a unique opportunity to align his passion for coding with teaching. He was interested in CS instruction, but was unsure about how to pursue an alternative teaching path without going back to school for a degree in engineering or CS. "I really didn't think that there was a way for me to get into tech or a tech position," said McFarlin.

"I realised there was a pathway to get into tech without having to go back to school. I really fell in love with it. I think I can make even more of a difference if I'm training teachers across the state in computer science."

Todd McFarlin

Assistant Director of Teacher Training at Discovery Partners Institute

In July 2022, McFarlin became part of the inaugural cohort of 24 teachers to enrol in the five-semester, 20-credit program. To date, 85 teachers representing 41 districts across the state have enrolled. With those credentials in hand, those educators are now introducing students across the state to CS classes.

Learning to teach the teachers

While McFarlin was enrolled in the endorsement program, he applied for an open teacher training position with DPI — a role in which he would help other educators gain the skills and credentials to teach CS. "I realised then there was a pathway to not only teach computer science permanently but also to work in tech without having to go back to school," he said. "I really fell in love with it. I thought I could make even more of a difference if I was training teachers across the state in computer science."

In his new role, McFarlin helped meet growing demand from teachers state-wide. DPI connected with the National Coalition of Certification Centers (NC3) — another Apple partner organisation that helps provide educator training for industry partner credentials, including App Development with Swift. Together they expanded DPI instructor capacity and developed pedagogy for the endorsement program, aided by Apple grant funding that helped provide scholarships and hardware.

Helping educators teach app development

Across the country, NC3 supports educators who are teaching Swift to prepare students for a career in the app economy. It offers two-week sessions during which educators receive hands-on instruction and a chance to earn industry-recognised Swift certifications. McFarlin knew that with the additional NC3 training, “DPI would be able to grow our program to be more in depth to meet the diverse career paths in tech that students may choose to take,” he said.

The collaboration helped DPI better understand how to support the educators it serves. Building on NC3’s approach, DPI developed an in-person orientation that helped teachers familiarise themselves with Mac, coding concepts and coding language, as well as an exploratory boot camp for those with little-to-no coding experience.

Evolving programming to best serve teachers

DPI continuously evolves its programming to better meet the diverse needs of teacher trainers. For example, when a colleague left CPS’s Hyde Park Academy, Eugene Pope, a former colleague of McFarlin’s and computer science teacher at the school, was assigned the responsibility of teaching the newly designed iOS Mobile App Development course. To ensure the continuity and growth of the program — and to become a subject-matter expert himself — Pope started learning Swift, but found it was tough to take an evening class, “especially after a long day of teaching”.



Danna Dotson working with DPI students to debug their Swift code. Photo provided by DPI.

To support educators like Pope, DPI developed the Summer Intensive Mobile App Development course, which launched in June 2024. The course provides educators with an introduction to coding before jumping into the CSTed. One of the unique aspects of the program is that teachers are paired with students so they can experience how high school students process the information, helping to deepen their understanding of computer science pedagogy.

“Life gets in the way, which was the problem with the after-school program,” said Pope. “I wanted to be a student. And the summer intensive allowed that. You were in the classroom with students, and wanted to make sure you know what you were talking about.”

Building robust pathways for teachers and students

Danna Dotson, Associate Director of Teacher Training at DPI, designed the summer intensive to allow teachers an opportunity to learn Swift alongside students. “We wanted teachers to be able to not only learn Swift but to also see how students were picking it up and learning this mobile app development process,” said Dotson. “And we wanted teachers to have first-hand experience with students prior to implementing the work during the school year.”

As a result of Apple’s support for DPI and NC3, qualified CS teachers are empowering thousands of students across Illinois, who are learning to code, participating in hackathons, and even creating their own apps.

Full STEAM ahead for educators and students in Los Angeles

Tech for Every 1 (T4E1) — Center for Innovation in STEM Education (CISE)



Brenda Chavez at the California State University Dominguez Hills Center for Innovation in STEM Education.

To help prepare primary and secondary students in California for the high-tech jobs of the future, the state created the Computer Science Supplementary Authorisation (CSSA). This authorisation enables teachers who specialise in other subjects to lead computer science classes as well, helping to meet the growing demand for STEAM offerings in California schools.

One school at which educators can work toward their CSSA is California State University Dominguez Hills (CSUDH), where the team at the Center for Innovation in STEM Education (CISE) partnered with Apple’s Community Education Initiative to design new programs for teachers who want to gain expertise in STEAM education. For instance, CISE Technology & Innovation in Education micro-credentials offer teachers a chance to learn key coding concepts and practice writing Swift code using Apple’s Everyone Can Code resources. Teachers who complete the micro-credentials earn continuing education units that apply to salary advancement, and many go on to become technology leaders and experts at their schools.

Expanding technical skills to transform computer science education

Over the past four years, more than 200 teachers have completed CISE’s Supplementary Authorisation programs — and every one of them is serving in schools in under-resourced communities. Brenda Chavez, a teacher at Ánimo Legacy Charter Middle School in South Los Angeles, shared how the program fuelled her growth as an educator. “Completing the Computer Science Supplementary Authorisation was a challenging, yet transformative journey,” she said. “It expanded my technical skills and deepened my understanding of computer science principles. The coursework challenged me to think critically and solve complex problems, while the hands-on projects provided practical experience in coding, algorithms and system design. This authorisation has equipped me with the knowledge and confidence to integrate computer science education into my teaching, inspiring the next generation of innovators.”

“The teachers who complete these authorisations are collectively reaching thousands of students in the community. The ripple effect extends far beyond the classroom. These students will become the innovators and creators of the future.”

Dr Kamal Hamdan
CISE Director



Brenda Chavez works with students to refine their app pitches.

Sparkling creativity and innovation across Wandsworth

Wandsworth BEST — Wandsworth Council



Alex Pursey, Wandsworth Council's Head of Schools IT.

In 2022, Apple moved into its historic Battersea location in London's Borough of Wandsworth and launched a broad community-centred initiative. This included partnering with Business and Education Succeeding Together (BEST), a local charity focused on bringing together schools and businesses to help young people learn valuable digital skills. BEST's strategy prioritises the digital arts as a means to foster creativity and inclusive local communities.

Apple's Community Education Initiative is partnering with BEST and the Wandsworth Council to deliver a robust digital program in local primary schools. The program leverages Apple technology and resources to empower students to unlock their creativity. The partnership has reached students and helped strengthen community connections in 11 schools to date, with plans to expand to 20 schools in the coming year.

Alex Pursey, Wandsworth Council's Head of Schools IT, leads this initiative with technical expertise and a passion for helping all children reach their potential. Reflecting on his journey, Alex says he discovered his ability to connect with children and understand their unique needs while working as a youth football coach during university.

"Becoming a teacher allowed me to create personalised learning experiences that cater to each student's strengths, interests and learning styles," he said. "I moved to Wandsworth in my late teens, bought my first home here, and have worked in the borough serving schools for nearly 30 years. Both my daughters now work in Wandsworth schools. I feel like a true Wandsworth lad, giving back to the community that has supported me!"

Bridging the achievement gap

The achievement gap between disadvantaged students and their peers is larger in Wandsworth than in any other community in London.² To help address this disparity, Alex and his team have developed a project for primary schools across the borough. The project aims to help students develop digital skills and express their creativity using Apple's free Everyone Can Code and Everyone Can Create resources, while also providing mentoring to enhance engagement and improve educational outcomes. Teachers participating in the program gain new knowledge, earn Apple Teacher recognition, and develop innovative new teaching practices for their classrooms.

Engaging in ongoing professional learning

One of the project's key pillars is professional learning designed to ensure that teachers are equipped to deliver innovative lessons. Alex is proud that his team includes Apple Distinguished Educators and that their work has resulted in being recognised as an Apple Regional Training Centre.



Alex Pursey and his team gather to plan for the year ahead.

"Attending the amazing Battersea Arts Centre showcase event was a brilliant way to celebrate and collaborate with so many visitors, participating Wandsworth schools and Apple staff."

Elijah Richards
Year Five Student, Wandsworth



Students put their skills into practice at the Wandsworth Primary Learning Showcase in the Battersea Arts Centre.

The team works weekly in participating schools, offering teachers opportunities to learn with products like iPad and Apple Pencil. This continuous upskilling contributes to teachers' professional development and growth, and helps ensure the project's long-term sustainability.

Connecting with community

Another key project pillar is linking the skills and subjects that students study in school with the challenges and needs of the greater community. To make lessons more relevant and actionable, Alex and his team use the Challenge Based Learning framework. They've helped teachers create lessons that engage students in hands-on activities, such as visualising and designing a sustainable environment or illustrating significant moments in history with a focus on equity and representation.

Building on this approach, the program extends learning into spaces and opportunities across the community. In the last year, more than 600 children and 100 teachers from Wandsworth schools have visited the Apple offices and the Apple Store in Battersea Power Station. During these visits, students have taken part in Today at Apple sessions with Apple Creative Pros, helping them acquire new skills. They've also learned about Apple's efforts to preserve and celebrate the rich history of the building and the community. The feedback from the schools has been overwhelmingly positive, with many students now aspiring to careers as digital creatives.

Beyond its work with students, the project has delivered over 40 sessions to more than 300 parents and other adult learners from the greater community. These sessions not only support the development of digital skills but also help deepen parents' engagement with their children's education.

Alex and his team also collaborated with the historic Battersea Arts Centre (BAC) to host a showcase event for participating schools, inviting 200 students to share their progress and achievements. Parents, teachers, school leaders, government officials and local business leaders attended the event, which offered students a chance to develop their presentation skills and interact with a wide range of professionals.

"Attending the amazing Battersea Arts Centre showcase event was a brilliant way to celebrate and collaborate with so many visitors, participating Wandsworth schools and Apple staff," shared Elijah Richards, a local Year Five student. "The opportunity to share and publish work, including presenting about my school's digital journey and involvement in the Battersea Project, was rewarding and gave recognition to the advanced skills that I have learnt along the way. It was exciting to host a podcasting expo-stand."

Exceeding expectations

For Alex, the project has surpassed its original goals. In addition to improving student achievement and equipping teachers with new and innovative methods, he noted that it has revitalised many educators' passion for learning and fostered essential collaborative teaching practices. School leaders have also created a new Digital Ambassadors recognition for students that celebrates their skills, while providing them with mentorship and leadership positions to support their peers. "I've seen how the students glow with pride in their new roles and how this experience has boosted their confidence in becoming future digital leaders," Alex said.

Fostering a culture of collaboration through professional learning

Apple Learning Coach — Granard Primary School



Francesca Smith, an Apple Learning Coach at Granard Primary School, London.

Apple Learning Coach is a free professional learning program that helps to coach educators on how to help teachers get more out of Apple technology. With new lessons and new languages, Apple Learning Coach is now available in eight languages across 17 countries.

How has Apple Learning Coach helped you in your teaching practice?

Apple Learning Coach has transformed my teaching practices. Through the online self-paced lessons and workshops hosted by Apple Professional Learning Specialists, I created a portfolio and action plan for taking my coaching to the next level.

Apple Learning Coach has helped me identify key areas that can benefit colleagues and students. For example, we've gone paperless in my year group thanks to the iPad devices gifted through the Battersea project, a partnership between the Wandsworth charities, local primary schools and Apple's Community Education Initiative. We've improved sustainability, reduced costs and lowered aspects of teacher workload.

How has the Apple Learning Coach program helped you support technology integration?

As a teacher and technology lead at my school, I not only teach all subjects, but I also support my colleagues in adopting and integrating technology into their classrooms. Apple Learning Coach has given me the skills I need to integrate technology with purpose to address the diverse needs of students and staff. It's made a significant difference in how students feel about their learning. They're more passionate and take ownership of their projects. With my support, they're able to use different apps together, like typing scripts in Pages, filming in iMovie and using iPad for cues.

How has Apple Learning Coach helped you support diverse learners?

I've found multiple ways to break down barriers and foster equity using technology. iPad has made learning more achievable for all students in the classroom. For instance, translation features on iPad have been especially helpful for allowing non-native English-speaking students to fully participate in class activities. Students who speak another language at home use the read-back feature to check their work for tense, mistakes and missing words. Students can take pictures of the board and receive resources via AirDrop so they can learn independently. Those who struggle with articulation can use alternative communication methods on iPad, such as speech-to-text or sketching. And those with visibility issues can zoom in on content using the Magnifier app.

Why is continuous professional learning important for the teaching profession?

It's crucial to stay on top of the latest technology so we can provide our students with the best opportunities and start them off right in life. There's never been a year in which I didn't learn something new as a teacher, either from colleagues or from students. Continuous professional learning ensures that we remain relevant and effective in our roles. It allows us to adapt to new educational trends and tools, ultimately enhancing our teaching practices and benefiting our students. It fosters a culture of collaboration and shared learning between staff — essential for a thriving school environment.

Inspiring a new generation of educators

Pathways in Technology Early College High School (P-TEACH)



Monica Moreno-Martinez, an educator with the Pathways in Technology Early College High School program in Colorado. Photo provided by Monica Moreno-Martinez.

With the support of a grant through Apple's Community Education Initiative that includes technology, curriculum and professional learning resources, University of Colorado Denver partnered with St. Vrain Valley School District to expand Pathways to Teaching (P-TEACH), a program designed to build strong teacher pipelines and increase community representation across the field of teaching. Apple's support has helped to build out the program and make it accessible to even more future teachers.

Can you tell us about the P-TEACH program?

P-TEACH introduces high school students to teaching careers through a variety of dual enrolment courses. Students can earn up to 43 credits in four education pathways through the University of Colorado Denver. Our focus is to recruit and retain future teachers from the communities they aim to teach. Currently, more than 54 per cent of our students identify as students of colour, a reflection of the diverse communities across our district.

Why is it important that teachers reflect the communities they serve?

I'm a St. Vrain Valley School District graduate and a Latina daughter of farm-worker immigrant parents. Growing up, none of my teachers looked like me. Now I see the impact that I have on our students of colour. They see themselves in me, and I see myself in them. If we want teachers who represent our student population, we need programs like P-TEACH to provide support to students who want to enter the profession as teachers and also as paraprofessionals.

How does P-TEACH support paraprofessionals?

P-TEACH gives paraprofessionals a clear pathway to realise their dreams of becoming certified classroom teachers by earning their bachelor's degree through the University of Colorado Denver or advancing skills in their current roles. Paraprofessionals have an associate degree and assist teachers with instructional, behavioural and other support to students in and outside of the classroom. We see the biggest impact with them because they can immediately apply what they've learned in their classrooms.

What's the role of technology in the program?

We're accelerating teacher growth and skill development by giving every participant the chance to earn their Apple Teacher certification. With access to Apple devices, participants have enhanced opportunities to learn, practise and refine their teaching skills so they're well equipped for today's classrooms. We focus on digital storytelling using the Challenge for Change Learning Series — particularly Use the Power of Storytelling to Create Change — to ensure that our students can tell their own stories and know that their stories are important. It's also been amazing to see them use iPad and MacBook, along with apps like Clips, Keynote and Numbers to tell their stories. We made different projects using each of the apps, then brought them all together in iMovie.

What impact are you seeing from this work?

I think the biggest impact is that students can put theory into practice. I've seen them use Early Learners Can Code using Swift to teach functions to year three to five students. Another shared how they use Keynote in maths lessons to keep students engaged. I'm really thankful to be doing this work and to be able to see its impact in a meaningful and creative way. Additionally, we've also hired six graduates from the P-TEACH program as certified teachers, with many more in the pipeline to become future teachers in St. Vrain, Colorado, and beyond.

Out-of-School Time

"Technology is a big part of 4-H. When kids pick up an iPad or Apple Pencil on the bus, it becomes the spark that gets them excited about learning new skills. I love when we have parents saying, 'It's time to get off the bus and go on fair rides', and the kids don't want to leave because they're so engaged."

Mark Light
4-H STEM Educator



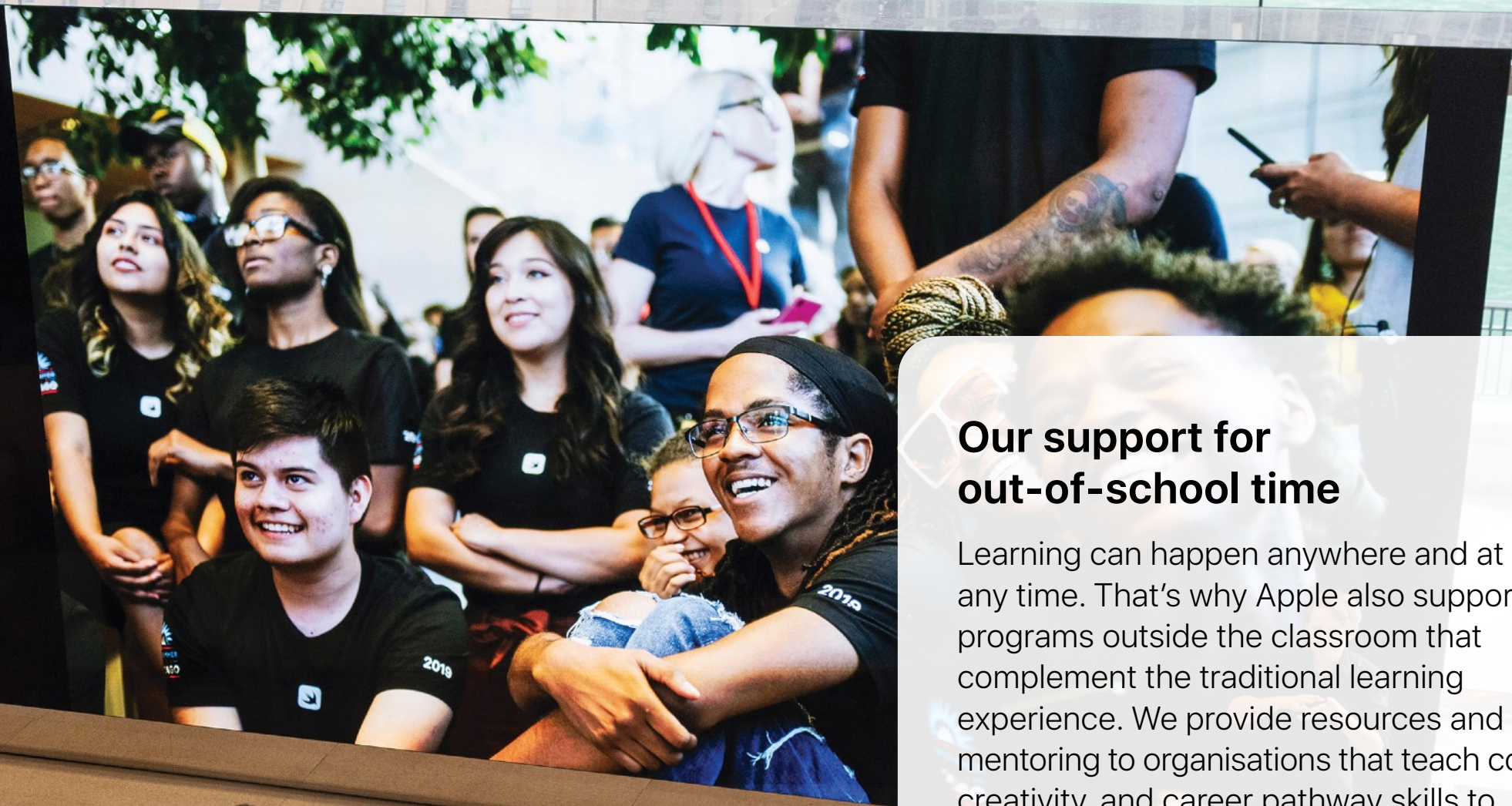
Mark Light with students on the 4-H Mobile Classroom bus, Columbus, Ohio.

Today at Apple

Now in Session

Spotlight
One Summer Chicago Code &
Create Showcase

Today we celebrate select student projects in coding,
AR, video, and photography.



Our support for out-of-school time

Learning can happen anywhere and at any time. That's why Apple also supports programs outside the classroom that complement the traditional learning experience. We provide resources and mentoring to organisations that teach coding, creativity, and career pathway skills to learners of all ages, especially in under-resourced communities. We envision a workforce that's diverse and reflective of the communities in which we live and work. To reach that goal, we're helping prepare people of all ages with creative and technical skills and real-world experiences that support their careers today and in the future.

Students gather at Apple Michigan Avenue for the One Summer Chicago showcase.

Building code and community for equity in tech

Kode With Klossy



Founder of Kode With Klossy, Karlie Kloss (centre), works with scholars who share their app prototypes for feedback in a Mobile App Development camp. Photo by Andrea Wattley.

For decades, the technology industry has faced a persistent gender equity gap, with many non-males choosing not to pursue STEM careers or abandoning their aspirations early in their journey. To help address this challenge, Apple is proud to support Kode With Klossy (KWK), an innovative non-profit focused on building community through coding education for young women and gender-expansive youth.

KWK offers rigorous, technical curricula in four areas: website development, mobile app development, data science, and artificial intelligence and machine learning. These topics are taught through KWK's flagship two-week summer camps, as well as two-day workshops in the spring and autumn, and are 100 per cent free to participants. In 2024, KWK awarded nearly 4,000 scholarships to new and returning participants across almost 50 programs. In-person programs were offered in London and 16 US cities, and virtual classes reached learners in another 100 countries.

"KWK programs provide experiential learning labs for the future of inclusive workplaces. We are building a retention solution that combines our community-centred approach with meaningful engagement from corporate partners ready to evolve their policies and processes in order to close the gender gap," said Osi Imeokparia, KWK CEO.

KWK introductory programs are designed for learners from 13 to 18 years old, ages when research shows that young women's interest in STEM is significantly influenced by inclusive pedagogy and women role models.³ As evidence of the program's success, 78 per cent of alumni pursue majors or minors in computer science or engineering, compared to the national average of fewer than 4 per cent of women who pursue these majors. And many of its more than 10,000 alumni are

highly accomplished, having won technical challenges like Apple's Swift Student Challenge and other competitive scholarships, internships and national awards.

For the last seven years, Apple has partnered with KWK across every dimension of its program portfolio. Apple donates hardware to KWK, which it uses for all in-person classes and provides for any virtual scholars who need it during camp. KWK has partnered with Apple technical teams to develop a research-based approach to teaching artificial intelligence and machine learning.⁴ It has also integrated Apple technologies, such as SwiftUI, Swift Playgrounds and Xcode, into its mobile app development curriculum. And Apple has hosted Kode With Klossy Demo Days at flagship Apple Store locations, giving scholars a chance to showcase their skills and creativity.

"Nearly 10 years ago, Kode With Klossy started with a simple idea. Today, we're a global organisation and a community that spans more than 100 countries. We're giving the next generation of tech leaders and changemakers the confidence and skills to turn their ideas into reality and to make their mark on the world."

Karlie Kloss
Founder, Kode With Klossy

The benefits of a diverse community

Diversity in life experiences is essential to creating technology that serves everyone. The KWK scholar community represents a wide spectrum of life experiences: 15 per cent live outside of the United States, 40 per cent qualify for reduced lunch and 80 per cent identify as people of colour. By cultivating a diverse learning community, KWK has seen first-hand how bringing more young women and gender-expansive youth into the world of coding unlocks opportunity and contributes to innovations of the future.

Driving retention through community

KWK's inclusive approach to delivering its coding instruction is just as important as its technical rigour. Before participating in KWK, many community members recount being the only young woman or gender-expansive person in a coding class or club. Others say they've been curious about coding but were too intimidated by unwelcoming comments or environments to explore it.

Every program includes time for relationship-building, play and mindfulness that drive connection within the community. Relationships are also reinforced through project-based learning where scholars work together to create, code and present a passion project. This also provides a chance for participants to practice lifelong workforce skills, such as collaboration, communication, creativity and critical thinking about responsible uses of technology.

The community creates an environment where learning is possible and where peer and near-peer mentorship builds a sense of belonging. It's a place where members can seek guidance, share tips for success, celebrate wins and provide support to overcome challenges.

These community-based scaffolds all help to keep young women and gender-expansive youth on the path to careers in technology, increasing gender representation and equity for generations to come.



Suri, a participant in Kode With Klossy coding camp, shows off her mobile app written with Swift in Xcode. Photo by Andrea Wattley.

A story of growth and inspiration

In 2019, Madeline Gupta sat down at the keyboard for her first Kode With Klossy camp in Detroit, Michigan. She was 16. She drove almost an hour from Ann Arbor to attend, shaking away nervous jitters as she wrote some of her first lines of code in the Swift programming language. By the end of her two-week camp, Madeline had built a mobile app for iPhone that focused on safety for immunocompromised youth. Today, she's leading research at the intersection of virtual reality, mental health and her own Indigenous culture.

Since that first camp in 2019, Madeline has been an active member of the Kode With Klossy community. During the pandemic, she was a part of the inaugural group of virtual instructor assistants — former participants who train to be near-peer mentors for a cohort — in KWK's first online

programs. In 2022, after two years as an instructor assistant, Madeline led a KWK summer pilot program with Apple in New York City. In 2023, Madeline returned as an instructor assistant for a KWK camp in Boston.

During her three years as an instructor assistant, Madeline taught, connected with and inspired more than 150 students. Throughout these experiences, she gained valuable leadership skills and a chance to give back to the community that KWK fosters.

Madeline is now a rising final-year student at Yale, pursuing a dual degree in data science and computer science. She's conducting field work with Native Nations in Michigan and the Yale School of Medicine. One of her projects focuses on creating immersive virtual reality (VR) experiences that capture culturally significant sites on Mackinac Island in



Kode With Klossy Instructor Assistant and alumni Madeline Gupta shares feedback with a student on app design. Photo by Erin Crowley.

"Kode With Klossy has been huge for providing me with a community of girls and [gender-expansive] people like me, and showing me just what can be possible with a little bit of inspiration."

Madeline Gupta
Student, Yale

Michigan. This project aims to alleviate historical trauma and enhance mental health for tribal youth through an immersive connection to their ancestral homelands. Madeline shared that it's the first VR project being used for Indigenous mental health in the United States on this scale.

After graduation, Madeline plans to continue pursuing her passion for community and cultural technologies. She envisions herself at the forefront of shaping how these technologies are built and used, with a goal of challenging harmful narratives and redefining their potential impact.

When hearing stories like Madeline's, Karlie Kloss reflects on the organisation's remarkable journey over the past decade. "Nearly 10 years ago, Kode With Klossy started with a simple idea," she said. "Today, we're a global organisation and a community that spans more than 100 countries. We're giving the next generation of tech leaders and changemakers the confidence and skills to turn their ideas into reality and to make their mark on the world."

Growing talent through collective impact

Motor City Can Code and Create



Chauncey Samuel and a student at the Motor City Can Code and Create Showcase at Apple Developer Academy in Detroit.

Detroit is home to a proud legacy of innovation and creativity. From manufacturing to music, the city has been responsible for breakthroughs that revolutionised industry and redefined culture. Now, as organisations across Detroit invest in its revitalisation, Apple is providing support to help unleash the innovative spirit that makes this iconic American city such an extraordinary place.

Empowering the next generation

The Detroit Employment Solutions Corporation is Detroit's official workforce agency, providing job placement, training and support for workers across the city. To help empower the next generation, the non-profit agency has partnered with Grow Detroit's Young Talent (GDYT) to create summer employment opportunities for Detroiters ages 14 to 24. Last year, the initiative reached more than 8,000 young people, providing them with exposure to different careers and opportunities for training, networking and skills development. As part of its work in Detroit, Apple has provided GDYT with professional learning, curriculum and technology to support its efforts.

GDYT also provides stipends for young Detroiters to learn to code with Swift through a number of community organisations, giving them financial support to spend time learning critical thinking and creativity skills that they can apply to future careers.

"In the quest to holistically serve Detroit youth, a community of organisations support this overall effort," said Chauncey Samuel, Manager of Fund Development and Employer Engagement at Detroit Employment Solutions Corporation.

Multiple groups teaching coding skills

For the past four years, Apple's Community Education Initiative (CEI) has supported organisations that are helping Detroiters build digital and creative skills, expanding learning opportunities for learners of all ages.

In 2020, Apple partnered with Michigan State University's (MSU) 4-H Extension and College of Education and the Detroit Police Athletic League to offer Swift coding and creativity classes using Apple's Everyone Can Code and Everyone Can

Create curriculum. The next year, Apple began partnering with the Boys & Girls Clubs of Southeastern Michigan (BGCSM) to provide foundational skills in photography, music, video and drawing using Everyone Can Create.

Apple has since expanded this work to other organisations, including Henry Ford College, Wayne State University, JOURNi, Detroit Public Community Schools, Hidden Genius and CODE313. This support has fostered opportunities for youth to take classes in coding, app development, photography, videography and drawing, with Apple hardware and content providing them with early exposure to tech. "For some youth, these summer experiences may be their very first experience in the IT and technology worlds," said Chauncey.

In 2021, some participants also joined the first cohort of the month-long Foundations Program training at Apple's Developer Academy in Detroit, a partnership between MSU and Apple.

Apple Developer Academy

Apple Developer Academy is a free 10-month program in central Detroit. Established as a part of Apple's Racial Equity and Justice Initiative, the Academy provides a unique learning experience at the intersection of creativity and technology, helping empower aspiring coders and entrepreneurs to thrive in the world's most vibrant app ecosystem. During their time in the program, students use Apple tools to learn the essentials of coding, design and business, providing a powerful onramp to the tech industry.

Since opening in 2021, nearly 1,000 Detroiters have graduated from the program with critical coding and workforce skills to help them succeed in the city's growing tech sector.

“I like the fact that I can recruit instructors in Detroit who already know this stuff in depth. I really appreciate the partnership and also the nudge to collaborate with our other colleagues in the other organisations.”

Richard Grundy
Co-founder and CEO of JOURNi

“It’s hard to get into the tech industry. People are locked out of it because they don’t have the money to spend, or they don’t know that there’s a process that you can follow,” said Richard Grundy, co-founder and CEO of JOURNi, which is committed to building an inclusive tech ecosystem in Detroit.

In addition to pursuing exciting careers of their own, Apple Developer Academy graduates are expanding Detroit’s tech ecosystem by sharing their knowledge and skills with others. JOURNi has hired graduates from the program over the last two summers to teach coding. BGCSM and CODE313 have also recruited alumni as instructors.

“I like the fact that I can recruit instructors in Detroit who already know this stuff in depth,” Grundy said. “I really appreciate the partnership and also the nudge to collaborate with our colleagues in other organisations.”

Unique styles plus expertise

Each organisation that teaches with Everyone Can Code and Everyone Can Create content brings its own unique expertise and style to its programming. One organisation may teach coding using robots, while another focuses on research and design. This gives youth a variety of offerings to choose from.

Grundy says the benefit of collaborating with other Apple partners is that groups may present the same content in completely different ways, allowing participants to broaden their perspectives and skills. “Each organisation has its own strength. One may be great at teaching Swift, another may be great at UI/UX and developing a concept. So it truly becomes a way to celebrate the unique learning process for each organisation and less of a competition.”

Celebrating success together

In 2024, the first Motor City Can Code and Create showcase celebrated the collective impact of organisations working to build a pipeline of tech talent in Detroit. The event was held at the Apple Developer Academy, where youth ages 9 to 18+ presented their coding and creativity projects.

Some of the younger scholars from CODE313 were excited to share games they programmed or beats they created in GarageBand. One youth coding team presented an app prototype called Chore Checkers that aims to support the community by outsourcing seasonal house chores to youth.

In BGCSM’s showcase, one presenter, Alicia, shared that she knew nothing about coding or UI/UX before the six-week

program. Now she’s created an app prototype and was accepted into the Apple Developer Academy’s fall cohort.

Two teams from Henry Ford College’s program presented health-related apps. One team designed an app prototype to help people learn to recover from muscle pain using a 360 model and an AI chatbot. The other team presented an app idea that would support skin care for young women.

And the top two teams from JOURNi’s summer program presented apps they designed to support their communities. One aims to reduce poverty by helping to address mental health and homelessness, while the other helps create customised tours as a way to preserve local culture. “Being able to showcase their ideas and iOS apps allows young people to see they’re part of a larger initiative or movement, and that other people are rooting for them,” said Grundy.



Richard Grundy (rear row, left) and members of the Motor City Can Code and Create initiative, JOURNi, CODE313, Henry Ford College, Boys & Girls Clubs of Southeastern Michigan and Michigan State University 4-H Extension.

Designing a program to inspire the next generation of innovators

BGCA Innovate — Boys & Girls Clubs of America



A student designs an app on iPad with a Boys & Girls Club staff member.

Boys & Girls Clubs of America (BGCA) know the power of engaging with youth early to spark their curiosity, ignite their passions and help them prepare for their futures. They're committed to providing enrichment and opportunities that empower young people to reach their full potential. To that end, BGCA partnered with Apple's Community Education Initiative (CEI) to launch BGCA Innovate, an initiative dedicated to bringing coding and creativity programming to select Clubs across the United States and Germany.

BGCA Innovate evolved out of an effort that began in 2021, when a small virtual cohort of Clubs started teaching youth to code using Swift on iPad. More creative learning experiences were added the next year, along with more participating members. And, today, BGCA Innovate includes more than 50 Club sites in total. To date, the initiative has engaged over 240 educators and served more than 4,000 young people.

"Youth are developing transferrable skills they can share with families and community. They are showcasing digital skills, as well as communication and leadership skills," said Elaine Hudson, BGCA Innovate Lead with Boys & Girls Clubs of America. "Youth who never saw themselves in STEM or as coders go through BGCA Innovate, and they see new possibilities. It's a beautiful thing, making an impact on staff, youth, community and the future."

Preparing to design and deliver programs

Many Boys & Girls Club staff members don't have backgrounds in computer science, coding or education. Through the CEI partnership, the program provides Club program leaders and

staff with professional development, tools, strategies and resources to help them feel confident and equipped to teach. They participate in professional learning to build leadership skills and model high-quality teaching. The professional learning involves a wide range of experiences, including virtual learning co-facilitated by Club staff and Apple Professional Learning Specialists, asynchronous use of Apple Education Community Learning Center resources, participation in BGCA leadership conferences, Apple Store sessions and train-the-trainer courses for industry certifications offered by the National Coalition of Certification Centers (NC3) — another CEI partner. All of this prepares Club leaders to design programming, train other staff, and facilitate youth programs. In just three years, a dozen Boys & Girls Club staff have participated in App Development with Swift Associate Certification through NC3, enhancing their ability to design learning experiences and teach Swift.

In 2023, the initiative also held its first-ever BGCA Innovate Summit. This in-person event, which included Apple Professional Learning Specialists, provided youth development professionals from 16 Clubs the chance to participate in shared hands-on learning. The event was designed to build professional networks, model instructional practices for teaching with iPad, and develop coding and creativity programming. "Connecting with other staff from across the nation and around the world created a community that is a key resource. Building a relationship with the Apple CEI team and having them as a resource definitely helped polish facilitator delivery," said Jasmine Culver, Director of STEM, Boys & Girls Clubs of Greater Washington.

“Youth who never saw themselves in STEM or as coders go through BGCA Innovate and they see new possibilities. It’s a beautiful thing, making an impact across the movement on staff, youth, community and the future.”

Elaine Hudson
BGCA Innovate Lead with Boys & Girls Clubs of America



Students design and create on iPad.

Localising the program

While the BGCA Innovate program is offered to Clubs, each organisation and community has unique requirements. It’s important to BGCA that individual Club leaders and staff design programming to meet their specific needs. Based on experience, staff are refining and re-imagining elements of the program to maximise its impact in their communities. Some Clubs have developed sequenced learning opportunities where cohorts of youth code and design app prototypes, produce podcasts or documentaries, or create with digital arts through weekly classes and camp experiences. Others are offering drop-in workshops that invite youth to create and code — igniting interest and innovation.

Learning with Today at Apple

Beginning in summer 2023, BGCA Innovate worked with Apple’s CEI team to extend learning for Club leaders, staff and youth to Apple Store locations in their communities. Using Group Reservations, Clubs arranged private Today at Apple sessions, such as Drawing on iPad with Apple Pencil, Getting Started with GarageBand, Code Your First App, Apple Camp and more. More than 25 Clubs from Seattle to Washington, DC, have participated in over 100 sessions, learning to compose music, make and edit photos, code and express creativity.

While the youth were creating, the staff learned new app and iPad features, best practices and strategies they could bring back to their Clubs. They discovered the power of using templates to guide learners and discussed the importance of encouraging, sharing and celebrating youth work.

“I am continually amazed by what can be achieved in a short time with proper preparation and purpose... starting with clear expectations, providing brief, modelled instructions, allowing time for practice, and concluding with individual projects and a share-out session,” said Pam Leppi, Senior Director of Program Impact, Boys & Girls Clubs of Silicon Valley. “The encouragement and positive feedback from the instructors fostered creativity and provided excellent modelling for my staff.”

Showcasing work in their communities

BGCA Innovate Clubs are connecting with their communities and celebrating youth accomplishments in many different ways. A Club in Boston debuted a film at BGCA’s annual Keystone conference, while a Silicon Valley Club invited industry volunteers to serve as judges for app design challenge pitches. A Club in Greater Scottsdale featured student work at community STEM learning celebrations, and other Clubs facilitated virtual showcases. These experiences provide BGCA youth with unique opportunities to demonstrate their skills and build confidence — and highlight the way BGCA Innovate is empowering young people to grow as innovators, communicators, leaders and people.

Inspiring college success through creativity and coding

STEAM Pathway — College Track



Tristin Jenkins, STEAM Pathway Manager for College Track, Oakland, California.

Dedicated to breaking barriers to higher education access and success for under-served youth, College Track makes a 10-year promise to secondary school students to provide structure, support systems and a variety of enrichment opportunities to assist them with higher education enrolment and graduation — and ultimately help them have lives full of opportunity, choice, purpose and power. College Track partnered with Apple's Community Education Initiative (CEI) to build its flagship program, STEAM Pathway, which teaches under-represented scholars new skills and introduces them to careers in coding and creativity.

What is College Track and the STEAM Pathway program?

The program includes a series of workshops, events, activities, field trips and Career Discovery Externships that expose scholars to new skills and careers aligned with STEAM. It begins in year nine when scholars take an in-person workshop called Bytes, which is focused around a community app design challenge and an introduction to coding with Swift. Scholars connect with industry professionals for career conversations and coaching as they develop and pitch solution ideas. I enjoy the feedback, reflection and connection experiences with scholars as they work through the app design challenge and learn how they can become active agents of change in their communities.

How did you become an educator?

I always loved computers, electronics and games, so I knew something with computers was going to be in my future. As a Black man, I entered university knowing the systemic struggles and barriers to success. While my formal studies were in

computer science and engineering, I realised I loved education, and have focused on creating opportunities in STEAM for under-represented youth for the past 12 years.

How have Apple employees supported the program?

Apple volunteers — from interns to Apple Store and corporate employees — bring a diversity of stories to support our Career Discovery Externship events for our early college scholars. They share their professional expertise and mentorship with scholars as they tell stories of their own experiences. This engagement is important because it demystifies the person behind the role. A project engineer on paper is very different from a real person. Scholars can discover what they have in common with Apple employees and start to see themselves in those same roles. When volunteers share their career journeys, scholars learn that there are many ways to find a passion or career.

What impact has the program had?

I can't emphasise enough the power that the program and Apple technology have had on our scholars. One scholar was interested in fashion and design — the STEAM Pathway provided an entry point through arts and creativity that led to UI design. She's now starting college focusing on human-computer interaction. Another scholar was already a huge computer science fan, but he learned the importance of the human side of design and communicating ideas through the app design challenge. It's an opportunity for our scholars to gain exposure as they problem-solve, build confidence, ignite interests and connect to industry professionals who look like them and support their success.

Unlocking new solutions for a new world

CodeDoor Creators Program



Karan Dehghani, Founder of the CodeDoor Creators program.

CodeDoor is an organisation dedicated to empowering youth and young adults from migrant family backgrounds, equipping them with essential digital skills and building their confidence to thrive in today’s job market or launch their own companies. The Creators program, supported by Apple’s Community Education Initiative (CEI), teaches participants how to identify and solve real-life problems through app development with Swift.

How did CodeDoor come to be?

In 2014, when Germany had one million immigrants fleeing from various crises, I was inspired by a clear but profound message from the United Nations: Food and shelter were simply not enough. We must also provide ongoing education.

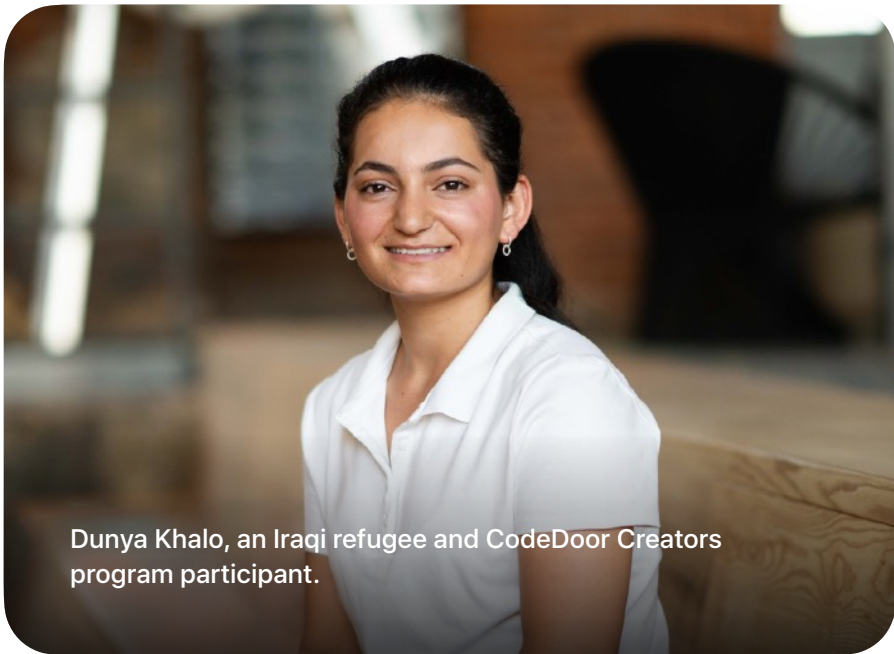
Given the high demand for developers in Germany, I believed that teaching coding could benefit industry and society at large. Determined to help, I reached out to local authorities to connect with refugees and offer coding lessons, but I found that there were no other programs offering this. Experts from various fields advised me to abandon the concept, claiming it was impossible.

Undeterred, I decided to pursue the idea on my own. I began with just one student, and by 2015, CodeDoor was born. Since then, CodeDoor CEO Nora Schimang and our team have built processes and technical solutions that help learners from migrant families throughout Germany while providing a talent network for companies and educational institutions. Today, CodeDoor is an award-winning organisation, receiving accolades from the nation’s leaders and scholars.

What is the CodeDoor Creators program?

The Creators program, supported by CEI, teaches participants how to identify and solve real-life problems through app development. By using Apple’s Everyone Can Code resources, engaging with Swift Playgrounds and pitching their apps as solutions to community challenges, participants acquire valuable skills, including coding with Swift, presentation techniques, language development and research related to their app’s focus.

The program offers eight months of hybrid, project-based learning and intensive coding sessions. Participants from across Germany gather on weekends for in-person coding camps held in the small town of Marburg. When not meeting in person, they connect online for practice sessions with mentors, as well as to refine their app ideas.



Dunya Khalo, an Iraqi refugee and CodeDoor Creators program participant.

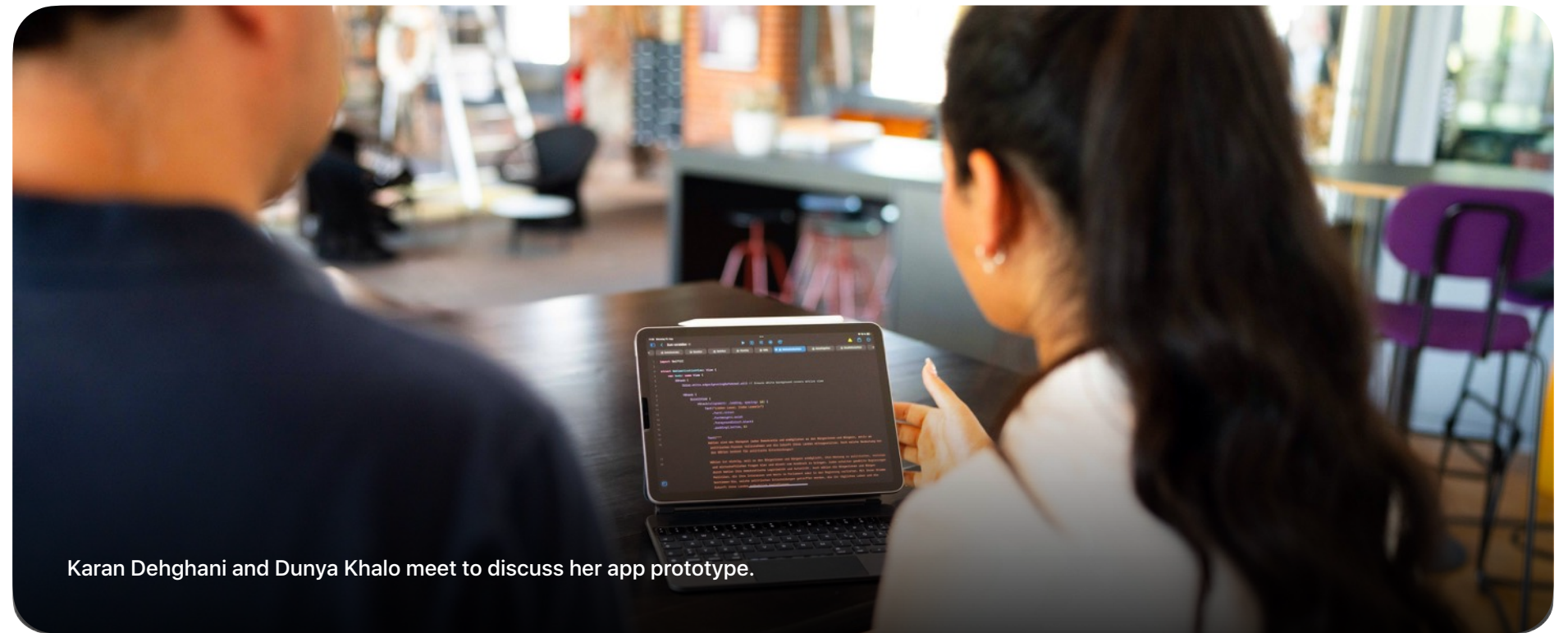
How do participants use their new skills to take on challenges?

One of the standout participants in the Creators program is Dunya, who joined the program to help encourage Germans to learn and engage with politics. She and her team of five, all contributing with their diverse backgrounds from Rwanda, Turkey, Serbia, Croatia and Egypt, developed an app to educate users about Germany's political parties. Through gamification, users of the app can explore their voting options and discover various political parties' platforms.

What makes Dunya's story even more remarkable is her background: She arrived in Germany as a young teenage refugee from Iraq. She's passionately committed to demonstrating the value and importance of democracy. As Dunya says, "There's simply no better form of government than democracy." The Creators program has enabled her to focus her efforts on helping Germans understand and appreciate their government.

What are some of the core outcomes CodeDoor is aiming for in the program?

The Creators program objectives are to teach young people problem-solving through app development, encourage continuous learning and adaptability, and equip them with both technical and soft skills that are crucial for future careers. Our participants use the Challenge Based Learning framework to recognise and thoroughly investigate overlooked problems in their daily lives, develop digital solutions and present their ideas clearly, enhancing their communication and project management abilities. The partnership with Apple provides students with tools to design, act and reflect on what's most important in their lives. For example, Dunya learned to code, which empowered her to build whatever she wanted and, in turn, use her skills to broaden others' understanding of democracy.



Karan Dehghani and Dunya Khalo meet to discuss her app prototype.

How has working with learners from migrant family backgrounds influenced CodeDoor's teaching?

It has profoundly shaped our teaching style in several ways. First, incorporating diverse cultural perspectives in the classroom encourages us to integrate new references, traditions and histories, making our teaching more inclusive and reflective of the global community we live in. Second, for learners and mentors alike, collaborating with people from different cultures in an open and respectful environment reduces prejudice and fosters a deeper appreciation and celebration of our differences. Finally, this work reinforces the idea that at our core, we share common goals and dreams, expressing unity in diversity.

Inspiring young adults to reach their full potential

Year Up United, Silicon Valley



Solomon Berhane, a participant in Year Up United.

For two years, Apple has been a corporate partner of Year Up United, Silicon Valley, an organisation dedicated to ensuring equitable access to economic opportunity, education and justice for young adults. Through the partnership, Apple provides professional learning, job training and apprenticeship opportunities, providing real-world experience and pathways into tech careers.

How did you learn about Year Up United?

As a first-generation Eritrean-American and the youngest of five siblings, I learned the value of dedication from my parents, who worked hard to raise five children together in Silicon Valley. Through their example, my siblings and I became entrepreneurs and founded a commercial trucking company, where I managed operations, human resources and organisational management. Everything was going well until 2020, when we struggled to maintain our business during the COVID-19 pandemic and eventually had to shut down operations.

I knew then that I had to pivot and do something different with my career. I always wanted to enter the technology field, so I enrolled at Western Governors University to begin my computer science studies. I joined many coding boot camps and earned several certifications. It was during this time that I heard about Year Up United through a friend of a friend who joined the program.

What is Year Up United and why did you decide to join the program?

In the Year Up United program, you benefit from training, professional learning, and programming opportunities. You spend six months in learning and development, building skills and enhancing your oral and written communications, and another six months participating in apprenticeship and work-based learning experiences with a local industry partner.

Given my entrepreneurial background and passion for leadership and team motivation, I decided to enrol in the program's project management track. After participating in the program, I'm excited to join Apple in a contract project management role.

Why is it important for programs like this to exist?

Despite being born and raised in Silicon Valley, I was never around individuals who worked in the tech industry and didn't know anyone in tech who looked like me, so I didn't consider it a career option.

People with non-traditional backgrounds like mine who attend community college or become entrepreneurs have valuable experiences they can share with a company. Year Up United gave me the opportunity to build new skills and to showcase the expertise I developed as a business owner. I pay that forwards by mentoring the next cohort of Year Up participants or those starting their apprenticeship opportunity with Apple.

How has Year Up United's partnership with Apple helped provide you with the skills you need for your career?

As a part of a team of apprentices, we relied on each other to complete projects. This experience taught me how to work with my teammates effectively and foster a spirit of collaboration.

Throughout the process, we leaned on each other as a team, which showed me that networking is directly linked to the success you can achieve within a company. I learned how to communicate and share our work to identify problems, find solutions and support one another. During my Apple apprenticeship, I led a session at our weekly Friday team meetings where we got together to share knowledge.

I'm so appreciative that Apple supports educational programs like Year Up United, and I'm grateful for the opportunity it has given me. As I advance in my career, I'm 100 per cent committed to applying the skills I've learned by reaching back through mentorship, engaging as a stakeholder in my community and advocating for the program.

Breaking the cycle of generational poverty through education

Akanksha Schools — The Akanksha Foundation



Saurabh Taneja, CEO of Akanksha. Photo provided by The Akanksha Foundation.

For 33 years, The Akanksha Foundation has worked to strengthen the public school education system in India. Through its network of 26 kindergarten-to-year 10 schools, Akanksha partners with local municipalities to provide free, high-quality education to children from under-resourced communities in Pune, Mumbai and Nagpur. Apple has supported the foundation's work for close to a decade, helping Akanksha integrate technology and Apple's learning resources into their classrooms.

Can you tell us more about The Akanksha Foundation model?

The Akanksha Foundation aims to create pathways out of poverty by building 20-year partnerships with the children who attend the schools, their parents and the wider community. We support students until they complete their education and step into the real world. Of the more than 5,000 alumni who have graduated, many have gone on to study at major Indian and international universities, and are now pursuing careers in diverse fields, including academics, arts and sports. In 2021, we broadened our impact even further by partnering with two new municipal governments, providing training and resources to 200-plus government schools and impacting 75,000 students.

How has iPad and other technology changed the learning experience for your students?

Our vision is to equip our children with the skills they need to succeed in the 21st century. We know that digital learning is an integral part of that vision. With support from Apple, we've created a digital learning environment where every student has access to tools and technologies that spark creativity and innovation in both academic and non-academic spaces.

We're seeing more interactive engagement from students when they use iPad in the classroom. They use their devices to share information and make complex concepts more accessible. And they're able to view and create educational videos and multimedia presentations to enhance comprehension and retention. Students use tools like AirPlay and AirDrop to easily share worksheets and presentations and Apple TV for live science experiments and demonstrations.

It's truly wonderful to see our students using these technologies both in and beyond the classroom. For example, the robotics team at one of our Pune schools uses iMac and iPad for

research, and students in Mumbai used their iPad for an interactive community presentation about cybersafety.

How has support from Apple impacted your students and your approach to teaching?

Lessons are more interactive and engaging with the support we've received from Apple. Integrating iPad across our teaching has allowed us to create a collaborative, connected, more personalised learning environment to meet student needs across the program.

Apple has also supported professional development for our teachers. They use these devices for professional learning that includes things like documenting their work and creating dynamic and collaborative learning environments that reach beyond the classroom. Every Akanksha school has a digital teacher lead who focuses on upskilling our team, providing comprehensive training on a range of apps, and offering guidance and suggestions on new ways to use iPad in lessons. This arms our educators with skills to harness the full potential of technology in education.

What does the Foundation's work mean for your community?

Research demonstrates that there's a significant correlation between family engagement and a child's life outcomes. We invest heavily in partnering with children's families and engage with parents in many ways, including through parent education programs.

We believe that a high-quality education has the power to break the cycle of generational poverty. Already, we have data to suggest that our alumni are supporting their families by contributing up to 40 per cent of their income to family expenses.

Racial Equity and Justice Initiative

"The partnership between The Propel Center and Apple's Racial Equity and Justice Initiative marks a transformative milestone in advancing educational and technological opportunities for HBCU students. By fostering innovation and providing critical resources through programs like the Accelerator, this collaboration is not only empowering the next generation of leaders but also reinforcing the vital role that inclusive and equitable access to technology plays in shaping a brighter, more equitable future for all."

Dr Lisa Herring
President, Propel Center



Students participating in the Propel Arts & Entertainment Accelerator program talk with Apple Music Radio host Kelleigh Bannen.



Our commitment to racial equity and justice

We believe that education advances equity. Since our earliest days, we've engaged with minority-serving institutions to help learners access pathways in science, technology, engineering, arts and maths (STEAM), because we believe that all learners, regardless of background, should have access to critical technology and skills. In alignment with Apple's Racial Equity and Justice Initiative, we continue to expand our support for education programming in under-resourced communities in Australia, Canada, Mexico, the United Kingdom and the United States.

Expanding access to create possibilities

TechConnect Program — The New York Public Library



Dr Brandy McNeil, The New York Public Library Deputy Director of Branch Programs & Services.

By expanding access to technology, the New York Public Library (NYPL) is empowering New Yorkers to participate more fully in their communities and helping create new pathways to economic opportunity. Since 2020, Apple’s Community Education Initiative (CEI) has partnered with NYPL to offer in-person and virtual training classes for New Yorkers of all backgrounds and skill levels as part of NYPL’s TechConnect program, which helps adults improve their computer skills and grow more comfortable in today’s digital world.

Envisioning a new role for libraries

As technology advances, libraries are adapting to better meet the evolving needs of their communities. Dr Brandy McNeil, PhD, NYPL’s Deputy Director of Branch Programs & Services, is at the forefront of this change. “One of the ways that we can help shape the trajectory of libraries is to create learning spaces that are designed for collaborative, interactive learning — one that fosters civic engagement, promotes cultural exchange of diverse interests, and ensures that health and wellness not be overlooked,” said Dr McNeil.

As President-Elect of the Public Library Association, Dr McNeil also understands how different library systems operate, innovate and manage staff. She looks for opportunities to expand the skills of NYPL facilitators by sending them to Apple Professional Learning sessions and providing them with professional development courses they can take online and in person.

NYPL also serves the community by working to close the digital literacy gap, while addressing important topics such as misinformation, personal data security and censorship. Library staff receive training on the latest technologies so they can help educate patrons on ways to discern what are credible sources of information and how to be proactive about protecting their personal data.

“One of my major goals, and probably the reason why I love my job so much, is because I am here to help serve those who are disadvantaged, and provide them with an opportunity to be as successful, productive and empowered as anyone else.”

Dr Brandy McNeil
The New York Public Library, Deputy Director of Branch Programs & Services; Public Library Association President-Elect for 2025–2026

Expanding access to classes

The TechConnect team continuously evolves its programming to keep up with the changing needs of New Yorkers through ongoing conversations with patrons. To date, the program has offered more than 100 online and in-person technology classes across 89 branches, making free educational programs more accessible for those who can't travel to Midtown. The program's leadership and staff work closely with branch librarians and borough directors to identify locations in the Bronx, Manhattan and Staten Island that supplement the main program at the Stavros Niarchos Foundation Library (SNFL) in Midtown.

NYPL has also expanded its train-the-trainer program, which trains SNFL instructors to teach staff at new locations how to lead high-quality local classes. Select classes are also held after the library's closing hours, so New Yorkers who have daytime commitments can take advantage of the program.

Teaching coding through Project Code

With Apple's support, NYPL has also expanded the availability of Swift coding classes to more neighbourhoods. Project Code, which uses Apple's Everyone Can Code curriculum, is a 12-week coding program with two iOS app development courses: Develop in Swift Explorations and Develop in Swift Fundamentals. The two-hour hands-on classes are available online and on-site twice a week. After launching with virtual programming during the pandemic, Project Code is now reaching a wider audience in under-resourced communities who are looking for opportunities to learn new skills.

"With Apple's support, we have expanded our widely successful Project Code program to provide app development classes and the potential for certification," said Dr McNeil. "We scaled up to four more certified facilitators to meet the demand for their coding programming using the NC3 Certiport course, App Development with Swift."



NYPL patron Evelyn von Gizycki engages in programming offered at Stavros Niarchos Foundation Library.

Practising and building on new skills

To ensure that patrons have opportunities to build skills or pursue careers in the digital arts, NYPL opened a state-of-the-art studio and media stations where patrons can create with the latest technologies. They can use GarageBand on iPad or Mac to practise recording music after learning it in one of the classes or go into the studio to record a podcast.

They also added a podcasting pilot program for non-native English speakers. "We already knew that patrons who attended our English-speaking classes were also coming to our TechConnect classes and getting help with job readiness skills through our Career Services department," said Dr McNeil. "Our goal is to collaborate and strengthen their skills so that patrons can see beyond the typical path of learning and practising English."

According to Dr McNeil, the pilot program exemplifies the new and important role that libraries can play in our communities. "One of my major goals, and probably the reason why I love my job so much, is because I am here to help serve those who are disadvantaged, and provide them with an opportunity to be as successful, productive, and empowered as anyone else."

Using creativity to fight censorship

The library has been offering Unite Against Book Bans and anti-censorship programs throughout the year. For example, one class asked participants to recreate a banned book cover using TechConnect's Code + Create Kits. Aspiring artist and NYPL patron Evelyn von Gizycki noted that after reading a very moving young adult memoir, she felt so much joy and heartbreak. She shared her interpretation of the cover at a spring celebration, saying, "I got to read a little of the book, and I was really impressed by the honesty, the love, the humility and the humour. It's not always easy to find joy in your pain and in your suffering, but the author brilliantly describes the support that he gets from many people and some communities."

Von Gizycki credits NYPL with increasing her sense of belonging, explaining that TechConnect has made a profound impact on her life. "We don't want to leave children behind, but I felt like I was getting left behind as an adult. NYPL became my second home. I don't know what I would do without these instructors," she said. "I love the New York Public Library, because as adults, we also have opportunities to learn. The TechConnect classes have inspired me, awakened me and humbled me," said von Gizycki. "I'm learning computer coding, graphic design and how to create a website. Anyone who knows me knows this is nothing short of miraculous."

"We have expanded our widely successful Project Code program with the help of Apple to provide app development classes and the potential for certification."

Dr Brandy McNeil

The New York Public Library, Deputy Director of Branch Programs & Services; Public Library Association President-Elect for 2025–2026

Creating culturally relevant learning experiences

C3: Culture, Community, Creativity — Oklahoma City University and Oklahoma Tribal Nation Initiative



Dana Cochran, Sequoyah High School science teacher.

To help educators in Native American communities engage their students, Oklahoma City University (OCU) launched C3: Culture, Community, Creativity — a professional learning program for preschool through high school teachers across Oklahoma. Since its inception in 2022, two cohorts totalling 46 educators from the Cherokee, Chickasaw, Choctaw, Osage and Muscogee (Creek) Nations have participated in the program.

As a part of Apple’s Community Education Initiative (CEI), OCU received iPad devices, other hardware and software for classrooms, funding and professional learning. The university also partnered with Apple to provide teachers with ongoing technical and professional support. Over the course of the C3 program, participants use Apple’s Challenge Based Learning framework — which guides learners of any age to facilitate change in their communities — to develop solutions they can take back and implement in their classrooms.

Changing the landscape of instruction and learning with technology

Throughout the year, teachers in the C3 program are guided by Dr Helen Gaudin, C3 Project Manager and Dr Heather Sparks from OCU’s Teacher Education Program, along with Apple Distinguished Educators.

Dr Sparks, a former Oklahoma Teacher of the Year and director of the Teacher Education Program, is passionate about preparing Oklahoma’s educators for success. She teaches educators how they can use technology to enhance the way students learn and provide them with skills they can carry and apply well into the future.

Dana Cochran, a Sequoyah High School science teacher and citizen of the Cherokee Nation, shared how she applied the solution she developed in the program to her classroom. “Our solution centred on a student-created podcast,” she said. “Teaching students to use technology to record, edit and publish their own content can get them excited about topics across the core curriculum.” Cochran’s students created episodes on various topics, including raised garden beds on campus that follow traditional Indigenous planting practices. The goal was for students to produce content that combines traditional Indigenous knowledge with Western science. The use of technology is helping them preserve and share their culture. “It’s an evolution of the storytelling that’s foundational to Indigenous ways of knowing,” said Cochran.

During their time in C3, educators create electronic portfolios that showcase the skills they develop along with the classroom projects. They also complete the Apple Teacher program, earn Apple Teacher recognition and receive a stipend when they complete the year-long program.

Professional learning to prepare students for in-demand jobs

Interested teachers are invited to enrol in the Instructional Design and Educational Technology graduate program at OCU, which is supported by Apple CEI grant funds and hardware. In the program, OCU provides tuition assistance to help teachers earn a certificate in educational technology or a master of education in instructional design and educational technology. OCU president Dr Ken Evans remarked, “From coding to more broad technical skills, by providing these learning opportunities

for teachers, we're helping young people prepare for in-demand jobs while honouring the heritages, languages and traditions of these nations."

Regardless of whether they continue their studies, teachers who go through C3 continue to develop ideas that will multiply student impact for years to come. They also encourage their students to take on projects using Apple's Everyone Can Code and Everyone Can Create resources, which are then shared with parents, in school assemblies, on district and Native nation websites, and in competitions at the state and national levels.

When asked what's next, Dr Gaudin shared, "Educators from the Year 2 cohort plan to launch new projects focused on app development with Swift. These teachers will attend additional coding training at OCU. At Sequoyah High School, the plan is to develop an app that highlights historical and cultural sites within the Cherokee Nation."

"From coding to more broad technical skills, we're helping young people prepare for in-demand jobs while honouring the heritages, languages and traditions of these nations."

Dr Ken Evans
OCU President



Dana Cochran implementing Challenge Based Learning in her classroom.

Cultivating skills in the artists of the future

Benedict College — The PROPEL Center



Colleagues Gina Moore and Sanford Greene ignite student creativity at Benedict College.

Benedict College, a Historically Black College and University (HBCU) in Columbia, South Carolina, has a rich history of fostering academic and personal growth. The college is driven by its mission to provide high-quality education that empowers graduates to contribute to their communities and succeed in their chosen fields. With grant support from the Propel Center, a learning and innovation hub launched in partnership with Apple’s Racial Equity and Justice Initiative, Benedict is helping talented students prepare for careers in the creative and digital arts.

Launching projects with Propel grants

Gina Moore, a Professor of Art and Coordinator of the Studio Art Program, has taught thousands of hopeful artists at Benedict College over the past 37 years. One of those students is Sanford Greene, who went on to become a professional illustrator. He now gives back to his alma mater as an Artist-in-Residence and Moore’s primary collaborator in finding ways to ensure that the arts degree program inspires students and prepares them for successful careers.

In 2021, when Moore learned about the Propel Center’s Impact Grants program, she knew it was the perfect opportunity for her students. By providing cutting-edge technology and coding education, the Propel Center helps students prepare for careers in high-demand fields, such as software development, digital arts and music production. As part of this work, the Impact Grants program aims to create more opportunities in under-resourced communities and ensure that all students have access to the tools they need. Benedict College was awarded a grant to create new learning experiences and build work-study pathways that align to courses, certifications and internships offered through Propel in the creative and digital arts.

Moore and Greene used the grant to launch a new project to engage students through the creation of a graphic novel, *The Wonders of an HBCU*. The students decided to focus on their unique experiences at the college, transforming their memorable moments into short stories with the fantastical elements of graphic novels. The students created an anthology of stories, each sharing a personal experience that led to a valuable lesson.



Greene’s background in illustration and sequential art brings authenticity and expertise to the initiative, enriching the learning environment for students. “Being able to come back and give back is great, and it just so happens that the stars aligned when we got this project and the grant,” he said. “This is my profession, so it’s easy to guide the students even though they’ve never been a part of something like this.”

Giving students hands-on experience

The process of creating the graphic novel began by selecting talented junior and senior visual arts students who were academically prepared to take on the project. Greene and his assistant, Asia Fullmore, guided the students through character creation, world-building and sequential storytelling while teaching them to use software like Procreate on iPad.

"Apple's technology has enabled our students to explore new creative possibilities and develop skills that are highly relevant in today's job market. The project not only prepared students for their future careers but also fostered a sense of pride and accomplishment."

Gina Moore
Professor of Art and Coordinator of the Studio Art Program,
Benedict College



Sanford Greene sets the stage for brainstorming and ideation with digital art students.



Erin Graves, a final-year studio art major, begins sketching her ideas using iPad and Apple Pencil.

Greene said many students are interested in careers in animation, concept design and sequential art, so working on the graphic novel provided hands-on experience that helped prepare them for these fields. Apple technology played a crucial role throughout the project, with students using iPad, Mac and various software tools to learn and create.

From initial brainstorming and writing to the final stages of publishing and promotion, the students played an integral part in every stage of the creative process. "It wasn't just 'let's produce a novel'. It was learning the software and hardware and about opportunities in the field. They didn't have to just go out and be a graphic designer. They learned all aspects of the publishing field," said Greene.

Engaging with the community

The project also attracted significant community involvement from accomplished professionals of colour who inspired the students. Publishers and artists conducted special career days, providing valuable insights on student portfolios. The graphic novel's publication was supported by a local Black-owned publishing company and a local printing company for merchandise. This comprehensive approach cultivated the students' skills and provided first-hand insights into potential career paths.

A sense of achievement

One of the most memorable aspects of the project was the students' sense of achievement upon becoming published authors. They participated in book signings, exhibitions and other events that celebrated their work. These experiences not only boosted their confidence but also connected them with the community.

The graphic novel initiative at Benedict College exemplifies the power of combining education, technology and community engagement. Its success can be attributed to its relevance to students' interests and aspirations, as well as Moore's and Greene's inspiring commitment to providing meaningful educational experiences.

"It was just good to work with something of this magnitude. This grant was shared with our other academic units in the department, so we joined forces with other disciplines, which made it exciting," said Moore. "If these students are encouraged and inspired by something, they're going to share it. I mean, we can talk about it, but them sharing with enthusiasm is so much better. They're the greatest advocates for this."

Transforming teacher education through culture and technology

Aggie Academy — North Carolina Agricultural & Technical State University’s College of Education



Dr Paula Groves Price, College of Education Dean at North Carolina Agricultural and Technical State University (NC A&T).

Founded in 1891, North Carolina Agricultural and Technical State University (NC A&T) is the nation’s largest HBCU and a long-time leader among public land-grant research institutions. Renowned for its extraordinary faculty and leaders, the school’s College of Education is dedicated to advancing the principles of equity and justice, while facilitating transformative teaching and learning experiences across the “K-to-Gray” spectrum. The university also operates Aggie Academy, a free, public lab school, where a partnership with Apple is creating new opportunities for educators and students alike.

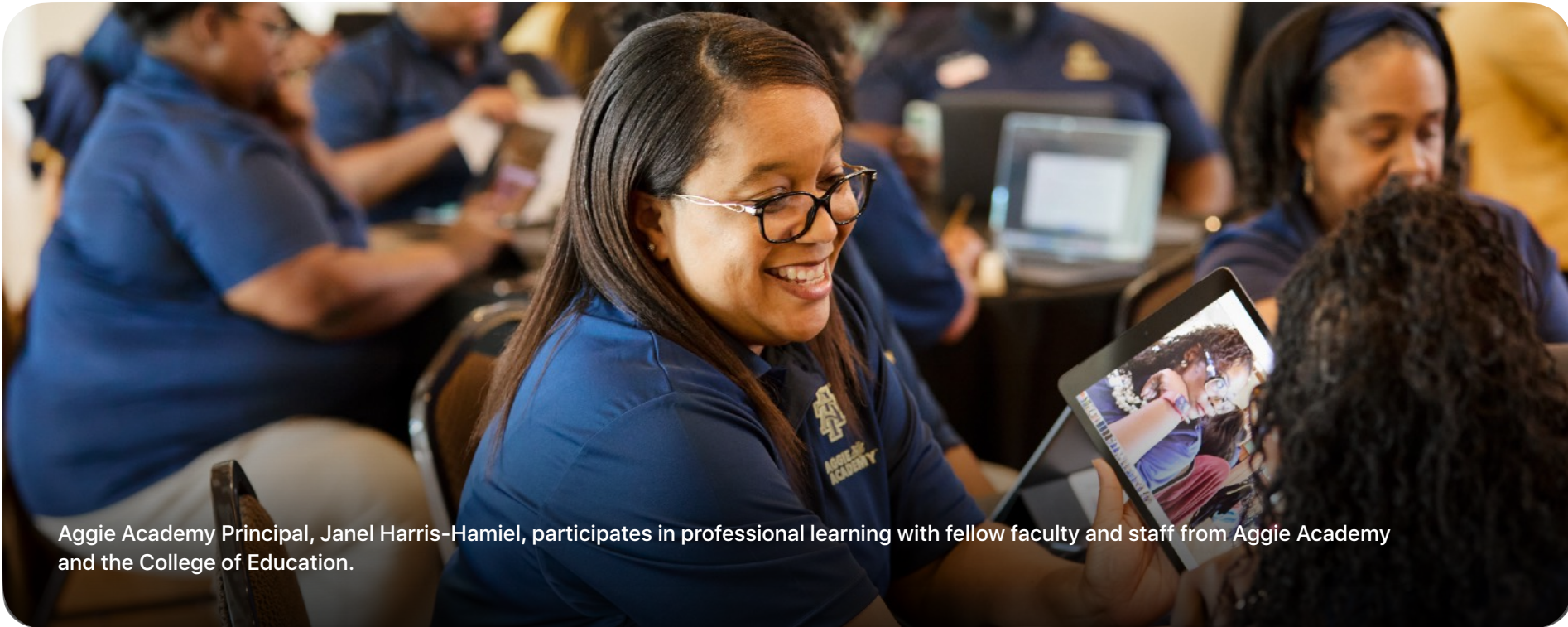
Bringing theory into practice through Aggie Academy’s living laboratory

North Carolina A&T established Aggie Academy to provide better learning opportunities for students who previously attended low-performing schools. Enrolling year three-to-five students in Guilford County, Aggie Academy also serves as a living laboratory for the College of Education, enabling faculty and students from the college to regularly engage with Aggie Academy, bringing theory into practice.

Since opening its doors for the 2022–23 academic year, student outcomes at Aggie Academy have been outstanding. Today, it’s one of the highest-performing lab schools in the state,⁵ and it was recently recognised as an Apple Distinguished School.

“Integrating technology into our curriculum across all units in the College of Education and Aggie Academy allows us to innovate teaching and learning to meet the diverse needs of all of our learners — from elementary school to adult — while holding strong to our mission to enact culturally sustaining and transformative and liberatory educational practices.”

Dr Paula Groves Price
Dean of the College of Education
North Carolina Agricultural and Technical State University



Aggie Academy Principal, Janel Harris-Hamiel, participates in professional learning with fellow faculty and staff from Aggie Academy and the College of Education.

Innovating a strong STEAM curriculum

Through a grant from Apple's Community Education Initiative (CEI), the College of Education is working to ensure that faculty and students have the skills needed to create a strong STEAM ecosystem at Aggie Academy and beyond. As part of this initiative, faculty, teachers and students enrolled in the college participate in professional learning opportunities, earn badges and have the opportunity to become recognised Apple Teachers.

Across the College of Education, faculty are also integrating technology into curriculum and research. For instance, while Department of Educator Preparation faculty members collaborate with Aggie Academy to strengthen pre-service teachers' skills, the Department of Counseling is exploring ways that Apple technologies can enhance the preparation of mental health counsellors.

Meanwhile at Aggie Academy, students and teachers use iPad to foster creativity and learn new skills. Shayla Thompson, a STEAM teacher and instructional coach at the school, described the impact of using Swift coding apps on iPad.

"Allowing students to use Swift Playgrounds on their iPad devices has been transformative for Aggie Academy scholars' coding skills," she said. "They have grown significantly in their understanding of programming concepts, problem-solving abilities and creativity in designing their own projects. iPad has provided an engaging and accessible platform that has made learning coding both enjoyable and educational for them."

Likewise, College of Education Dean Dr Paula Groves Price shared how the partnership with Apple is helping advance the college's mission. "Integrating technology into our curriculum across all units in the College of Education and Aggie Academy allows us to innovate teaching and learning to meet the diverse needs of all of our learners — from primary school to adult — while holding strong to our mission to enact culturally sustaining and transformative and liberatory educational practices," she said.

Advancing the mission through the power of collaboration

As Aggie Academy heads into its third full academic year, the future looks promising. By bringing together diverse resources and expertise, the collaboration between North Carolina A&T and Apple is helping create a vibrant educational environment that benefits students, educators and the broader community. As both the College of Education and Aggie Academy continue to grow and evolve, they show what's possible when institutions come together with a shared commitment to excellence and equity — and with the right tools and technology to support their mission.

"Allowing students to use Swift Playgrounds on their iPad devices has been transformative for Aggie Academy scholars' coding skills."

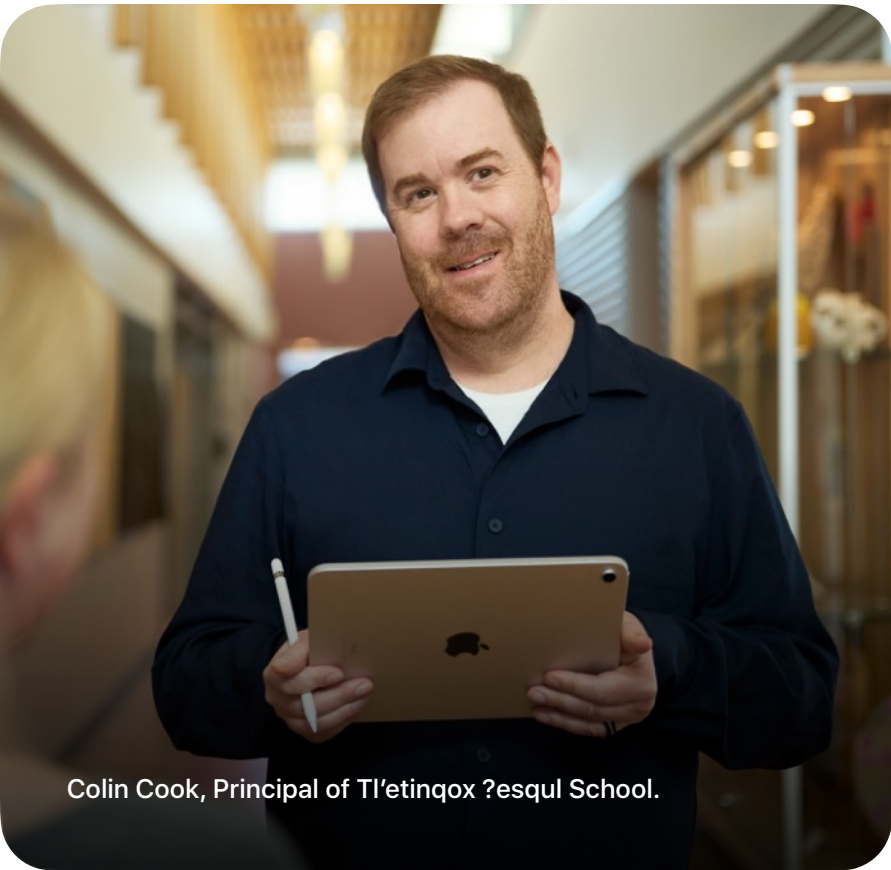
Shayla Thompson
STEAM Teacher



Shayla Thompson, Aggie Academy STEAM teacher and instructional coach.

Preserving culture while creating opportunities

Indigenous Education Initiative — Tl’etinqox ?esqul (kleh-deen-ko)



Colin Cook, Principal of Tl’etinqox ?esqul School.

Indigenous communities in Canada have long faced systemic barriers to quality education. Deeply rooted inequities have bred intergenerational trauma and widespread distrust of educational systems, resulting in fewer learning opportunities for Indigenous youth. However, with an emphasis on self-determination and sovereignty in education, many communities are making significant progress in improving student outcomes. Tl’etinqox ?esqul School is an example of an on-reserve school that’s transforming Indigenous education, with leaders using Apple technology to provide students with enriching experiences that honour their culture and heritage.

Embracing a student-centred approach

Located on the unceded lands of the Tsilhqot’in people near Alexis Creek, British Columbia, Tl’etinqox ?esqul is a primary and secondary sovereign school run by the Tl’etinqox government. The Tsilhqot’in people value their youth greatly, and that’s reflected in the school’s student-centred approach to learning.

“Everything else falls into place once our students’ needs are prioritised, which begins with trust. Trust is earned through consistent actions and having them be authentic voices and leaders in the school, which includes everything from the hiring process of school staff to leading activities in the school,” said school principal Colin Cook.

Enabling personalised learning with Apple

Tl’etinqox ?esqul uses Apple technology to support a curriculum focused on language and culture. To enable personalised learning, the school makes iPad available to every student, and all students in years 6–12 have access to a Mac. Apple has supported staff and students through six years of virtual and on-site learning experiences. This collaboration has provided opportunities for members of the community to learn directly from Apple Professional Learning Specialists and Apple Distinguished Educators, while using Everyone Can Create and Everyone Can Code resources to share stories and express their creativity.

Using iPad to connect with culture

In years 1–4, students use Pages on iPad for Indigenous land-based teaching activities that would otherwise be impossible. iPad has made it easy — and meaningful — to document learning through photos, film and audio. Students can draw and sketch their ideas, conveying more than they could through

text-based expression. Apple’s assistive technology is also empowering students who have communication difficulties to flourish. Families are impressed by the new skills their children bring home and how their learning flows into the community due to the ease of documenting stories and songs.

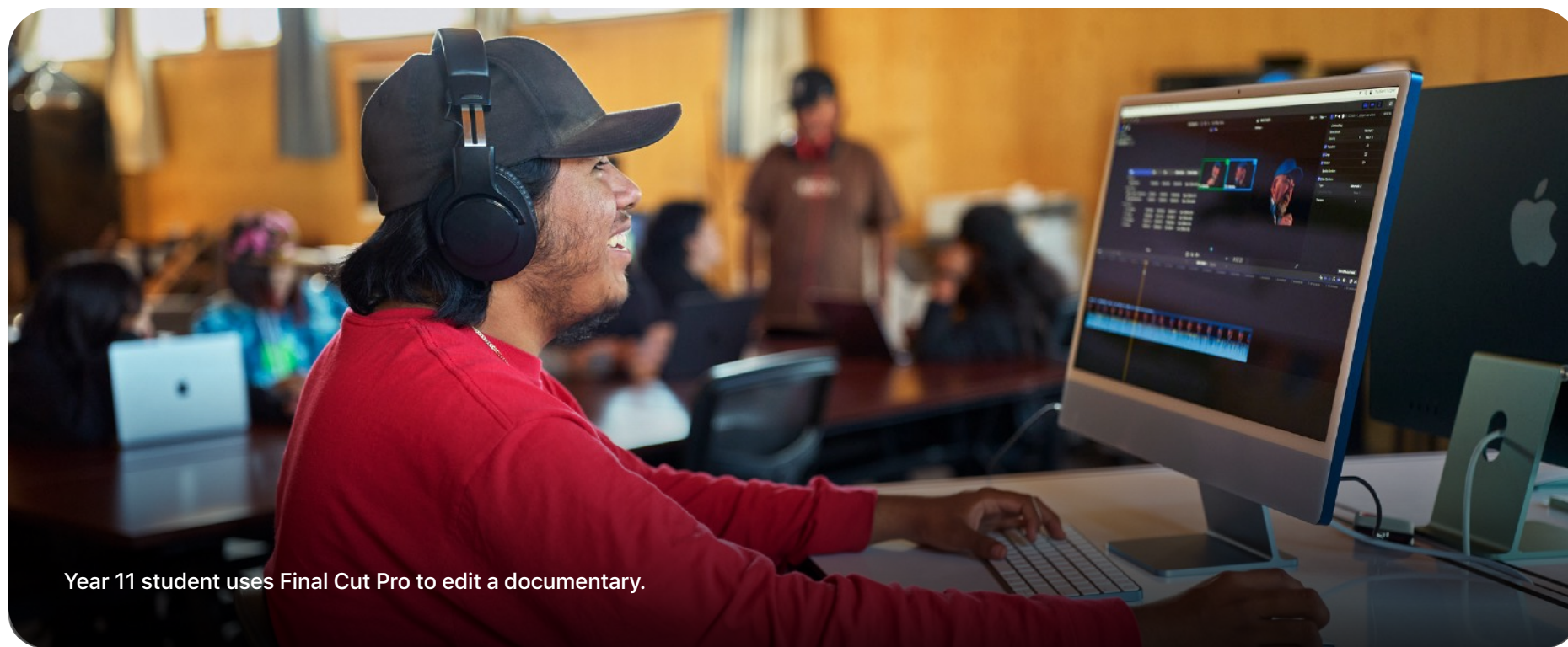
Using Mac and Pro Apps to document culture

With Mac, secondary students are empowered to explore photography and videography at an industry-standard level. They use Final Cut Pro and Logic Pro to produce, create and edit documentaries of their history. They use Adobe Photoshop and Lightroom to edit school portraits or classroom photos. Some are even using their creative skills to pursue entrepreneurial opportunities both at school and within the community.

Improving engagement and performance

As a result of these efforts, Tl’etinqox ?esqul has seen a dramatic improvement in student engagement and outcomes. The personalised learning enabled by Apple technology is helping students become more confident in their abilities and more willing to share their perspectives. Some students diagnosed with cognitive disabilities or behavioural issues prior to enrolling in Tl’etinqox ?esqul are now thriving. One year 11 student says, “In the beginning, in any other school, I would’ve been kicked out or dropped out, but it’s different here.”

According to Principal Cook, as of June 2024, 65 per cent of students at Tl’etinqox ?esqul were reading at or above year level, up from just 40 per cent in 2018. And he says the progress in maths over the same period has been even more dramatic, with the proportion of students performing at year level rising from less than 50 per cent to more than 90 per cent.



Year 11 student uses Final Cut Pro to edit a documentary.

“Apple technology connects our students with our knowledge and language keepers to create digital records and archives of traditional knowledge, stories and songs that would otherwise be lost. The value of that knowledge is immeasurable.”

Colin Cook
Principal, Tl’etinqox ?esqul School

Cook also notes that daily attendance of secondary students has increased to 98 per cent. And that incredibly, the school is now projected to have a 100 per cent graduation rate for the 2024–25 school year, significantly outpacing the 52 per cent national average for on-reserve students.

Opening a gateway to the outside world

Beyond its academic impact, Apple technology has helped create a gateway to the outside world, allowing students to explore opportunities that would not be available otherwise. “Our community is small and remote, with limited career prospects,” said Cook. “Young people have always faced a dilemma between seeking opportunities for themselves and not wanting to leave their families behind.”

Among other experiences, students participated in an exchange with a diverse learning community from Hawai’i that included Kanaka Māoli (Native Hawaiian) and other Indigenous youth.

The participants learned about each other’s land, shared traditions, customs and cultural values. Travelling to another country helped Tl’etinqox ?esqul students see that the world is far bigger than their community near Alexis Creek. On the ride home, Cook overheard one student quietly say, “I think I’m not just a “rez kid” any more.”

“Our students have connected with Indigenous peers in other countries and careers that would have otherwise been inaccessible to them,” Cook said. “They are acquiring skills that enable them to compete for opportunities, which is a significant game changer. We notice confidence in our students as learners and as proud Tsilhqot’ins.”

Inspired by other Indigenous communities in Ontario, the school worked with an artist to create a large-format mural that documents and showcases Tsilhqot’in culture and history. Located at the entrance of the school, the mural reinforces student learning and their heritage. And as practices at the

school broaden students’ perspectives, they’re also helping elders and other community members reshape how they view the education system. Now, Cook and the students are exploring ways to create more community-based artwork to preserve the community’s language, voice and story.



Year 3 and 4 students create infographics in Pages on iPad.

Building confidence and skills through second chances

Firme Coding — Global HSI Equity Innovation Hub



Maria Martinez, Founder of Firme Coding. Photo provided by California State University, Northridge.

Firme Coding was launched to create coding and workforce training for formerly incarcerated individuals. Apple has been supporting Firme Coding's work through a grant awarded by the Global HSI Equity Innovation Hub, an initiative launched out of Apple's Racial Equity and Justice Initiative (REJI) to expand technology and opportunity within the broad community of Hispanic-Serving Institutions.

What does Firme Coding do?

At Firme Coding, we teach coding to formerly incarcerated individuals as a way for them to earn a living wage. Through my volunteer work at Homeboy Industries, an organisation that provides hope, training and support for people who were previously involved in gangs or incarcerated, I realised that many of them lacked basic computer literacy skills, making economic mobility more challenging. They often didn't have access to technology while imprisoned, and because technology evolves so quickly, even a few years without access can severely disrupt their ability to enter the workforce. So, in collaboration with Homeboy Industries, I launched Firme Coding to empower and educate individuals with criminal backgrounds, preparing them for tech employment.

How did your experiences lead you to create Firme Coding?

I, too, am formerly incarcerated. Luckily, I had the support of my family — especially my sister. She encouraged me to continue my studies while incarcerated and to enrol at university once released. I earned my degree in computer science from California State University, Northridge (CSUN).

I also relied on the support system of Homeboy Industries. Wanting to give back to my community, I began volunteering in a supportive role for other formerly incarcerated individuals. It then occurred to me that teaching them what I knew — coding — could help them increase their earning capacity. To get started, I applied for an HSI Community grant through the Global HSI Equity Innovation Hub at CSUN. Thankfully, we received the grant, and with the support of CSUN's Project Rebound program and Homeboy Industries, we were able to bring my vision of Firme Coding to reality.

Why use coding to re-enter the workforce?

My sister is a programmer; she asked her HR department if they'd hire someone with a criminal background. They said they would, as long as the person knew what they were doing. I was hired very quickly as an intern and then offered a full-time software engineering job. Seeing the opportunity it gave me, I wanted to extend that support to others — especially to women.

Many of the women had been separated from their children and, when they returned to society, had to provide for themselves and their families. The traditional path often begins with entry-level jobs in fast-food restaurants, which don't provide the financial security these women need. Although the journey can be difficult and full of setbacks, coding opens doors to economic mobility and stability.

What impacts are you seeing?

Many Firme Coding members didn't even know how to use a computer — now they're all tech savvy! For example, one member who couldn't search the web or use digital tools before the program is pursuing his master's degree online at the University of Southern California.

What most people view as simple — things like accessing iCloud on iPhone, iPad and Mac — can be game changers for our students. They're more comfortable using tools like iMovie, Apple Podcasts and Keynote to create their content and tell their stories.

Firme Coding is about second chances. Building confidence and skills within a supportive community empowers members to redirect their lives and open new paths to success.

Fostering inclusivity in AIML research

Apple's Artificial Intelligence and Machine Learning (AIML) Conference Travel Grant — Morgan State University



Kofi Nyarko, Director of the Center for Equitable Artificial Intelligence and Machine Learning Systems at Morgan State University, Maryland. Photo provided by Morgan State.

Apple's AIML Conference Travel Grant enables early-career PhD students from HBCUs to attend top machine learning conferences. The grants help provide opportunities for PhD students at Minority Serving Institutions (MSIs) to attend conferences, along with educational resources to help prepare them for an enriching experience at the conference.

How did you learn about Apple's AIML Conference Travel Grant?

I was introduced to the grant by my colleague, Dr Michael Spencer, Chair of the Electrical and Computer Engineering Department at Morgan State University. He learned about it through his involvement in Apple's HBCU Innovation Grant, which focuses on supporting learning in silicon and hardware technologies. Given my current role as Director of the Center for Equitable Artificial Intelligence and Machine Learning Systems at Morgan State, Dr Spencer believed I could create new opportunities for our students with this grant.

Why is it crucial for diverse communities to contribute to AIML research?

AIML technologies impact many aspects of our lives, from healthcare to criminal justice. Including a wide range of perspectives in the development process helps reduce bias in these systems and effectively address the needs of diverse communities. When people from different backgrounds come together, they bring fresh ideas and solutions to the table.

What impact has the grant program had on the HBCU students you teach?

One of its most transformative effects has been broadening our students' horizons regarding what's possible in their academic and professional lives. By attending AIML conferences, which otherwise may have been inaccessible, they've been introduced to cutting-edge research and innovations, deepening their understanding of the field and motivating them to set higher goals for their work.

These conferences have empowered students by validating their unique ideas and contributions. The program has also demystified AIML by showing them that they can actively participate in and contribute to this rapidly evolving discipline. And it has fostered a sense of belonging, helping them see themselves as a part of a broader community of researchers. Overall, the program has encouraged students to pursue AIML careers with confidence and ambition.

How does the grant advance your university's AIML research practice?

The AIML Conference Travel Grant connects the centre's research with cutting-edge trends and developments in industry and academia. Conferences are hotbeds of new ideas and innovations, where students discover tools, methods or frameworks that can be integrated into their AI research. By bringing these fresh insights back to their projects, they enhance the centre's capabilities and make their work more efficient and effective.

The grant also provides valuable networking opportunities that have led to collaborations with other researchers and institutions. These connections are instrumental in securing future funding, accessing additional resources and partnering on joint projects that require sophisticated technology or expertise beyond what's available at the centre.

Empowering HBCU women in tech: mind, body, and soul

HBCU Coding Bootcamp — Arise and Shine Foundation, Inc.



Malinda Williams, Founder of Arise and Shine Foundation, Inc.
Photo provided by Aliyah Monai.

Arise and Shine Foundation, Inc. aims to help young women attending HBCUs unlock their potential through E.S.T.E.A.M. (Entrepreneurship, Science, Technology, Engineering, Arts and Maths). Through a partnership with Apple’s Community Education Initiative (CEI), which provided technology, curriculum, and professional learning, Arise and Shine launched their HBCU Coding Bootcamp, a program designed to foster confidence and exposure to coding and app development.

What led you to start the Arise and Shine Foundation, Inc.?

As an actress for more than 40 years, I’ve been fortunate to meet some incredible women from all walks of life and industries. Many of these women look like me, my sisters and my mother, so I’ve always had a deep affinity for women, the unique plight of women, and the importance of sisterhood.

Growing up, my parents always impressed upon me and my sisters to take care of one another. So 15 years ago, when I found myself in what I call one of “life’s valleys”, it was women — my sisters, my sister friends — who came and supported and uplifted me. They encouraged me to pursue what I was already starting to do, which was to transition, do something different and change my circumstance — and I knew it would involve entrepreneurship, technology and supporting women.

Technology was transforming my whole industry. I would tell my fellow actors, especially women, any chance I got that “technology is here, it’s changing everything — how we view content, how we create content and how we distribute content; let’s make sure we are prepared to meet that change.” I bought a book and started teaching myself different programming

languages, such as HTML, CSS and Flash. I learnt how to use Sparkle and Dreamweaver for website development, building websites for myself and friends for free. I also taught myself JavaScript and Hypertext Preprocessor (PHP).

I started doing all I could to empower women. In 2020, an opportunity to partner with brands to host women’s empowerment events came along. It was at one of those events in 2023 where I launched the Arise and Shine Foundation, Inc., which aims to help young women attending HBCUs unlock their potential through E.S.T.E.A.M.

This journey has taught me about the power of change, how to pivot and how to shift. I learned that through technology, I can build channels, avenues and opportunities that I didn’t think were available to me as an artist. But because technology has evolved us as artists, I naturally became a different kind of artist. I became an artist who used technology.

What is Arise and Shine’s HBCU Coding Bootcamp, and what unique need is it meeting in the HBCU community?

In 2023, with the support of CEI, we launched our first program, the HBCU Coding Bootcamp — a three-day event focused on empowering women through virtual coding and scholarship. Designed to elevate the personal and professional development of young women at HBCUs, the program equips participants with real-world skills and opportunities, fostering a more inclusive tech sector and paving the way for greater representation and impact. This experience simultaneously builds their confidence and prioritises health and wellness.

Participants across 19 HBCU institutions came together at Jackson State University — an HBCU in Mississippi — to participate in a rigorous coding curriculum, hands-on group sessions and mentorship facilitated through strategic partnerships. Inspirational speakers and daily wellness activities were embedded seamlessly into the learning experience.

Why is it important to create a supportive space for young women looking to enter ESTEAM careers?

In the technology industry, women — and women of colour in particular — are often the “only ones”. I want to foster a space where young women can be nurtured and encouraged, where they can build skills before entering the workplace. I want to build a program that enhances self-esteem and well-being, a positive self-perception and emotional intelligence. We nurture a balanced mindset through evidence-based wellness practices to enhance technical and soft skills that are crucial for a successful career.

This multifaceted approach involves spotlighting the intersection of technology and the art of wellness, creating curated and meaningful experiences.

How has your partnership with Apple provided access and equity for the bootcamp participants?

Apple’s Everyone Can Code curriculum, which was designed around using the Swift UI, was easy for the students to understand, which was helpful because some of our cohort had little or no experience with coding. The professional learning and general support provided by the CEI team has been invaluable. Apple provided us with the resources and information we needed to create a top-notch program.

My overarching goal is to amplify the diverse tapestry of HBCUs, thereby fostering a heightened interest and increased representation in STEAM careers.

“Apple’s Everyone Can Code curriculum, which was designed around using the Swift UI, was easy for the students to understand, which was helpful because some of our cohort had little or no experience with coding. The professional learning and general support provided by Apple’s Community Education Initiative (CEI) team has been invaluable.”

Malinda Williams
Founder, Arise and Shine Foundation, Inc.

"Education is one of the most powerful forces for equity. Because our efforts around the world are centred on a mission of equity, we work tirelessly to ensure that learners from all backgrounds have access to the technology that can open up possibilities and expand access to opportunities. This belief is core to who we are, and this work dates back to Apple's earliest days as a company. And it's work that we will continue to do going forwards."

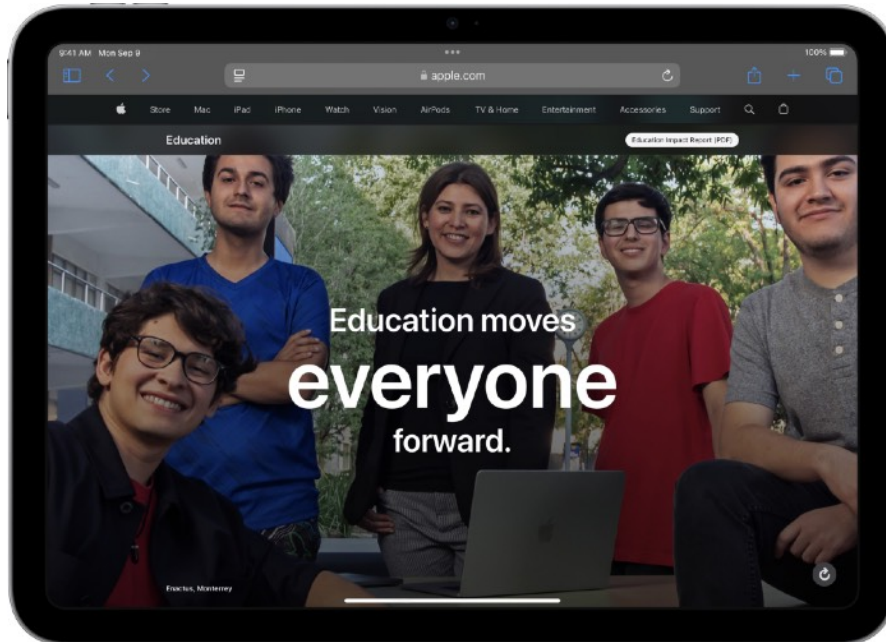
Stacy Erb

Director, Apple Community Education Initiative



Resources

Use these resources to do more and learn more with Apple products — from coding and creating to building and engaging with community. We can't wait to see what you do with them.



[Apple Education Initiatives](#) — We believe education moves everyone forward. Read more about how our partners around the world help people have greater access to education.

[Apple Developer Academy](#) — A nine-month program that covers the basics of coding, as well as areas such as design, marketing and project management, empowering students with a full set of skills needed to become world-class entrepreneurs and developers.

[Apple Distinguished Schools](#) — Centres of leadership and educational excellence that demonstrate Apple's vision for learning with technology — and we believe they are some of the most innovative schools in the world.

[Apple Professional Learning Live](#) — Hands-on virtual experiences hosted by Apple Professional Learning Specialists where participants can explore helpful resources, practice new skills and reflect on ways Apple technology can support great learning and teaching.

[Challenge for Change Learning Series](#) — A part of Apple's Racial Equity and Justice Initiative designed to help anyone explore important issues in their communities and create innovative solutions to make lasting impact.

[Challenge Based Learning](#) (CBL) — A framework created by Apple to leverage technology in meaningful ways and make learning relevant. CBL makes it easy for anyone to address personal, community and global challenges while acquiring content knowledge in areas such as literacy, maths, science, technology and the arts.

[Develop in Swift Tutorials](#) — Self-guided tutorials that help students build great apps with easy-to-follow instructions using Xcode and Swift — a great first step to a career in app development.

[Elements of Learning](#) — A book about using research-based strategies to design deeper student learning experiences with Apple technology.

[Everyone Can Create](#) — Resources that make it easier for educators to unlock student creativity and bring active learning to any lesson with iPad.

[Machine Learning Research](#) — Research from Apple that explores advancements in machine learning.

[swift.org](#) — An open source community for Swift learners of all ages.

[Swift Student Challenge](#) — A program to support and uplift the next generation of student developers, creators and entrepreneurs. When students learn to code with Swift, they join a worldwide community of developers who are creating the next wave of groundbreaking apps.

[Teaching Code with Swift Playgrounds](#) — Resources educators can use to help students build essential skills while learning app development on iPad and Mac using Swift Playgrounds.

[Today at Apple](#) — Free daily sessions at the Apple Store, perfect for educators and students to explore teaching tools and creative activities together. Choose from a wide range of learning experiences.

[Apple Education Community](#) — An online, professional learning hub designed to support educators using Apple technology for teaching and learning. The Community provides free programs and recognitions, tutorials, lesson ideas and the opportunity for educators to connect and learn from one another. Explore key resources within the Community below.

- [Apple Distinguished Educators](#) — A global community of innovative educators who foster powerful ideas to improve teaching and learning using Apple products.
- [Apple Learning Coach](#) — A free professional learning program for coaching educators to help teachers get more out of Apple technology.
- [Apple Teacher](#) — A free, self-paced professional learning program that equips educators with iPad and Mac skills and guides them to design engaging new learning experiences.
- [Leadership Forum in the Community](#) — A space where leaders can share insights and solutions with their peers, and explore the role Apple can play in this work.
- [Teaching & Learning Forum in the Community](#) — A space for educators to exchange ideas that spark learning for themselves and their students.



Endnotes

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2. GOV.UK – Explore education statistics, "Schools, pupils and their characteristics, academic year 2023–25". explore-education-statistics.service.gov.uk
3. Sáinz, et al., "Interventions to increase young people's interest in STEM. A scoping review", Front Psychol., www.ncbi.nlm.nih.gov/pmc/articles/PMC9593045, October 2022
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