Reflections on Stanford Digital Education from 2021 through 2025:

How Innovations in Online Learning Brought the Benefits of a Stanford Education to Students Lacking Access to Elite Universities

Edited by Jonathan Rabinovitz, Stanford Digital Education communications director

Published Dec. 22, 2025

Table of Contents

Introduction

By Matthew Rascoff, vice provost for digital education at Stanford

Stanford Digital Education (SDE) was at the forefront of a movement that envisions using online learning to address a crisis facing higher education.

When SDE was established in 2021, public trust in higher education, once a source of national pride, was plummeting because of a growing perception that universities were not serving the greater good. Although universities had been viewed for decades as an engine of social mobility, people increasingly saw them as a system rigged to advance the interests of a privileged few.

Our mission was to pursue innovation in Stanford's approach to education so that the benefits would be available more widely. We pioneered a model of mission-driven digital education that aimed to accelerate social mobility for learners who have been historically underserved by higher education. "Through this new office, we seek to strengthen Stanford's capacity to innovate in extending educational opportunities to those who have not had access to them before," said Provost Persis Drell in announcing SDE's founding.

The idea that online learning could be a tool for improving educational equity was surprising to many in 2021. For years, universities viewed online education primarily as a source of new revenue, not a viable alternative to face-to-face classes. The experience during the COVID-19 pandemic, when campuses closed and professors suddenly had to rely on digital technologies to teach their courses, reinforced this perspective. Many educators and students saw the forced experiment — remote emergency learning — as rife with chaos and shortcomings.

Stanford Digital Education, along with a small group of likeminded educators at peer institutions and nonprofit groups, had a different frame for the pandemic educational experience. We were intrigued by changes in online learning during the pandemic that hinted at improved efficacy. We set out to explore whether Stanford, and higher education more broadly, could do more to redirect digital education to create courses as meaningful as the ones offered on campus. To lay the groundwork for such an effort, our team conducted Stanford-wide interviews to identify which measures had shown promise in the university's emergency remote education response to the pandemic. From those conversations, and from information gleaned from internal documents and news articles, we produced a report that identified lessons learned from that period.

Our pandemic learning study found that a de facto professional development program emerged to support the thousands of instructors who were teaching online for the first time. While unplanned, this ad hoc training eliminated one of the biggest hurdles to successful online education. Before the pandemic most instructors were not familiar with online learning tools. Indeed, prior to the campus closing, there was little motivation for professors to become comfortable with the use of video conferencing and other technologies to conduct classes online. The crisis forced them to learn and for the university to support that learning.

In addition, the pandemic lessons review observed that even with training, faculty still needed the support of professional staff, such as course designers, video producers, project managers, and

teaching assistants, to assure success of distance learning. The review also recognized how students had faltered during the pandemic when they could not connect with each other and with their teacher; in response, new approaches to digital education were adopted to enable greater engagement than the one-way video lectures that had characterized the earlier paradigm. Underlying these efforts was a strong emphasis on communication and collaboration among instructors, students and other stakeholders.

The following pages of this document detail how these pandemic lessons shaped SDE's work from 2021 through 2025, as can be seen here:

- SDE worked to provide digital education centered on personal teacher-student relationships and an engaged learning community, as is discussed in reflections from SDE Director of Project Strategy and Operations Cindy Berhtram and from Stanford Structured Liberal Education Lecturer Greg Watkins.

- SDE provided faculty with an array of support services to help them to develop six Stanford digital courses that were taken by a total of 2,612 high school students in high-poverty communities nationwide, as detailed in reflections from SDE Associate Creative Director Erik Brown and Assistant Director of Project Evaluation and Research Annie Sadler.

- SDE delivered courses that under-resourced high schools lacked and that the high schools were hungry to offer. A Stanford writing course, for instance, provided students with critical skills that they needed to succeed in college, as Meg Lamont, a Stanford instructor, recounts in her reflection. Two other courses offered material about the civil rights movement and about Black Studies, which high school students found to be deeply personal and meaningful, according to the reflection from teaching fellow Dasia Moore.

- SDE dual-enrollment courses provided Title I high school students with a genuine Stanford experience, showing how a hybrid digital course could be as meaningful as a course on campus. High school students earned Stanford credits for their work. They learned they could handle the challenges of a real Stanford course, and that made them more confident about attending Stanford or other highly selective institutions. Los Angeles public high school teacher Lindsay Humphrey discusses this effect in her reflection about the first SDE course she co-taught at her school. Students from that class went on to attend Columbia University, Cornell University, and Stanford. At least 13 students who took NEON courses are now at Stanford.

- SDE made it a priority to communicate and collaborate with stakeholders in creating its courses, ensuring that teachers outside of Stanford would be able to use innovative new material from Stanford — and that they were aligned with the effort. SDE graduate fellow Parth Sarin's reflection shares how the SDE team worked with high school teachers, high school students, and other Stanford researchers to develop appropriate and compelling lessons about AI that were relatively easy to implement. Similarly, SDE Assistant Director of Project Innovation and Technology Michael Acedo's reflection discusses how SDE worked closely with community college faculty, along with members of the Stanford Computer Science Department and Google, to deploy new approaches to teaching computer programming and data analytics. These approaches are now being rolled out in community colleges throughout California.

Underlying SDE efforts in high schools and community colleges was a conviction that substantial improvements in equity and opportunity in higher ed could never be accomplished by Stanford or any university acting alone. Associate Vice Provost for Digital Education Priscilla Fiden highlights in her reflection how SDE recognized that other universities were engaged in similar work and that we could all grow by working together. To help higher education rise to this challenge, for instance, SDE formed a consortium of universities to participate in a three-year-long discussion series, Academic Innovation for the Public Good. Communications Specialist Jenny Robinson covers in her reflection how this series was part of a variety of events that SDE hosted to create a larger movement among universities and colleges to use digital education to achieve greater equity in higher education.

Perhaps the deepest manifestation of that collaborative approach was SDE's partnership with the nonprofit National Education Opportunity Network. Provost Jenny Martinez, who succeeded Drell, described the purpose of SDE's work with NEON in a 2023 meeting with the Stanford Faculty Senate: "The goal is to provide educational resources where they are lacking and to help ensure that high-performing, low-income students have a better chance of making it to a place like Stanford," she said.

By working with NEON, its network of Title I high schools, and its consortium of colleges and universities, SDE helped to create a catalog of challenging online courses that granted both high school and higher education credits. As noted in a letter to SDE from NEON's CEO and founder Leslie Cornfeld, SDE was a leader in this effort to mobilize universities to build new pathways to higher education for youth from low-income families. My colleagues and I anticipate that this effort to build new pathways will continue to grow. In the appendix, we offer a playbook that can guide educators at Stanford and other universities who wish to work with NEON in the future and create their own digital courses for high school students. We are pleased to note that Dartmouth College, Duke University, Notre Dame University, and Vanderbilt joined the NEON consortium in 2025.

I believe this report to be an important record of SDE projects and their impacts. I am proud to share how a small team of 10 SDE employees accomplished so much. Their personal reflections add a dimension to the data that SDE has presented over the last four years, underscoring how SDE's progress arose from strong convictions as well as tremendous talent and insightful thinking. I wish to acknowledge my colleagues' commitment and thank them for investing their ideas, their energy, and their hearts in this project. It was an honor and pleasure to be part of this effort.

SDE Projects and Their Impacts

Stanford Digital Education (SDE) sought to build and enhance digital pathways that increase access to the extraordinary knowledge and community at Stanford. SDE worked to expand the Stanford community through projects with low-income high school students, community college students, and working learners nationwide; with academic peers around the world; and, of course, with faculty, staff, and students at Stanford. What follows are brief summaries of many of SDE's projects — what the unit aimed to do, our progress toward those goals, and the internal and external partners who helped to bring our vision to life.

Dual Enrollment Courses for Title I High School Students

Overview

SDE worked with the National Education Opportunity Network to offer Stanford courses nationwide to students in Title I high schools, which serve high-poverty communities. Students earned both Stanford and high school credits.

SDE courses provided a high-touch learning experience to students, with a remote Stanford teaching fellow for every participating high school. To develop these courses, SDE collaborated with high school teachers, leveraging their classroom expertise to shape Stanford course content for a high school student audience.

The goals were to introduce students in Title I high schools to Stanford coursework and the Stanford community, to give them college credit, to build confidence in college readiness, and to increase interest in applying to Stanford or other universities that may have seemed out of reach. For more detail, please see the next chapter of this report.

Launch date: September 2021.
Partners: National Education Opportunity Network (previously known as the National Education Equity Lab); school districts in Albuquerque, Dade County, El Paso (TX), Houston, Jackson (MS), Los Angeles, New York City, and Topeka (KS), among others; Stanford faculty from departments of African and African American Studies, Bioengineering, and Computer Science, Stanford Online High School, and Stanford Structured Liberal Education; and16 other colleges and universities including Brown, Cornell, Howard, Notre Dame, and University of California.

Impact

Over a four-year period, 2,612 high school students enrolled in Stanford courses at 103 schools in 22 states, plus Washington, D.C. [*For more detail, see Overview of SDE Program for Title I High Schools and Letter from National Education Opportunity Network.*]

Stanford Digital Education published in fall 2025 a playbook offering guidance to educators at Stanford and other universities on how to create and deliver dual enrollment courses for Title I high schools in collaboration with the National Education Opportunity Network. [For more information about the playbook, see Appendix B.]

Developing Lessons about AI for High Schools

Overview

SDE helped to conduct and publish research on best approaches to teaching about AI in high school classrooms. As part of this work, SDE interviewed high school educators, held workshops with them, and coached and observed teachers and students in classrooms, both in-person and virtually. The effort involved designing for a Stanford website original Stanford lessons about AI, which teachers can download for free. SDE also enabled high schools to use Google's AI Essential online certification course, at no cost, and examined how best to incorporate that course, in full or in part, in high school classrooms. Along with supporting the use of the Google curriculum, SDE developed complementary learning materials.

Launch date: Fall 2022.
Partners: Stanford Graduate School of Education, Stanford HAI (Human-Centered Artificial Intelligence Institute); McCoy Family Center for Ethics in Society at Stanford, Google, and several high schools including Uncommon Schools Northstar Academy Washington Park High School in Newark, N.J., Niagara Falls High School in Niagara Falls, N.Y., and Birmingham Community Charter High School in L.A.

Impacts

This work led to six papers in academic journals, with two SDE team members Parth Sarin and Jacob Wolf included as co-authors. In producing the research, SDE recruited and worked closely with 13 high school teachers from around the country, helping them to develop and use lessons about AI in their classrooms. This work led to at least three SDE-designed lessons being posted on the Stanford website, Classroom-Ready Resources About AI For Teaching (CRAFT), which continues to make them available for downloading. Sarin and two other SDE colleagues — Michael Acedo and Michael Taubman — also supported high school's using Google's AI Essential curriculum, resulting in at least 22 students earning certificates. The materials they developed to complement the Google course remain available for use in high schools. [For more detail, see SDE graduate student fellow Parth Sarin's reflection.]

Code in Place at Community Colleges

Overview

SDE collaborated with the Stanford University Computer Science Department and Foothill College, a community college in Los Altos Hills, Calif., to offer a version of Stanford's acclaimed Code in Place (CiP) program directly to Foothill students, for credit. The college first provided the online course in spring 2024 and was continuing to offer it as of fall 2025, when SDE closed.

SDE supported Code in Place (CiP) faculty — Chris Piech, assistant professor of computer science, and colleagues — as they worked with Foothill instructors to integrate CiP programming into an introductory CS course at Foothill, CS 49: Foundations for Computer Programming. CiP is a free non-credit online introduction to computer programming that enrolls some 10,000 students worldwide every spring. The Foothill-Stanford team leveraged the CiP platform to weave activities, lectures, and discussions into the

community college's existing CS 49 curriculum, providing a robust and engaging learning environment for students.

Five Foothill computer science students served as section leaders when the course launched and the number grew to eight by 2025. These section leaders met with students weekly to deliver concepts, lead discussions, and answer questions. The section leaders were trained by CiP staff on pedagogical and platform best practices, and had group review sessions every week with Foothill, SDE, and CiP team leaders. met with the team weekly to check in on student progress.

Foothill instructor Lane Johnson acted as primary instructor of record and oversaw the section leaders and students week to week. Code in Place staff member Miranda Li played a critical role in carrying out curriculum integration, platform troubleshooting, and section leader training. SDE Vice Provost Matthew Rascoff envisioned the partnership, and Michael Acedo, SDE assistant director of project innovation and technology, brought the team together, provided project management support, and acted as liaison between all parties.

Launch date: Spring 2024.
Partners: Stanford Computer Science Department, Code in Place, and Foothill College Department of Computer Science.

Impact

The Foothill-Stanford team launched the program to around 30 Foothill students in spring 2024, split across four sections, and supported by five Foothill computer science student section leaders. Ninety students were enrolled in spring 2025, supported by eight section leaders. As of the end of the fall 2025 quarter, a total of about 250 community college students had taken the course. Students in the program were overwhelmingly successful in grasping the CS 49/CiP concepts, with many of them reporting the program to be a "life-changing experience."

Also in 2025, the program took a big step toward expanding beyond Foothill College. The Foothill-Stanford team began making the for-credit course available to students from across California if they were registered at Foothill or another state community college. [*For more detail, see SDE Assistant Director of Project Innovation and Technology Michael Acedo's reflection*.]

Bringing Google Professional Certificates to Community Colleges

Overview

SDE pioneered a project that facilitated community colleges using Google data analytics lessons in their courses, enabling students to earn an industry-recognized professional certificate from the company. After establishing a three-way partnership among SDE, Google, and the Bay Area Community College Consortium, SDE drew on Stanford educational expertise to hold an intensive summer workshop for community college faculty. The program helped the educators to identify how best to integrate the data analytics certificates into their existing courses and community college curriculums.. As SDE worked with participating community college faculty, SDE Assistant Director of Project Innovation and Technology Michael Acedo recorded the different strategies that emerged as the basis for a playbook of certificate implementation best practices that could be scaled to additional community colleges. Since then, we have

continued to support the faculty as they experimented with integrating the content into computer science education at their schools. SDE tracked these efforts and synthesized the findings into a playbook of best practices: Empowering Community Colleges: A Playbook for Integrating Google's Data Analytics Certificate into Curriculum (published in spring 2024).

Launch date: Summer 2023.
Partners: Google and the Bay Area Community College Consortium with collaboration on the professional development workshop from Stanford Women in Data Science, Stanford Center for Teaching and Learning, and Stanford Graduate School of Education, among others.

Impacts

SDE supported 10 faculty from eight community colleges and one California State University who developed plans to integrate the certification content into their coursework, with several successfully launching their ideas by 2025. A playbook of best practices, Empowering Community Colleges: A Playbook for Integrating Google's Data Analytics Certificate into Curriculum (published in spring 2024), synthesized these faculty's experiences, and now serves as a resource for other faculty wishing to incorporate the certificate at their institutions. The California Community College system announced Sept. 25, 2025, that it would be expanding upon this pilot to advance a statewide partnership with Google. [*For more detail, see SDE Assistant Director of Project Innovation and Technology Michael Acedo's reflection.*]

Stanford Pandemic Education Report

Overview

SDE's pandemic education report, "Lessons from Teaching and Learning at Stanford During the COVID-19 Pandemic," reflects a year-long effort to synthesize and clarify the failures and successes of emergency remote education at Stanford in 2020 and 2021. The report serves as the foundation on which the Stanford community can design its future digital education strategy.

Launch date: October 2021 (published October 2022)
Partners: SDE co-authors Cynthis Behrtram and Lisa Anderson interviewed 59 Stanford stakeholders, from deans and professors to students to support staff.

Impact

The report provides a publicly available historical record of Stanford's response and documented innovations in online education that SDE and other units at Stanford have pursued. It also contributed to the national conversation about the effect of the pandemic on higher education and was covered in various news outlets and podcasts as well as being a subject of discussion at several education conferences.

Academic Innovation for the Public Good conversation series

Overview

Academic Innovation for the Public Good was a series of conversations held in real-time on Zoom before a live audience joining the webinar. Free and open to all, the sessions generally featured authors of recently published scholarly books on higher education and explored how to make higher education more equitable, accessible, and meaningful. The featured guests were interviewed by experts in the guests' fields. The series aimed to create a community of educators and students committed to strengthening higher education.

Launch date: January 2022
Partners: Trinity College (co-organizer for 2022-24); more than 20 partnering and co-sponsoring colleges and universities (for 2022-24), including Brown, Carnegie Mellon, Duke, North Dakota State University, and University of Michigan.

Impact

As of 2025, SDE had hosted 24 events, featuring 22 books, with attendance averaging roughly 130 participants. All the events were recorded and are available online. [*For more detail, see SDE communication specialist Jenny Robinson's reflection.*]

Support for Stanford Student Initiatives: Spokes

Overview/objectives

SDE supported forums and selected projects that elicited Stanford students' creativity and initiative, particularly those with an education component. Most notable of these efforts was SDE's sponsorship of Stanford Spokes, a student group that bikes cross-country over the summer, presenting hands-on workshops for youth along the way.

Launch date: Stanford Spokes was formed in 2018, and SDE began supporting their planning and fundraising in spring 2023.
Partner: Stanford Spokes.

Impact

For three summers, from 2023 through 2025, SDE provided fundraising assistance, logistical planning, and teaching instructions to the Spokes, who biked cross country and held learning festivals for children and teenagers along the way. Lessons ranged from "Building Bottle Rockets" to "How the Internet Works." [*For more detail, see SDE-Spokes liaison Debby Angus-Weberski's reflection.*]

Working Learners Initiative for Employees: Coursera for Stanford

Overview

Working learners are employed adults who do not have four-year college degrees. In January 2022, Stanford's Office of Community Engagement formed a community of practice to discover how distributed efforts could be connected to meet the challenges of working learners at Stanford. Stanford Digital Education was part of the core leadership team for the Working Learners Initiative. The goal was to accelerate opportunity and mobility for Stanford employees. As part of this effort, Stanford Digital Education, working closely with University Human Resources Learning and Development, launched Coursera for Stanford, a new learning program to support the educational and professional growth of Stanford staff.

Launch date: January 2022.
Partners: Stanford University Human Resources and Coursera, an online learning platform that offers courses

Impact

As of June 24, 2025, more than 3,170 Stanford learners had enrolled in Coursera courses and had spent some 15,400 hours on the platform. Five hundred fifty-three had completed at least one course.

Lifelong Learning on the Stanford Website

Overview

The Lifelong Learning website project highlighted lifelong learning opportunities at Stanford and made it easier to find and sign up for them. The site also helped to build community, shared understanding, and a common frame of reference among the Stanford entities that provide lifelong learning.

Launch date: December 2022
Partner: University Communications and Office of Community Engagement

Impact

Over a two-year period, the portal served 40K users from 192 countries. Visitors gained access to it through the main Stanford Academics webpage, where it appears alongside undergraduate and graduate education.

Stanford Administrative Fellowship Program

Overview

SDE reached out to the College of San Mateo and other offices at Stanford to pilot an internship program for administrative associates, called the Stanford Administrative Fellowship (StAF). Interns shadowed

Stanford administrative staff to learn on-the-job skills while receiving course credit and mentoring from the College of San Mateo.

Launch date: September 2023.
Partners: College of San Mateo, Stanford Pathways Network, Stanford Administrative Champions, and Stanford Office of Community Engagement.

Impact

Student fellows from the College of San Mateo completed paid administrative internships in seven “host” departments at Stanford. They worked an average of 10 hours a week for twelve weeks and developed software, presentation, and project management skills. A few continued on to permanent employment at Stanford.

Overview of SDE Program for Title I High Schools

From September 2021 through December 2025, Stanford Digital Education (SDE) pioneered a dual-credit course program in which students from high schools in low-income communities (Title I high schools) earned Stanford credits, as well as credits from their high schools.

The SDE courses gave students unique learning opportunities to master Stanford's college-level material that was previously unavailable in their high schools. The experience not only provided students with new subject matter, it boosted their confidence that they could thrive at Stanford and other selective colleges and universities. Courses were offered in collaboration with the nonprofit National Education Opportunity Network, formerly the National Education Equity Lab. To help educators at Stanford and other universities create and offer their own dual enrollment courses with the National Education Opportunity Network, we published a playbook in fall 2025 that explains how we designed, delivered, and maintained our courses.

SDE's dual-credit model was based in the high school classroom with one of the school's teachers, who led the course in tandem with at least one Stanford teaching fellow. Students watched lectures from a Stanford faculty member asynchronously and engaged in the same assignments as students in other Title I schools that were part of NEON's nationwide network. Students could also attend weekly office hours with teaching fellows via Zoom. The courses offered college-level rigor — covering the same material being taken by Stanford undergraduates — while providing the extra scaffolding needed by high school students.

From our launch in fall 2021 through fall 2025, SDE enrolled 2,612 Title I high school students in a total of six courses. These were offered in 103 schools across 22 states and Washington D.C. Four of the six courses were given two or three years; one was offered four years; and another was provided for five years.

Course descriptions

CS105: Introduction to Computers

Instructor: Patrick Young, lecturer in computer science.
The course provided an in-depth understanding of how the internet and computers work. High school students received an introduction to CSS and HTML, learned practical skills in website design, and explored computer security, privacy, and the Internet of Things. This course has been taken by Stanford undergraduates on campus for more than 20 years.
Offered: Fall 2021, 16 schools; fall 2022, 15 schools; fall 2023, 12 schools; fall 2024, 18 schools; fall 2025, 1 school
For more: See high school teacher Lindsay Humphrey's reflection. Also, this SDE video has interviews with Dr. Young, a CS 105 teaching fellow, and students, their teacher, and the principal at Birmingham Community Charter High School in Los Angeles. Another SDE video features a Stanford undergraduate who took the course the first year it was offered at Birmingham. In addition, a video shows the response to CS 105 at a different high school, Niagara Falls High School in upstate New York. Also, former teaching fellow Brian Sha wrote about CS 105 in a Stanford Daily opinion piece.

Searching Together for the Common Good

Instructor: Greg Watkins, former lecturer in and associate director of Structured Liberal Education (SLE)
High school students had the opportunity to join the tradition of thinkers, from philosophers to artists, who examine what it means to live well and to meet obligations to family, community, nation, and self. Underpinning the course is the conviction that moral philosophy is best understood not as an individual quest, but as a collective undertaking. Assignments include reading excerpts from Confucius, Marcus Aurelius, Sophocles, Plato, Aristotle, Karl Marx, Mengzi, and Gwendolyn Brooks and viewing Spike Lee's film *Do the Right Thing*. The course is based on SLE, a long-running residential humanities program at Stanford. The high school students engaged in conversations about the material with their high school teachers, Dr. Watkins and other instructors, and Stanford undergraduates in SLE.
Offered: Spring 2022, 1 school; spring 2023, 5 schools; spring 2024, 6 schools; spring 2025, 10 schools
For more: See course instructor and creator Greg Watkins' reflection and this video from a Brooklyn high school.

Between Malcolm X and Martin Luther King, Jr.: Race, Religion, and the Politics of Freedom

Instructor: Lerone A. Martin, professor of religious studies and director of the Martin Luther King, Jr. Research and Education Institute.
Students learned about the political and spiritual lives of Martin Luther King, Jr., and Malcolm X. While many students were aware of these two men as cultural icons, the first part of the course steeped them in their life histories, the ways their thinking evolved, and the challenging sociopolitical issues in their time. In the following weeks, the lectures, readings, writing assignments, and class discussion enabled students to explore how these two leaders' philosophies and lived experiences can provide frameworks for approaching current issues. The course was adapted for digital education from a version that was taken by Stanford undergraduates and students at other colleges. Offered: Winter/spring 2023, 1 school; winter/spring 2024, 7 schools; winter/spring 2025, 9 schools
For more: See SDE Assistant Director of Project Evaluation and Research Annie Sadler's reflection. Also see two videos: Do I know my history and Easing the 'jump' from high school to college: how teaching fellows support a Stanford course.

BioE 80: Introduction to Bioengineering

Instructors: Drew Endy, associate professor of bioengineering, and Jenn Brophy, assistant professor of bioengineering.
This course aims to give students a working understanding of how to approach the engineering of living systems to benefit all people and the planet. Students learned what makes living matter unique, explored case studies of drug discovery, and examined how DNA encodes genetic data, among other topics. They were taught to think like bioengineers and to consider the field's social and ethical implications. Stanford undergraduates took the same course on campus.
Offered: Spring 2023, 9 schools; spring 2024, 3 schools; spring 2025, 10 schools
For more: See SDE Associate Creative Director Erik Brown's reflection.

Raise Your Voice: Learn to Write Successfully for College and Beyond

Instructor: Members of the English faculty at Stanford Online High School

This course prepared students to use writing as a tool for understanding and analyzing the world and for making arguments about ideas. Through a series of increasingly complex writing challenges, culminating in an extended essay, students engaged in college-level coursework in the humanities and social sciences. They read and parsed material across several genres, learned how to synthesize their thoughts about the material in their writing, and were taught about paying attention to academic style, tone, and structure. In sum, students developed their voices and skills as creatively analytical academic writers. The university approved this course for Stanford credits after evaluating the curriculum.
Offered: Spring 2022, 8 schools; spring 2023, 5 schools
For more: See course creator and assistant head of Stanford Online High School Meg Lamont's reflection.

Black Life, Culture, and the Emergence of the Field from Emancipation to the Present

Instructor: Kimberly Thomas McNair, lecturer in African and African American Studies.
Covering more than a century — from Reconstruction to the present-day — this interdisciplinary course introduced students to the intellectual history of African American Studies as a field of study: its genealogy, development, major debates, and global context. High school students studied historical, political, social, and artistic themes that impact the understanding of Black life and identity. The syllabus included the writings of W.E.B. Du Bois, Zora Neale Hurston, Ida B. Wells-Barnett, James Baldwin, and others, as well as film, music, and new media. The course was also offered on campus to Stanford undergraduates.
Offered: Spring 2025, 1 high school; fall 2025, 9 high schools

How Stanford teaching fellows contributed

Teaching fellows, also known as section leaders, played a critical role in SDE courses. These positions were filled by Stanford undergraduates, graduates, or alumni, as well as subject matter experts, who had relevant teaching experience, from outside the Stanford community.

Sometimes called the "special sauce" that made SDE courses so effective, the TFs worked directly with a specific high school classroom and collaborated with the classroom teacher in lesson planning and problem solving for individual student's learning challenges. The TF became familiar with students through regular teaching sessions via Zoom in which they actively interacted with students, asking and answering questions. TFs also met with small groups of students from their classes in online office hours, generally held in the early evening after school.

Because TFs tended to be younger than most students' high school teachers, they were able to provide a "near peer" experience for their students. In many cases, the TFs had recently taken the course and knew first-hand how confusing certain lessons might be. TFs could offer methods they had developed to learn the material themselves. High school students often remarked in interviews and evaluations how much they valued the TFs and how it was easier to communicate with and understand TFs than their other teachers. Students sometimes reported that they had not previously met someone from Stanford and how working with the TFs encouraged them to consider the possibility of attending Stanford or another

selective university. Equally important, students' relationships with TFs sometimes inspired their envisioning future careers in computer science, bioengineering, and other fields.

In turn, surveys of the TFs and anecdotal conversations with them revealed that they had found their teaching experiences meaningful. They reported that it helped them to appreciate inequities in education and how teaching could make a difference in the lives of students in low-income communities. They also said that it deepened their own thinking on the subject. An added bonus, they said, was that it was fun.

For more: See SDE Director of Project Strategy and Operations Cindy Berhtram's reflection and TF Dasia Moore's reflection.

Letter from National Education Opportunity Network

648 Broadway, Suite 603
New York, NY 10012
neonopportunity.org

Oct. 31, 2025

Matthew Rascoff, vice provost for digital education
Priscilla Fiden, chief of staff
Stanford Digital Education
408 Panama Mall
Stanford, CA 94305

Dear Matthew, Priscilla, and Team Stanford,

Congratulations for an incredible five years of leadership in expanding opportunity to high school scholars from low-income communities across the country. As of this fall, Stanford has served 2,612 scholars from 103 high schools in 58 cities, including New York City, NY; Miami, FL; San Francisco, CA; Los Angeles, CA; Houston, TX; Newark, NJ; Washington DC; Phoenix, AZ; Topeka, KS; Waipahu, HI; and Albuquerque, NM.

You set the bar high with rigorous courses:

- Eighty-five percent of scholars passed, proving what they are capable of to admissions officers, employers — and most important, themselves.
- Because of your efforts, 215 Stanford students and alumni have had the opportunity to participate as Teaching Fellows. In the 2024-25 school year, 93% of Teaching Fellows said they grew professionally from serving in the role.
- You helped propel college access and opportunity. Thirteen NEON scholars matriculated at Stanford, including from Gallup New Mexico's Navajo Nation.

Your commitment to expanding opportunity beyond your gates has contributed to our network's ability to reach 50,000 scholars from nearly 600 low-income high schools. We are on track to serve 20,000 scholars this school year and 1 million scholars within the decade.

Stanford has been a leader in our College and University Consortium — which now includes 17 powerful colleges and universities, including HBCU partners Howard, Spelman and Morehouse, and the entire University of California system. We are proud that during this challenging year Dartmouth, Duke, Vanderbilt, New York University, and Notre Dame have joined our efforts.

After six years, one thing is clear: our scholars' success is fueled by a powerful network — you, our college and university leaders, faculty and teaching fellows, as well as classroom teachers, principals, college advisors, philanthropic supporters, and our team. This network of opportunity and support

will drive the next phase of our work, propelling scholars to new levels of economic mobility and contributions to our nation.

Thank you for being a cherished partner in this effort. Your leadership has propelled thousands of scholars to discover and demonstrate their potential and seize the opportunity to pursue the American Dream.

With deep gratitude,

Leslie and the National Education Opportunity Network (NEON) team

Leslie Cornfeld, CEO and Founder
National Education Opportunity Network
A 501(c)3 not-for-profit organization
neonopportunity.org

Reflections from SDE Staff and Affiliates

National Movement to Expand Access to Higher Ed

Priscilla Fiden, associate vice provost and chief of staff for Stanford Digital Education (SDE), was in charge of the unit's day-to-day operations. She oversaw many of SDE's efforts to partner with educators at nonprofit organizations and other universities and with faculty and staff in other offices and departments at Stanford. She also was the point person on the innovation that enabled the university to award Stanford credits to high school students who completed and passed SDE courses. This was the first time that Stanford awarded credits to non-matriculated students working remotely during the academic year. In the following commentary, Priscilla places SDE's work in a national context.

Having worked in higher education over the last three decades, I'm well aware that universities often operate as competitors, each striving to attract the best students and resources. My time at SDE offered a different perspective. I witnessed how collaboration can transcend competition through partnerships, which benefited both Stanford and the larger higher education community. Even more interesting, I glimpsed how making university resources available to a wider universe of learners has the potential to lay the groundwork for a more educated, dynamic, and harmonious nation.

In summer 2021, Provost Pervis Drell established SDE with an unusual mission: to collaborate with partners across campus and the country to open doors to selective universities such as Stanford for learners who might not otherwise have the opportunity. We hit the ground running, and by September had launched our first course, Computer Science 105: *Introduction to Computers*; we delivered it to more than a dozen classrooms in Title I high schools spanning from Brooklyn, New York, to the island of Oahu in Hawaii. I was struck by how much it meant to these talented students, most of whom had never imagined enrolling in a Stanford course, let alone earning Stanford credits.

College credits are one of the linchpins of higher education's authority. It's the way that universities certify that students have met their standards of proficiency and mastered a given subject. These credits have tremendous value in the knowledge economy. Starting with CS 105 in fall quarter 2021, my colleagues in the registrar's office and our SDE team extended the boundary of who could receive Stanford credits so that the university could support more students at under-resourced Title I high schools, which serve high-poverty communities. There were serious administrative challenges to accomplishing that feat, and it involved our having to create new systems to acknowledge these students' achievements.

We continued offering CS 105 and expanded to offer other hybrid versions of Stanford undergraduate courses over the next four years. By the time our office closed, we had reached 2,612 students from 103 Title I high schools nationwide. In addition to earning Stanford credits and credits from their high schools, students who successfully completed these courses had developed skills that prepared them to thrive in higher education. And many strengthened their college applications by calling attention to their work in Stanford courses.

I'm proud of what Stanford provided to these high schools. It's important to recognize that our courses are just the tip of the iceberg. We multiplied their effect by committing at our launch to building a larger network of universities and high schools. We signed a memorandum of understanding with the nonprofit National Education Equity Lab, now the National Education Opportunity Network (NEON), which was developing a national network of Title I high schools that were hungry for dual-enrollment courses from Stanford and other universities. By embracing our partnership with NEON, we positioned ourselves to appeal to other universities to bring their college courses directly into high school classrooms. My team and I spoke with colleagues at Duke, Notre Dame, the University of California system, Howard University,

and other schools, helping them to prepare dual enrollment courses and become part of the NEON program.

This collaboration appears to have directly affected Stanford admissions. At least 13 students who completed NEON courses, were enrolled at Stanford as of fall quarter 2021. About half had taken at least one SDE course, but almost all of them had also taken NEON courses with other colleges and universities. In turn, many of the high school students who have enrolled in SDE courses are now enrolled at Yale, Columbia, Cornell, and other Ivy League schools; various University of California and State University of New York campuses; and other large research institutions and small liberal arts colleges nationwide.

Our work with NEON was part of a larger effort to build a national movement that uses digital education to improve access to highly selective universities and colleges. Here are a few of our actions:

- In 2023, we joined with the higher ed consulting firm Ithaka S+R, the American Talent Initiative, and NEON to found Digital Innovation for Equity and Excellence in College Admissions (DIEECA). Its mission was to expand dual enrollment offerings in Title I high schools and to ensure that admissions offices were aware of these programs when evaluating applicants. We helped to recruit admissions leaders and digital educators from 11 other universities: Allegheny College, Cornell University, Emory University, Massachusetts Institute of Technology, Santa Clara University, Stevens Institute of Technology, University of California System, University of Illinois Urbana-Champaign, University of Pennsylvania, Vanderbilt University, and Wesleyan University.
- In 2024, we hosted the Digital Learning Summit, an invitation-only event that drew teams to Stanford from online learning units at 20 institutions across the country, including small private colleges, Ivy League universities, and state flagships. The summit fostered collaboration across institutions and domains, connecting leaders, emerging leaders, and experts to build a vibrant community of practice. Together, we explored what engaging, equitable, and scalable educational experiences in higher education might look like by 2035, with a focus on innovation that creates lasting impact and strengthens collective capacity.
- We cultivated relationships with high school educators who co-designed and delivered Stanford courses in their classrooms. Their insights into local student needs and instructional strategies helped shape course content and models. In 2024, we hosted 20 teachers and administrators on campus to envision the future of dual-enrollment and school-to-college pipelines. Through design thinking challenges, we developed a new cohort-based, sequenced approach for our offerings, and we shared the feedback we received with NEON and university partners.

Stanford faculty and staff shared lessons and models from these initiatives at national conferences and convenings. Across all collaborations, we reinforced that meaningful progress in digital education equity depends not on institutional competition, but on collective innovation, trust, and shared purpose. Coming together around a shared mission to expand equitable access to digital education allowed us to make a far greater impact than any of us could have accomplished alone.

This teamwork inspired me. It showed me the power of collective innovation and trust, reminding me that when we prioritize shared goals over rivalry, we can create meaningful and lasting change in education. That spirit of partnership has been one of the most rewarding and motivating parts of this work for me personally.

Stanford's CS 105 Comes to an L.A. High School

A Stanford alumna, Lindsay Humphrey has been an English teacher in Los Angeles public schools for 15 years, working at Birmingham Community Charter High School in the San Fernando Valley since 2016. She was in the inaugural class of Stanford's Hollyhock Fellowship, awarded to promising early-career teachers in Title I high schools, and later served as a mentor to new fellows after completing her own fellowship. A National Board Certified teacher, she has taught seven dual enrollment courses from the National Education Opportunity Network (NEON), including two from Stanford. In the following note, she discusses her initial experience with Stanford Digital Education, co-teaching an introductory computer science course.

When I first heard about the National Education Opportunity Network (called, at that time, the National Education Equity Lab), I was excited to connect the students at my Title I school with the rigor and excellence I experienced myself as a Stanford undergraduate. I passed the opportunity to my school's administration and stopped thinking about it. In July 2021, just days before the start of school, masked and trying to adjust to the transition back to campus after over a year of distance learning during COVID, I was shocked when the assistant principal approached me to teach the Stanford Computer Science 105 class. As an English major turned English teacher, I couldn't imagine a less appropriate teacher for the course. But faced with taking on the challenge or losing the opportunity for our students to participate, I agreed. I had no idea how exciting and rewarding it would be to join the Stanford Digital Education family.

Of course, the very first thing that happened was . . . nothing. Stanford's fall quarter starts in late September, and our school starts in early August, so the students and I got to know each other while we waited for the course content to arrive. My students were mostly 10th graders, stepping foot on our campus for the first time after celebrating their 8th-grade graduations remotely and starting their high school experience entirely online. They were deeply serious in their dedication to academics, but also struggling with the social and emotional toll of isolation during the critical 9th-grade transition from middle to high school. They enjoyed simply being in the same room together, and the excited buzz of nerves and pride at the prospect of enrolling in a Stanford course was palpable. The group included a student who had recently been living in a garage with her mom, one who was an only child to a single mom frequently in and out of the hospital, and one who was a primary caretaker for her grandfather on dialysis. They were all enrolled in seven other courses in addition to the CS 105 class. Those first weeks were a blur of Pictionary, study hall, and anxious, excited conversations about what to expect.

Once I got access to the course content – Patrick Young's excellent series of video lectures – it quickly became clear that my students didn't need me to teach them computer science. In fact, between the lectures and our outstanding teaching fellow, recent Stanford grad Elina Thadhani, who joined us for a weekly Zoom lesson, the course content was covered. What the students needed from me was coaching to help them understand not *what* to study, but *how* to study it. And that, as it turned out, I was very qualified to help with. In the week before the course began, we practiced watching Professor Young's first lecture videos. We took notes, comparing what we'd written with each other and identifying strategies such as using bullet points, starring important information, and drawing pictures in the margins, to help us efficiently get the most out of each video. I joked with the students that I wish I'd been able to pause and rewind, or even fast-forward, some of my Stanford lectures!

My first real challenge, and a turning point for my experience as a teacher with NEON, was when I saw the first assignment. Coming in at a whopping ten pages of instructions, the problem set was detailed and

specific, much longer than most readings my 10th graders had encountered. Deeply concerned, I reached out to ask that the work be simplified for the high school students. Could the assignment be shortened? Could the instructions be streamlined? I will always be grateful for my perspective shift after I was gently told that no, the course content for the high school class was identical to the work assigned on Stanford's campus that quarter, and it would not be changed. I realized what a gift it was to my students to be offered the opportunity to prove themselves alongside Stanford students. What would it mean for them, I wondered, if they were given the chance to tackle the work? And what could it mean when they succeeded?

Over the rest of that first quarter, I made it my mission to help students organize their assignments, checking their notes, asking them to submit work to me early so they could peer-review with each other in class, and helping them learn how to break down those intimidating ten-page assignments into manageable, bite-sized task lists. And it worked. We ended the quarter with six As and two A-pluses. But more than just the grades, my students walked away from the class with a deep and abiding sense of confidence and possibility. Having succeeded in an arena they had never even dreamed of entering, they took on bold challenges, pushed themselves to greater heights, and pursued previously unimaginable opportunities. Several of those first students returned the following fall to serve as mentors for the next crop of CS 105 hopefuls. Students from my first CS 105 class now attend UCLA, Columbia, Cornell, and even Stanford. I will always be grateful to Stanford for giving them the chance to expand their horizons and for the way the program helped me to reframe seemingly insurmountable challenges as invaluable opportunities. One quarter of computer science changed all our lives, opening our eyes to what's possible when opportunity is distributed equitably.

An Elite University's Effort to Level the Playing Field

A writer, policy analyst, and educator, Dasia Moore was one of the most accomplished teaching fellows in the SDE-NEON dual enrollment program. From winter 2022 through fall 2025, she taught three SDE courses: Raise Your Voice: Learn to Write Successfully for College and Beyond *(in Brooklyn, N.Y.);* Between Malcolm X and Martin Luther King, Jr.: Race, Religion, and the Politics of Freedom *(in Jersey City, N.J.); and* Black Life, Culture, and the Emergence of the Field from Emancipation to the Present *(in Los Angeles). In each of these courses, she led weekly discussions over Zoom with classrooms of around 20 high school students as well as helping students individually in office hours and via email. Moore holds an MFA from New York University and a bachelor's degree from Yale University, where she studied ethics, politics, and economics with a concentration in poverty policy. She was a staff writer for the* Boston Globe *magazine, and her work has also been published in such publications as* Hayden's Ferry Review*,* The Offing*, and* The Nation*. In the following note, she shares her thoughts on her experiences as a Teaching Fellow for SDE and on how her and other TFs work helped to advance students' growth.*

Elite universities have long inhabited a paradox: Beneficiaries of both public support and private wealth, these relatively small communities wield enormous resources that allow them to impact society as a whole. It is not surprising, then, that responsibility to the greater good is part of Stanford's very foundation. In 1885, California Senator Leland Stanford established the university in his deceased son's name "to promote the public welfare by exercising an influence on behalf of humanity and civilization." Some 140 years later, the senator's charge remains a tall order. Over the past three years, I have watched Stanford's Office of Digital Education work tirelessly to fill it.

I first joined the teaching team for Stanford's dual-enrollment partnership with the National Education Opportunity Network (NEON, formerly the National Education Equity Lab) in spring 2022. A friend of mine had forwarded a call for teaching fellows who would help guide a group of high school students through a college course. The students, the email said, would earn Stanford credit remotely while physically attending Title I public high schools, all of which serve low-income communities, spread across the country.

At the time, I was a full-time journalist with precious few working hours to spare. But reading about the Stanford-NEON initiative reminded me of my own journey from underfunded schools and financial precarity to a selective and wealthy university. During my time at Yale, debates about elite institutions' debt to society were a common dining hall topic. Our luscious campus stood in stark contrast to the impoverished communities it bordered. Yale's endowment, like Stanford's, competed with the GDP of small nations. Given those conditions, what must a university do to address the widening gap between its massive resources and unevenly distributed public benefit? The stakes were clear, but the answers were murky. Still grappling with these questions years after graduation, I applied to be a teaching fellow at Stanford that spring. I would end up returning to the program for two additional semesters.

It was immediately clear to me that Stanford Digital Education was a special place staffed by talented, passionate people. My colleagues take Stanford's responsibility to promote the public good seriously, and they work hard to deliver on that promise by expanding campus's borders to reach deserving students nationwide. Most impressively, thanks to the NEON model, Stanford Digital Education does this work while meeting students exactly where they were — in community-based schools with strong cultures, talented educators, and innovative approaches to addressing student needs even while managing limited resources. Stanford, NEON, and partner high schools work together to tackle educational inequity and the

everyday classroom challenges it creates. If students lack headphones or laptops, the whole teaching team steps in to provide proper equipment. When students submit final projects and celebrate graduations, all of us come together to applaud them. In this way, the dual-enrollment program is a model of true partnership and shared purpose. Students have benefitted a great deal from this unity, and so have I. My earliest teaching experiences were with Stanford-NEON, and the courses I have taught through this program fed and fueled my passion for education. In every class I design and teach, whether in or outside this program, I draw on the lessons I have learned from Stanford professors and staff, as well as my experienced, on-the-ground co-teachers — Mr. Quinones at All City Leadership Secondary School in Brooklyn, N.Y.; Dr. O'Neill at Infinity Institute in Jersey City, N.J.; and Mr. Wydra at Birmingham Community Charter High School in Los Angeles.

Focused on courses in the humanities, the dual-enrollment program engages with the public good on multiple levels. Just as program design promotes educational access and equitable partnership, course content speaks powerfully to students' lives and experiences. The three courses I taught have focused on self expression through academic writing, the philosophies of key civil rights leaders, and the core tenets of Black Studies, respectively. The majority of my students have been people of color, with many first-generation Americans and some English language learners among them. I know from experience that for many such students, a school like Stanford can feel like a distant dream, despite their intelligence and ability. I saw it as my mission to break down barriers of exposure and distance to bring Stanford and the course material close. Many talented students began the semester anxious about keeping up with college expectations — *Stanford* expectations. Twelve or so weeks later, the same students emerge with the satisfaction of having met the challenge of a college workload. They engage boldly in debate and write with clarity and confidence. As an educator, it is wonderful to see young people's sense of self soar. As an educator committed to justice, it is even better to know they will walk away with concrete benefits — lines on a resume, saved time or money on future college credits, an extra recommender or essay topic, genuine exposure to a top-tier university — that can help them find solid footing on an uneven playing field.

Each year, the stakes of teaching the humanities in service of education equity seem to get higher. This fall, my Black Studies students in Los Angeles began learning about historic patterns of racial violence while their hometown was at the center of immigration raids. This winter, when our semester together comes to an end, so too will the Office of Digital Education and Stanford's partnership with NEON. My students and their peers nationwide will start 2026 with fewer pathways to rigorous, honest humanities curricula, which means fewer opportunities for them to understand the disorienting, misinformation-filled world around them. I can only hope that the lessons imparted by their Stanford coursework so far — lessons about the humanities and about their own undeniable talent and worth — continue to sustain and propel them.

We live in a country where prestigious education is available to a select few. Stanford Digital Education opened that narrow door wider. It was a privilege to take part in such an expansive approach to education. It was a privilege to help young people thrive and gain crucial exposure. It was a privilege to see a university embrace and fulfill its true purpose.

Course Leads High Schoolers to Think Like Philosophers

*Greg Watkins served as a lecturer in the Structured Liberal Education program (SLE) at Stanford for almost 20 years. SLE is a residence-based, year-long curriculum that studies important works of the Western tradition, from the Ancient Greeks through the modern world. F*rom *2022 through 2025, he worked every winter-spring semester* with *Stanford Digital Education to offer a moral philosophy course,* Searching Together for the Common Good*, that was based on the SLE curriculum. It fulfilled a long-term goal of his to take SLE and its lessons beyond the Stanford campus to high school students in high-poverty communities. In this note, he discusses the origin, evolution, and delivery of the course.*

Background

I enrolled in SLE as a Stanford undergraduate, and it changed my life. I had arrived at Stanford from my small hometown in Idaho, intent on being a pre-med student majoring in chemistry. Instead, I found myself reading philosophy and engaging with classmates in conversations about what it means to be human, personally and collectively. We were all housed together, and that encouraged us to engage with the material and with each other well beyond the bounds of the classroom.The SLE curriculum invited robust discussion and personal reflection; our learning was immersively social.

I went on to earn doctorates in humanities and religious studies at Stanford, and I taught in SLE for many years. When I became associate director of the program, I started to explore how we might both 1) get our own students off campus to engage with students in the surrounding community; and 2) explore bringing a similar curriculum to area high school students. While we were able to get some of our students to regularly visit the Boys and Girls Club in East Palo Alto (where we had a strong connection to the staff), it only ever amounted to working with high school students in the study hall to help them with their homework. This is important work, too, but it was difficult to find a structured way to experiment with the SLE-like curriculum. These high school students already had plenty of responsibilities, and so, although our administrative partners there saw the potential value of doing that kind of program, there was just no good way to provide the opportunity. When I explored the possibility of bringing this kind of thing to a charter high school in East Palo Alto, the response was similar: “It sounds amazing, but how can we find the time and place in a student’s schedule?”

Initial Pilot (Summer 2021)

To solve this problem, I worked with a SLE alum high school teacher, Michael Taubman, to create a summer workshop opportunity for high school students. This was an in-person program that had me working with five students from East Palo Alto at the same time that Mike would be working with eight students from his high school in Brooklyn. As an acknowledgement of the fact that this population of students are often having to work summer jobs, we gave the students some money for their time participating (I believe it was $500). We were finally in a position to offer a SLE-like curriculum in a structured way.

The program ran over a 10-day period. Even though the SLE curriculum is very wide-ranging in its disciplinary emphases (literature, philosophy, religion, art), we decided to focus the short-term program on

moral philosophy, including Confucius, *Antigone*, Plato, Aristotle, Marx, and Spike Lee's movie, *Do the Right Thing*. I was also able to involve a couple of Stanford undergraduates to participate in the seminar sessions, which was part of our long-range plan to include undergraduates as co-learners in this kind of program.

In brief, we think the program was a big success, primarily in the positive reaction the high school students had to the material and the format. As part of the teaching team, I had also hired a college student who had attended the same high school as the participants. Part of his job was to transport them to and from campus. I was hoping that his time in the car with the students would allow me to hear about their frank reactions to the course. He reported something on the very first day that really stuck with me. After first telling me that the students were liking the course so far, he added that "They love how casual it is." When I asked what that meant, he elaborated: "They love that you are interested in what they think." This, I thought, got to the heart of what we would be up to: introducing them to important texts from the past – texts that get us thinking – and then giving them the space to share what *they* think of the texts and the questions they raise. It appeared to me that this was not the kind of thing they were getting to do much of in their high school classes.

Partnership with Stanford Digital Education

It was just sheer good fortune for us that we were then able to partner with Stanford Digital Education to turn our summer pilot experience into an actual credit-bearing Stanford course that could be delivered to high school students through SDE's partnership with what is now the National Education Opportunity Network (previously called the National Education Equity Lab). Needless to say — as the background section above suggests — the ability to offer Stanford academic credit was the magic key that opened the door to bringing the curriculum to high school students. Instead of trying to wedge our way into the busy lives of high school students, the promise of college credit, especially from Stanford, motivated high school administrators to work to find a place in their students' schedules.

By this time, we had also worked out many of the features of the version of the course we wanted to offer: 1) a curriculum based on moral philosophy by way of important texts from the past; 2) a flipped curriculum in which students work through the video and reading material while writing up some of their own reactions; 3) a Zoom session for each week of material to allow for discussion; 4) the involvement of Stanford undergraduates who would attend the Zoom sessions, where breakout rooms would be created for discussing the material; and 5) a professional development program to work with the high school teachers to introduce them to, and make them more effective with, this kind of curriculum.

Over time, the curriculum came to focus more clearly on the classical notion of a liberal education. The umbrella idea of 'moral philosophy' continued to be used, but the logic of the course was to first present the students with the assertion that a democratic culture called for its citizens to be particular kinds of thinkers. The course included discussion of 'the Greek question,' which is found in the work of Stanford classicist Ian Morris: "How are we going to live if nobody is telling us how to live?" This core idea became a way of explaining why an education in moral philosophy was both relevant and important.

One particular challenge of this course, given our priority of a discussion-based experience, was being able to scale on the human side of the equation. As the number of classrooms grew — from 1 in 2022 to 10 in 2025 — we had to grow the number of undergraduates involved, as well as enlisting what we referred to as 'instructors,' meaning the advanced degree person who would run the Zoom sessions and

do the grading for any particular school. We were able to pull this off with the 10 high schools in 2025 by recruiting 25 SLE undergraduates and three instructors in addition to myself. Continuing to scale may have proven difficult, but certainly was possible, perhaps with the added involvement of Stanford alums to serve in the co-discussant role.

To close, I don't think I can say enough about how powerful this curriculum could be for a lot of the participants, and in all roles: students, undergraduates, high school teachers. It all comes back to that student comment that got texted to me after the first day of the initial in-person pilot: "They love that you are interested in what they think." In a liberal education curriculum, it's important that the participants engage in authentic exchange of ideas, that they probe and question the values that they already hold, and that they get an opportunity for important texts from the past to challenge them. It seemed that everybody was getting energized by this approach to education. The high school teachers don't normally get opportunities to engage with students in this way (though they would like to!), and the undergraduates — already sold on the value of this kind of education — get energized by the ability to bring it to their near-peers.

When we first started strategizing about bringing a SLE-like educational experience to high school students, we quickly fell into talking about it as a 'culture of the classroom.' I'm proud of how our team and so many of the participants were able to feel they were part of a culture of intellectual inquiry and to have their own lives affected by it.

Why Bring Bioengineering to Title I High Schools?

Erik Brown, SDE Associate Creative Director, oversaw the effort to produce and deliver the course BioE 80: Introduction to Bioengineering*, which was offered three consecutive years in winter-spring quarters, 2023-25, as part of Stanford Digital Education's collaboration with the National Education Equity Lab, now the National Education Opportunity Network. He partnered with Stanford Associate Professor of Bioengineering Drew Endy and Assistant Professor of Engineering Jennifer Brophy to adapt the BioE 180 course that they offer to Stanford undergraduates on campus into an online format that would be suitable for high school students. He also recruited and coordinated teaching fellows, usually Stanford undergraduate and graduate students, who taught the course at more than 20 Title I high schools nationwide. In this commentary, Brown addresses the impact of this effort.*

Stanford Digital Education's BioE 80 was more than a course; it was a deliberate intervention in the long-standing disparities that define who gets to participate in high-quality science education in the United States. In a nation where a handful of universities sit atop vast reservoirs of intellectual, financial, and cultural capital, the gap between those who are granted access to such resources and those who are not has widened in recent decades into a chasm.

In response to this disparity, my teaching fellow team and I built a robust digital ecosystem around the BioE 80 course to make learning not only possible but thrilling. Students accessed materials through a dedicated website designed with clarity and accessibility in mind — which was then open sourced in the spirit of our commitment to "bioengineering for all," in the words of Associate Professor Drew Endy. A custom-built helper bot, affectionately titled BITS, provided just-in-time answers to student questions, offering guidance that felt personal even when learning asynchronously. I produced extra video content featuring unconventional bioengineering professionals, including an FBI agent speaking about biosecurity and Star Wars actor Ahmed Best, who spoke on how real science informs science fiction. Perhaps most exciting was the mailing of foldscopes — origami-style microscopes that allowed students to literally unfold the microscopic world with their own hands. And to top it off, a few local schools had the unforgettable opportunity to visit Stanford's campus, turning abstract aspiration into lived experience. These layers of innovation made BioE 80 a full-scale educational adventure.

The course itself covered some of the most exciting ideas at the frontier of science and technology. Students were introduced to bioengineering not simply as abstract theory but as a discipline that shapes medicine, agriculture, energy, entertainment, and even the environment. They learned about DNA, genetics, and the revolutionary tool CRISPR. They explored how living systems can be designed to solve global challenges, from creating drought-resistant crops to engineering new vaccines. They investigated how bioengineering intersects with ethics, policy, and equity, opening discussions about who benefits from scientific innovation and who is left behind. In short, BioE 80 gave them an early glimpse into the future of science, while situating them as potential contributors to that future. For many students, this was their first opportunity to see themselves not as passive consumers of science but as active participants. That shift in perspective is life-changing.

For Title I high schoolers — students who are overwhelmingly Black, Brown, immigrant, or from low-income households — the opportunity to engage with bioengineering content, taught and contextualized by Stanford faculty and teaching fellows, was transformative. It represented a tangible act of democratization: Knowledge that is too often locked within ivory towers was extended outward as a public good, and in so doing, signaled a potential shift in how elite institutions envision their role in society.

If universities such as Stanford are to remain relevant and socially responsible, they must invest not only in producing cutting-edge science but also in ensuring that the pipeline to that science is enhanced and diversified.. I believe that BioE 80 embodied this ethos, meeting learners where they are, rather than expecting them to arrive already polished by privilege.

In classrooms where access to labs, updated equipment, or even the internet can be inconsistent, the rigorous, inquiry-driven course designed and delivered by Stanford faculty and teaching fellows helped the high school students to see that they have a seat in the future of STEM. The impact was not measured solely in their mastery of content, though the content was challenging and intellectually demanding. It was equally, if not more so, in the sparks lit: Some high schoolers left with a newfound passion for STEM fields they had never before considered; others used their participation in BioE80 to bolster college applications, earning admission into universities that might have otherwise felt out of reach. A few even began to articulate career pathways in bioengineering, biotechnology, or medicine — fields that rarely recruit directly from Title I schools. Education researchers often speak of the “leaky pipeline” in STEM, where students from underrepresented groups are disproportionately lost at every stage. BioE 80 offers a model for plugging those leaks, affirming early and often that underrepresented learners are both capable of and essential to the future of science.

The teaching fellows for the course — Stanford students themselves — were equally transformed. Many entered the program thinking of themselves narrowly as engineers-in-training, future scientists, or professionals on linear career paths. Through the act of teaching, mentoring, and science communication, they discovered that the transmission of knowledge is itself a discipline, one that demands creativity, empathy, and humility. They wrestled with questions of pedagogy: How do you explain CRISPR to a 15-year-old whose biology textbook predates its discovery? How do you scaffold a hands-on lab in a school with no pipettes? How do you balance rigor with accessibility, ensuring that learners are challenged but not discouraged? These were not theoretical dilemmas; they were lived, daily challenges. And in confronting them, teaching fellows became both better communicators and more socially aware citizens. I personally saw how many walked away with an awakened passion for teaching and community building, a sense that their technical expertise could be wielded not just in labs or boardrooms but in classrooms and neighborhoods. Some reevaluated their career trajectories, choosing paths that would allow them to continue working in education, public service, or policy.

The implications of the course go beyond individual growth of teaching fellows and students. I like to frame BioE 80 as a public good and to recognize that it carries weight at the level of national sustainability and even national security. A society that fails to educate its entire populace equitably is a society that squanders potential innovators, thinkers, and leaders. In a century where bioengineering will shape everything from health to food systems to climate resilience, leaving swaths of the population underprepared is dangerous. Equitable access to science education is a necessity for the survival and flourishing of the nation. By investing in high school students from Title I schools, Stanford is not merely helping individuals to achieve their full potential; it is strengthening the future of our world. By investing in its own students as communicators and teachers, Stanford also is ensuring that future scientists have a global understanding of research that transcends viewing it narrowly as finding solutions to technical problems.

Too often in academia, success is measured in metrics: the number of schools reached, the number of students enrolled, the number of teaching fellows deployed. These numbers must be placed in a context of lived outcomes. To fully appreciate BioE 80’s impact, we need to acknowledge the smaller, more intimate stories. I remember hearing from one student about their discovering a love of STEM in the course that has led them to pursue a degree in environmental engineering in college. I was surprised by a

conversation with a teaching fellow who shared their realization that engineering alone could not satisfy their calling, and has since committed to a career in education policy. I will never forget the amazement and pride of the student who, for the first time, saw someone who looked like them at the front of a classroom teaching science. These stories underscore how systemic change begins locally, in the lives of individuals, and then ripples outward into families, communities, and institutions.

I see the effort to provide dual enrollment courses to Title I schools as central to the mission of higher education in the 21st century. Universities must embrace their responsibility to democratize knowledge, to bridge divides, and to cultivate leaders who understand both science and society. BioE 80 is proof of concept: a model of how universities can and must step into this work.

AFRICAAM 221 Touched High School Students' Lives

Annie Sadler, assistant director of project evaluation and research at Stanford Digital Education, served as project manager for AFRICAAM 221, Between Malcolm X and Martin Luther King, JR.: Race, Religion, and the Politics of Freedom. *The course examined these two social justice icons, who sometimes are viewed as ideological opposites, and helped students to understand how Malcolm's and MLK's philosophies often are complementary. Sadler played a critical role in recruiting and supporting teaching fellows for nearly two dozen classrooms, identifying ways the course could be best taught to high school students, and helping the course's creator, Dr. Lerone A. Martin, professor of religious studies and African American studies, to adapt an on-campus course for Stanford undergraduates to an online course available nationwide. In the following note, she discusses why she found this course to be such a meaningful experience for all involved.*

Working on the course *Between Malcolm X and Martin Luther King, Jr.* has been a highlight of my work with Stanford Digital Education (SDE). In many ways, I feel it fulfills the promise of what digital education can be. The course offered access to knowledge that would have otherwise been inaccessible to students, and it did so in a way that took advantage of the affordances of the digital medium.

SDE offered this dual enrollment course for under-resourced high schools from 2023 through 2025, serving 287 students, through our partnership with the National Education Opportunity Network (then known as the National Education Equity Lab). The 12-week course started with three weeks devoted to the life of Malcolm X followed by three weeks on Martin Luther King Jr. The remaining weeks examined major themes from both figures' perspectives, including gender and sexuality, national security, and leadership and mobilizing, among others. Each week, students wrote 250 words responding to a prompt related to that week's reading. Importantly, each week, students were asked to connect what they read that week to a larger issue in their life or their community. For the midterm, students chose a quote or passage from either a Malcolm X or King speech, recited it to their class, and explained its historical significance and why they chose it. This was an exceptionally powerful assignment for students. For the final, students wrote an op-ed on a topic of their choice that they analyzed in conversation with Malcolm or Martin.

High school teachers led the students through the curriculum guided by the Canvas online learning platform page, anchored by Professor Lerone A. Martin's lecture videos and supported by instructional guides that suggested how to facilitate challenging conversations about race and other social issues. Each week a teaching fellow, hired and managed by Stanford, would meet with the class over Zoom to lead a discussion on a pre-selected passage of either Malcolm's or King's writing. Teaching fellows were supplied questions for leading discussion but had creative freedom to engage their students with regards to the material as they saw best. According to post-course surveys, this time with the teaching fellows was a highlight of the course for students.

Our teaching fellows were exceptionally dedicated. The digital medium allowed high school students to be mentored and taught by Stanford undergrads, master's students, PhDs, and alumni, as well as by faculty at other institutions who took on the teaching fellow role. I have received many emails from students and co-teachers about teaching fellows who have given so much of their time and energy to students, as well as emails from the teaching fellows themselves wanting to continue their involvement. For a humanities class at Stanford to have built a network of teaching assistants (TAs) who are so invested that they return

to teaching year after year without the structure of an internal TA system — such as exists for computer science courses — is a testament to the course and everyone involved.

Working alongside Professor Martin and Marina Límon, a Stanford undergraduate who served as course manager, has been a great joy and privilege. Professor Martin, who is director of Stanford's Martin Luther King, Jr., Research and Education Institute, was dedicated to this course and the students and was enthusiastic about exploring the specific needs of the dual enrollment context. After our pilot course in 2023, we overhauled the course, moving away from the heavy reading load required in the original version to accommodate the crowded schedule of high school students. Professor Martin's openness to redesigning a course that he had taught at multiple institutions speaks to his embrace of SDE as a collaborator and a partner, not just a service provider. He was also a mentor, bringing Marina onto the team as a sophomore after she took the class at Stanford. This trust that he has in students, whether high school or Stanford students, is part of what makes him an exceptional teacher. For me, working with Marina and watching her develop her skills, from basic professionalism, to managing a team of 20-plus teaching fellows, to strong course design, was a privilege.

The content of this course matters. It matters to me personally, and I think it matters nationally as public education erodes and officials in federal, local, and state governments limit what history is allowed to be taught in our schools. Spending three years with Malcolm X and Martin Luther King, Jr., watching high school students unlearn their misconceptions about them and instead embrace their nuance and complexity as they pursued similar goals, gives me hope for the future of our democracy. One key lesson of the course stands out to me. High school students have grown up in an age where people no longer take time to reflect and explore ideas and beliefs with each other. Students haven't witnessed adult figures with strong convictions change their minds. In this class, students followed Malcolm as his thinking evolved. They wrestled with that and reflected on the strength of character it takes to be a leader and to change your mind.

The final project of the course asked students to choose a social issue (not common for high school assignments), take a stance on the issue, and explain how Malcolm X or King would support that stance, in the form of an op-ed. This is where, without fail, I was struck by what happens when we offer students a well-designed educational experience that pushes them to connect what they have learned to their lives. Linking history to the present is one of the most important skills we can teach students, and the entire course was designed around having students practice these skills, with each week leading to the final project. The op-ed topics range from everything from analysis of recent rap albums and what they say about Black masculinity in conversation with Malcolm X to what the lack of affordable childcare means for the economic independence of women in a specific part of Los Angeles. It was a privilege to read the writings of these students, whom for a quarter we were lucky enough to call Stanford students.

Writing Course Helped Students to Find Their Voices

Meg Lamont, assistant head of Stanford Online High School, led the OHS instructional team that created the course Raise Your Voice: Learn to Write Successfully for College and Beyond*. One of the most successful courses offered as part of the National Education Opportunity Network dual enrollment program, it enrolled about 200 students in 13 high schools in Connecticut, Florida, New Jersey, New Mexico, New York, and Washington, D.C. in spring 2022 and spring 2023. Students were given a series of increasingly complex writing challenges, culminating in an extended research essay. Assignments included college-level reading in the humanities and social sciences. The course helped students to develop their voices and skills as creatively analytical academic writers. In the note below, Lamont, who is also an OHS English instructor, provides some thoughts about the impact of the course and the efficacy of working with a diverse population of students in high school classrooms nationwide.*

Background

Stanford Online High School was founded in 2006 with the mission of bringing advanced academic coursework to bright and capable students wherever they lived in the United States or abroad. To increase access to its courses, SOHS from its inception has offered multiple enrollment options, from full-time students who graduate from the school to single course students who take just one SOHS course in conjunction with their main school. During its 20-year history, SOHS has explored multiple partnerships to bring its distinctive curriculum and pedagogy to a wide range of students and has also contributed its expertise in online pedagogy to programs for incoming Stanford freshman, such as the Stanford Online Academic Readiness (SOAR) program.

SOHS's many years of experience in offering college-level courses to high school students through synchronous online seminars made it a natural fit for the National Education Opportunity Network's goal of offering credit-bearing college courses online to students in Title I schools across the country. A significant area of need that had been identified by NEON and Stanford Digital Education was increasing students' academic writing skills, and so the decision was made to create a course that included substantive written work from students, supported by intensive individualized feedback and time for deep revisions.

Raise Your Voice

Raise Your Voice was a team effort from the SOHS English Division. The course syllabus and the main lectures were created by Mackenzie Russell, drawing on her experience teaching as a graduate student in both Stanford's English Department and Program in Writing and Rhetoric. The course brought students through all stages of the research paper writing process, from identifying research questions to finding and evaluating sources to writing a first draft and then revising to a final draft. In addition, to support the mechanics of students' writing, Thomas Hendrickson developed a series of lectures on grammar to accompany the course. Anne Hruska ran weekly meetings for the course's Teaching Fellows, working closely with them to support the success of students across a wide range of schools and preparation levels. Kristina Zarlengo, Division Head of English, and I oversaw general logistics and coordination across the course, and SOHS's Department of Technology assisted with enrollments and course Canvas

pages. We also coordinated weekly with members of Stanford Digital Education and NEON to make sure everyone involved in the course was on the same page.

At the structural level, a key early decision was to keep the student:teaching fellow ratio small, about 10:1, to allow for substantial individualized feedback on students' writing. Teaching Fellows ranged from Stanford undergraduate and graduate students to writing professionals. A significant effort was also made to hire TFs who reflected aspects of the students' demographics, such as having attended a Title I school. Both elements contributed to the course's success. Students mentioned that they felt that their TFs knew them as individuals and cared about them, and they felt motivated to respond to and apply their feedback from assignment to assignment. Through Anne's weekly meetings with Teaching Fellows and through careful monitoring of student work submission on Canvas by Kristina and me, the SOHS team was able to keep a close eye on student progress and intervene quickly if a student was falling behind or if a particular school was struggling with an aspect of the course. Notably, though this course was one of the few offered by NEON that required significant formal writing from students, the vast majority of students were able to complete the writing requirements and pass the course.

Impacts

From the start, Mackenzie's vision for the course was to help students develop their own voices and learn to connect formal academic writing with their own unique perspectives and interests. This is why the course was designed around a sustained research paper based on students' own interests. Even before the official start of the course, students could engage with pre-course materials designed to develop their point of view. Inspired by the long-running Moth Radio Hour, students crafted five-minute personal narratives that they showcased in an event open to all students enrolled in the course across schools. Student comments on mid-semester and end-of-course surveys highlight how impactful the course's focus on student voice was. As one student wrote, "One highlight for me in the course so far is definitely all the research I've been doing on a topic that interests me. I've been having a good time learning so much more than what I already knew." Another referred to the process of finding and evaluating sources as "a long process, but surprisingly fun," a testament to how much students valued being able to explore areas of deep interest to them in their academic work.

Teaching Fellows also found the course a meaningful experience, and their enthusiasm translated to students. One teaching fellow, reflecting on the course before moving on to graduate school, described teaching the course as an "experience that I personally witnessed empowering both students and educators." The dedication of the Teaching Fellows and their enthusiasm for teaching the student population they were working with was evident to students. In course surveys, for example, one student commented that "the class feels more like a community or family" and another noted that "the highlight for me in this course so far has been my teaching fellow, she is very helpful and joyful so attending her meetings is always fun." In these student comments and those noted above, one striking element is a sense of enjoyment in academic work, a sense that the students are scholars and that scholarly work is something they can fully participate in.

On a personal level, the course was made even more meaningful for me because one of the schools enrolling students in *Raise Your Voice* both years it was offered was Miami Southridge Senior High School, which was the high school I graduated from in 1994. When applying to teach at SOHS, I wrote in my cover letter how much being able to take a course like the ones offered at SOHS would have meant to

me in high school. To be able to offer that opportunity to current Southridge students, free of charge to them, was extremely rewarding. The partnership with Southridge was especially satisfying because of the improvement in student performance in the course from the first year to the second. The first year was a struggle, though most of the enrolled students did finish the course due to the dedication of the school's coordinator and the Teaching Fellows. The second year, the school's coordinator was able to select students who would take full advantage of the course and also, crucially, to prepare them for its requirements of time and effort. As a result, student performance at Southridge soared in that second year, a model of what could be achieved through a recurring partnership with a set of schools.

Teaching Fellows the ‘Secret Sauce’ in SDE success

Cindy Berhtram was director of project strategy and operations at Stanford Digital Education. She led the design of and oversaw the delivery of SDE’s dual enrollment-courses for students in high schools serving high-poverty communities. Among her many contributions was SDE’s distinct approach to using teaching fellows to provide effective student-centered instruction while also giving the TFs meaningful, life-changing experiences. In the following commentary, she explains why the TFs were essential to the program.

The Stanford Digital Education (SDE) dual-enrollment program supporting Title 1 high schools had a deep and lasting impact on the teaching fellows (TFs) who helped run it. These TFs, who were mostly Stanford undergraduates, graduate students, and alumni, engaged in co-teaching college-level courses alongside high school teachers, often gaining formative experiences that extend far beyond the classroom. Their involvement fostered significant professional growth, intellectual enrichment, and personal transformation. Moreover, teaching fellows contributed significantly to the success of the program. Professor Lerone A. Martin, who teaches a dual-enrollment course on Malcolm X and Martin Luther King, Jr., called them its “secret sauce.”

Growth through Teaching

TFs frequently described the role, in which they taught over Zoom and met with students in online “office hours,” as a unique opportunity to deepen their own understanding of complex academic material. The challenge of breaking down sophisticated concepts for high school students encouraged them to sharpen their critical thinking and communication skills. This process of learning by teaching fostered mastery and built confidence in their academic abilities, a benefit that lasts beyond the term of their involvement.

Many TFs said that their participation helped shape their career paths, whether in education, research, public policy, and nonprofit leadership. The skills and insights gained in the TF role served as foundational experiences. Some TFs were inspired to become educators themselves, while others leveraged the communication and project management skills they developed to excel in various professional fields.

Overall, the program cultivates a cadre of socially conscious leaders equipped to effect change. The emotional dimension of the TF role can cultivate empathy, cultural competency, and a commitment to educational equity. I witnessed TFs developing a passion for social justice work and community engagement. Brian Sha served as a TF for an introductory computer science course, CS 105, in spring 2022. Writing in the Stanford Daily, he noted that “While I was initially excited about teaching students how to code, by the end of the program, I ended up learning a lot about social inequity and how elite institutions such as Stanford have the resources to inspire a whole new generation of students through innovative and accessible educational programs.”

For Star Doby, who was a TF for CS 105 a year later, in spring 2023, the chance to address educational disparities was part of what drew her to the course. “When I first heard about this opportunity to work on this course offered by Stanford through the National Education Equity Lab, what really stood out to me was the word equity,” she said. “It's one thing to teach this course to students, but another thing to teach this course with a focus on equity and providing equitable resources to underserved communities.”

We repeatedly heard that the program had profound impacts on teaching fellows who participated. “This experience was a lot more transformational than I thought,” commented Juan Flores, a TF in the Malcolm and Martin course in spring 2024. “Not only did I learn professional skills,” he continued, “It was a passion project — I was doing something I enjoyed.”

Expanding Their Community

My colleagues and I at Stanford Digital Education provided a structured support system for TFs, including onboarding, weekly training, and regular meetings, that helped them form a professional community. TFs found value not only in the guidance and mentorship from coordinators and faculty but also in sharing best practices and challenges with their peers. This network provided emotional sustenance and professional camaraderie that many TFs cherished. I witnessed that these relationships often extended beyond the program, leading to lasting friendships.

TFs often described their work as deeply meaningful and rewarding because it unites their academic interests with a tangible impact. “The students mentioned feeling comfortable in the class because of me,” said TF Anna Rose, a TF for the Malcolm and Martin class in spring 2024. “That meant so much to me.”

Varun Madan, a Stanford computer science major who served as a TF for CS 105 in fall 2023 and 2024, remarked: “It's so awesome to see their [the students’] growth. Even in the span of like nine weeks, they've become so much more interested in computer science. And that makes me quite happy.”

Personal Reflection

It’s been a pleasure for me to see teaching fellows develop a keen awareness of the diverse experiences and challenges faced by students from under-resourced communities. As they learn to engage compassionately and thoughtfully with perspectives unlike their own, they are preparing to contribute meaningfully in education and beyond.

With the closure of Stanford Digital Education, the current form of the dual-enrollment program is concluding, but I am hopeful that others will carry it forward into new contexts and programs across Stanford and other institutions. The end of this chapter could become the beginning of a broader effort to involve Stanford students in teaching high school students, their “near-peers,” and to institutionalize these opportunities for empathy and equity-centered leadership as a common feature of a Stanford education.

References

- Sha, Brian. “What I learned teaching a Stanford computer science class to high school students.” *The Stanford Daily*. April 10, 2022.
- Stanford Digital Education. “An amazing opportunity for us to reach beyond campus.’ Stanford brings CS 105 to high schools” (video transcript). December 10, 2024.
- Stanford Digital Education. “Easing the ‘jump’ from high school to college: how teaching fellows support a Stanford course.” January 9, 2025.
- Stanford Digital Education. “For high schools in low-income communities, a new way for students to get a Stanford education.” August 31, 2022.
- Stanford Digital Education. “Teaching computer science in high schools in low-income communities” (video transcript). April 14, 2023.

Community Colleges Benefit from SDE Partnership

Michael Acedo, assistant director of project innovation and technology, led two projects at Stanford Digital Education that brought innovative computer science education to community colleges. One involved adapting Code in Place, a free online course developed by Stanford computer science professor Christopher Piech and colleagues, so that it could be offered as a for-credit introductory programming course at California community colleges. In the other he worked with the Bay Area Community College Consortium and Google to enable community college instructors to incorporate the company's professional certification lessons into their school curriculums. While Acedo also was SDE's point person on its high school computer science course, he describes here how his work with community colleges presented unique challenges and great opportunities.

Community colleges provide pathways to students who often have financial constraints and family responsibilities that preclude other avenues for educational advancement. These institutions admirably serve diverse, determined learners — those navigating transfer pathways, career changes, and upskilling amid complex life circumstances.

Community colleges are lifelines, yet face huge hurdles to meet the needs of the many students who hunger for opportunities to advance themselves. Perhaps the subject in greatest demand is computer science. Stanford Digital Education's mission was clear: to bolster community college faculty with Stanford's programming and professional development in computer science, honoring their students' ambitions while creating pathways to meaningful credentials and degrees.

From this foundation emerged two initiatives, SDE Code in Place and SDE Grow with Google, that offer a paradigm shift in how universities and community colleges can partner to extend opportunities equitably and at scale. In my role as project leader, I became deeply committed to weaving together technological innovation, pedagogical care, and community-centered collaboration.

SDE Code in Place: A New Frontier in Community College CS Education

In spring 2024, I had the honor of leading a partnership between Stanford's Computer Science Department and Foothill College to bring Code in Place (CiP), Stanford's acclaimed online introductory computer science course, directly to community college students. While tens of thousands of learners from around the world have taken this course, we wanted to make it possible for learners to earn credits for this work. Foothill agreed. Together we integrated CiP's rich, interactive digital platform with Foothill's existing introductory programming curriculum and enlisted peer section leaders who themselves embodied student leadership and mentorship. The new course offers a template for other community colleges to adopt.

This growing program, which increased from 30 students in spring 2024 to 90 in spring 2025, was demonstrably effective in building students' coding skills, with an average 86% passing rate. Many students describe it as life-changing, awakening confidence and a sense of belonging in STEM fields that had felt out of reach. They talked about the importance of having small online sections, led by more senior students and alumni, who understood their questions and became role models. As the one coordinating faculty, student leaders, and platform teams, I witnessed firsthand how combining human connection with digital innovation allowed more students to learn to write code. This new approach to

computer science instruction for community college students can rewrite the script for community college learners, turning barriers into gateways.

This model is scalable and replicable, a blueprint for Stanford and other universities seeking to build partnerships and extend expertise and programs to students beyond their campuses. Although SDE's work with Foothill ended with our closing, the school's collaboration with the CiP team is continuing. The course has become available online to students throughout the California Community College System.

SDE Grow with Google: Bridging Credentials and College Credit

Beginning in summer 2023, I led Stanford Digital Education's initiative with Grow with Google and the Bay Area Community College Consortium to embed Google's Data Analytics Career Certificate within community college curricula. The program aimed to expand horizons for students juggling work, family, and education, providing them with industry-recognized credentials alongside college credit.

We supported faculty across multiple community colleges and a California State University, creating a professional learning community to navigate curriculum integration, pedagogy, and student support. The resulting playbook distilled these experiences into a guide for scaling impact while respecting local context.

By fall 2023, three faculty had launched courses incorporating the certificate, linking students to a credential valued by employers nationwide and opening doors to entry-level jobs in high-demand fields. For students, these certificates can be passports to economic mobility and affirmation that their learning is both relevant and powerful.

Through this work, I have come to see university–community college partnerships as transformative. By marrying Google's credential with college credit, we are building pathways for social advancement, equity, and dignity. This approach is growing. The Office of the California Community College Chancellor announced in September a partnership with Google to incorporate the company's professional certificates, particularly its AI coursework, in its 116 colleges.The announcement cites the pilot program with SDE, BACCC, and Google as laying the foundation for the new, expanded effort.

Reflections and the Road Ahead

Navigating complex partnerships reinforced for me that the heart of effective education is human connection; that programs must be flexible to honor diverse learner realities; and that sustained innovation requires authentic partnerships across institutions and communities.

Through my work at Stanford Digital Education, I witnessed how our team served as both a conveyer and catalyst for transformation. I saw learners discovering their passion for code or data analytics and realizing that success in these fields was genuinely within their reach. I watched faculty members expand their sense of pedagogical possibility and embrace new ways of teaching. Most meaningfully, I saw the impact on learners and communities that historically lacked access to such opportunities. Stanford Digital Education didn't just deliver programs, we created pathways that fundamentally changed what people believed was possible for themselves.

As this legacy continues to unfold, I hold hope that educators and leaders will persevere in dreaming boldly, serving generously, and ensuring that education is a transformative force for all.

Examining How to Teach About AI in High Schools

Parth Sarin was an SDE graduate fellow involved in researching and developing approaches to teaching AI in high schools. While pursuing their co-term master's in computer science, they were part of a project involving SDE, Stanford HAI (Human-Centered Artificial Intelligence Institute), Stanford Graduate School of Education, and the McCoy Family Center for Ethics in Society at Stanford. They worked with a group of 13 high school teachers to study how the teachers thought about incorporating AI lessons into their classes. That work led to several scholarly papers, on which Sarin was a co-author, and to their co-producing lessons for a website, Classroom-Ready Resources About AI For Teaching (CRAFT), that teachers can download at no cost. Sarin also collaborated with SDE Fellow Michael Taubman, a high school teacher in Newark, NJ., to develop high school AI lessons that complement use of the online Google AI Essentials Certification Course. Sarin wrote the following note to highlight key points that distinguished SDE's AI work and to summarize what they found meaningful about these projects.

I started working at SDE as part of a collaboration between HAI, SDE, and the Graduate School of Education. The initiative, funded by an assortment of seed grants and pilot funds, was a space to think creatively and expansively about education, learning, and technology. SDE was a natural home for this work, given its radical desire to broaden access to Stanford's learning experiences without degrading their quality. SDE helped us to focus on the capacity of technology to support learning — across the portfolio, they hosted classrooms on Zoom, distributed microscopes made of cardboard, and, in our project, designed new ways for students to think with and about AI.

When ChatGPT was released there was a scramble to understand how it could complement the mission of educational institutions rather than contribute to their degradation, and I noticed many other initiatives uncritically embrace hype about personalized learning and efficiency. SDE supported us to take a different approach, a more critical approach. We spent a lot of time questioning the assumptions that most AI+Education projects took for granted at the time like, does learning really need to be more personalized? Might it rather benefit from being more communal? And does learning need to be more efficient, faster? Or can we perhaps reject such a neoliberal impulse and instead assert the importance of slower learning? And, perhaps most importantly, what is the world that students and teachers want to live in with AI, and what would it take to bring that into existence?

In fall 2022 and winter 2023, SDE explored the latter question. We assembled the first, to my knowledge, multidisciplinary group of teachers to design lessons about AI. They met every month and co-designed lessons about AI, bringing their disciplinary and cultural background into conversation about the capacities of AI. Then, they taught those lessons in their classes and reported back about what they'd learned. Over our conversations, new ideas emerged: the research team began to formulate a more precise understanding of the skills teachers needed to help their students think about AI; we began to understand that the co-design process itself was a form of professional development where teachers, working with each other, created new pedagogical orientations; and we began to hear more from students themselves, through the teacher reports and through their coursework, about their evolving understanding of AI.

In one of the most meaningful experiences of my Stanford graduate career, SDE sent me on a field trip to Los Angeles to visit the classroom of a teacher that participated in our co-design sessions. I sat down with her students to ask what they'd been learning, and they offered reflections on their realities that I felt were so disconnected from AI curricula and AI development. When I asked what kind of AI technology they wanted to see in the world, they bristled at the attempts to automate the production of visual art. Instead, one student said, "My mom only speaks Spanish and I want her to be able to speak to a device so it's

immediately translated into English.” Another kid talked about how, because he doesn’t have enough money, he runs scams to get more. He wanted to know how AI could help him scam people better. I do think we should have better technology for translating Spanish into English; I also think we should live in a world where people are not denied access to services or nominated for deportation because they don’t speak English. I don’t think AI should be better at running scams, but I hear that student wishing to be free from economic precarity, reaching towards a technological solution. Nearly every student I talked to hated how environmentally and socially extractive the production of AI is, but they also felt it was deeply unfair that they — poor, black and brown kids from LA — should be the ones to refuse AI or curtail their use while their rich counterparts in Palo Alto might continue using it. For all the talk of AI promoting equity in education, there was not much thoughtfulness about the fact that asking schools and students to use AI underwrites its legitimacy as a public service.

With SDE’s support, we wrote some of the earliest research that actually involved going into classrooms and asking students to imagine a future with AI. We were doing this research just as schools around the world were moving assessment to an in-person, pen-and-paper modality to avoid cheating with AI and, so, we were constantly being asked to give feedback to journalists and give presentations. Although overwhelming, I am deeply grateful to the entire SDE team and the project team for navigating that time with such grace and a mindset to support and help other educators.

After that project, I supported other work on emerging pedagogies at SDE — I helped develop a better tool for academic advising. I supported NEON courses in establishing AI policies fit to their contexts. I developed a NEON course called the AI Toolbox that was not launched but later became part of a collaboration with SDE Fellow Michael Taubman in which we developed a different AI curriculum. In all these projects I’ve felt sustained by the team at SDE and their commitment to ask hard, critical questions when easier ones would have sufficed. This team was uniquely able to imagine educational futures rooted in justice rather than convenience or efficiency. In its curriculum development, SDE was proof that institutions can choose to approach new technologies with craft and care rather than hype. I have personally left this work changed — to say nothing of the numerous students, teachers, educators, and universities that were touched by it — and I am incredibly grateful for the team which made space for expansive inquiry, humbled by students and teachers who shared so openly with us, and hopeful that the seeds we planted together will continue to grow into more humane and equitable approaches to learning about — and even acting against — AI.

Cross-Country Cycling Treks Offer Many Lessons

Having worked at Stanford for 40 years, Debby Angus-Weberski, administrative associate for Stanford Digital Education (SDE), knows the university like few others. She was the glue that held SDE together and played an essential role in keeping the team, which mostly worked remotely, connected to campus and to each other. Throughout her career, she has been devoted to helping Stanford students, and this commitment continued in her four years at SDE. She discusses in the following note a project, Spokes, that involved SDE working with undergraduate students at Stanford.

In 2023 a student approached my colleagues and me about a Stanford student cycling program, called Spokes, that they were a part of. Almost every summer since 2018, a different Spokes team — typically six Stanford students — embarked on a ten-week journey biking from Stanford to Washington, D.C. Along the way they stopped to present multi-day learning festivals for hundreds of K-12 students at local schools, libraries, and other teaching sites. Spokes was requesting Stanford Digital Education (SDE) to help with the program.

Spokes certainly did not resemble other SDE projects in a key respect — its digital component was minimal. But nonetheless I felt it complemented our portfolio of projects, and the Stanford Digital Education leadership shared that conviction. Spokes aligned with SDE's mission to expand education opportunities by spreading a love for learning. Spoke's emphasis on connecting personally with students was perfectly in step with the way SDE conducted its online courses. Furthermore, SDE considered it a priority to support the efforts of Stanford students to learn about and become involved in education. And last but not least, bicycling more than 3,000 miles is amazing!

For these reasons, we decided to provide institutional and administrative support to Spokes, including access to internal fundraising. Prior to our involvement, Spokes had not had a sponsor, and so it represented a new phase for the group to have SDE assume that role from 2023-2025. I was impressed by the students' dedication in preparing for their trip. It was a nice break from my regular duties to help the team prepare for their departure and provide support tracking their funds and processing reimbursements for expenses they incurred along the way. By lightening the logistical burden, we made it possible for students to devote more time to developing their lessons. SDE's educational expertise also helped the Spokes riders to produce more engaging and polished presentations and exercises.

Each summer, as the riders made their cross country trek, I would follow their progress through their Spokes blog, which was updated several times a week and showed the breathtaking landscapes they cycled through. It was remarkable to find out how they would take a break from riding and throw themselves into teaching. I was impressed by all of the different ways the team taught the students, with lessons such as "Building Bottle Rockets," "Community and Social Networks," "Art as Meditation: Practicing Mindfulness Through Creative Expression," "Exploring Historical Perspective and Bias Through a Camera Lens," and "How the Internet Works." Seeing the pictures they posted, I could see clearly that both the Spokes team and the young students were enjoying the experience.

The Spokes blog also reflected the team's experiences on the road, including planning out routes that everyone could complete, meals, lodging, bike repairs, and other chores. Most of their lodging was at homes of other cyclists. It was fun to read about those stories and all the good food the hosts provided.

As time went on I saw growth in the students themselves. They experienced biking across unfamiliar landscapes and immersing themselves in communities that challenged their perspectives. I think by listening to people they met along the way they learned to carry with them stories that will deepen their own understanding of the world. I think at its heart, Spokes is about a group of young people taking on a big challenge, solving the problems that always arise, and carrying that adventurousness and love of learning to other young people.

I could tell that the trip was a once-in-a-lifetime experience for each Spokes team, and I was so happy to be one of their supporters.

Conversations Drive Innovations in Digital Education

Jenny Robinson worked as digital community and social media specialist at Stanford Digital Education. She developed the unit's websites; managed SDE channels on YouTube and LinkedIn; wrote stories; and helped to produce videos. She also played a critical role in event planning. In the following note, she provides an overview of the events SDE hosted and how they served SDE's mission of enhancing innovation and equity in education.

A guiding theme of Stanford Digital Education (SDE) was that learning is social — that it happens in communities and through relationships. Our efforts to innovate in online education were grounded in this understanding about learning. SDE's approach was also influenced by conversations among educators about the obligations of the university to the public and about Stanford's potential to reach groups of learners who might never set foot on campus.

Stanford is a highly selective institution — and yet, it brims with professors, researchers, and students who aim to understand, respond to, and build capacity in the world far beyond its campus. At SDE, we aimed to invite in new learners and interlocutors in innovative ways, and to explore what those efforts could look like with peers engaged in similar work. While our courses were an important vehicle for this outreach, we also developed connections and community through in-person and online gatherings.

An online conversation series devoted to academic innovation

One way that Stanford Digital Education contributed to conversations about extending access to higher education was by presenting a series of online events called Academic Innovation for the Public Good. This author conversation series ran from January 2022 through May 2025, with 24 events in all, averaging about 120 attendees per session. Co-organized with Trinity College, and co-sponsored by more than a dozen universities across the country, it paired authors of new books about higher education with interviewers who were experts in their fields. Subjects included technology, digital literacy, belonging, democracy, and social networks; these conversations were filtered and clarified through the lenses of history, sociology, economics, psychology, and media studies. Authors and interviewers were educators and practitioners ranging from academic staff and entrepreneurs to professors and university presidents. All events were broadcast live over Zoom, free to all who registered, and included a question-and-answer period at the end, with the chat open throughout.

"Vice Provost Matthew Rascoff wanted to break open that notion of 'rarified air' and give everyone access to the knowledge leaders in academic innovation," Lisa Anderson recalls. She helped launch the series as SDE's associate director of educational partnerships and has since moved on to direct the Office of Online Learning at the University of Illinois Urbana-Champaign. "It was exciting to think about Academic Innovation for the Public Good not just as an event series, but as a platform for fostering ongoing dialogue and connection. It became a way to bring together voices across institutions, disciplines, and perspectives." It also provided a new channel for authors to promote their scholarly books, taking the place of in-person book tours, which many publishers no longer have the resources to support.

In its first year, 2022, the series revolved around the formation of the modern research university, its relationship to civil society, and proactive ways to address systemic racism and inequity. Events in 2023 were linked by themes of belonging — with an emphasis on supporting students — and knowledge sharing. In 2024 and 2025, the discussion turned to making sense of the new technological landscape,

from evaluating sources of information to the future of learning and pedagogy in a world of agentic artificial intelligence (the last two events of the series were organized by the group Harvesting Academic Innovation for Learners, a network of higher education leaders of which SDE was a member). Recordings can be found in the Academic Innovation for the Public Good playlist on YouTube.

Throughout, SDE aimed for the series to make academic expertise accessible and inviting, and we were thrilled that responses to our post-event survey affirmed that approach. Here's some of what attendees had to say:

- "The conversation was SO rich and insightful. Sometimes it's hard to stay focused on webinars, but this one was awesome and super relevant and thought-provoking."
- "I always enjoy the conversational feel of these events and the way in which questions are welcomed."
- "The presenter was very knowledgeable about the subject and spoke in layperson language. I like when they add current trends of what is happening in our space to their expertise topic."

Our guests were generous. They brought seriousness and warmth to these occasions. The moderators prepared conscientiously; the authors laid out their principal arguments, engaged with challenging questions, and showed spontaneity and agility in the moment. As a member of the staff facilitating the series, I loved the element of unpredictability as each conversation unfolded, and at the same time, I knew I could rely on the conversation to be deeply edifying. After the events, I frequently received emails from registrants who had not been able to attend, asking for the recording (which I was happy to be able to assure them would be posted on YouTube and our website and distributed through our newsletter). We were not seeing our audience's faces, but we provided a predictable cadence and structure in which unique encounters could happen and collective knowledge could grow.

In-person convenings with diverse colleagues

Additionally, Stanford Digital Education hosted and co-sponsored a number of in-person gatherings to advance conversations about innovations in education.

March 2023: the German delegation. In concert with the Robert Bosch Foundation, SDE hosted a delegation of senior philanthropy and government leaders from Germany. In addition to officials of the Bosch Foundation, guests included leaders of the Deutsche Telekom and Siemens foundations, as well as the secretary general of the Kultusministerkonferenz and a Boston College professor of change in education. Group members sought to understand what skills the educational systems of the U.S. and Germany should prioritize, even as they agreed on the enduring value of fostering communication, collaboration, critical thinking, and creativity. In visits to the Stanford d.school and Graduate School of Education, the California Education Learning Lab, and Silicon Valley firms, the delegation heard from local experts on artificial intelligence, learning science, ed tech, and school design.

May 2023: Empowering Educators via Language Technology. SDE helped host a conference on natural language processing (NLP) and education organized by Dora Demszky, assistant professor at Stanford Graduate School of Education, with colleagues from other universities. The conference, "Empowering Educators via Language Technology," brought academic researchers together with entrepreneurs and potential funders, seeding the NLP research-practice-industry ecosystem with dialogue about values as well as potential areas of collaboration. Professor Demszky explained, "We wanted to seize this opportunity to build a community focused on the most important question we all care about:

how do we leverage language technology to empower all teachers, and in turn, facilitate access to high-quality, equitable education for all?" One tangible result of the conference was a white paper that laid out guiding principles for actors at the intersection of natural language processing and education — principles that included beginning with equity, centering teacher needs, promoting high-quality instruction, and building and informing educational theory.

March 2024: Digital Learning Summit. SDE hosted the Digital Learning Summit for leaders and staff of online learning units at private colleges, Ivy League universities, and state flagships across the country. For two packed days, the 80 attendees shared pedagogical frameworks and logistical wisdom while exploring ambitious visions for the future of digital education. They discussed issues ranging from affordability, student recruitment, and creating community in digital classrooms to faculty empowerment, chatbots, and new models for delivering course credit.

"We united innovators in online learning who might not otherwise intersect," recalls Associate Vice Provost Priscilla Fiden, who led the planning and design of the summit with the goal of fostering connection and collaboration. "The program emphasized cross-institutional dialogue, recognizing that institutions are advancing digital education in diverse and sometimes unexpected ways." She is pleased that participants wanted to keep the conversations going, brainstorming at the summit about the best channels in which to do so.

September 2024: Pathways workshop with high school educators. SDE brought a small group of high school teachers and administrators to the Stanford campus for a pathways workshop, which focused on strengthening the pathway from high school to college for students in under-resourced schools. Many were on the Stanford campus for the first time, but they had already collaborated with SDE and with Stanford teaching fellows to implement credit-bearing Stanford courses in their schools.

We knew we needed to be able to incorporate high school educators' perspectives, experiences, and knowledge for our dual-enrollment courses to work most productively. Meeting face to face and spending time brainstorming and creating together was invaluable. Hybrid courses such as the ones SDE has provided to high schools offer the promise of scalability, but they also require ongoing coordination among multiple entities. Hosting high school educators in-person was a commitment to an ongoing relationship, a solid basis on which to expand and grow.

Closing Remarks

Michael Taubman, an SDE fellow, has a deep understanding of what it takes to bring Stanford courses to Title I high schools. As a teacher for more than 20 years in charter high schools in Brooklyn and Newark, N.J., he is well aware of the challenges students and educators face in trying to deliver ambitious programs to under-resourced communities. In turn, as a devoted Stanford alum who graduated in 2004 with a BA in English and in 2005 with an MA in Teaching from the STEP program, he knows firsthand how transformative a Stanford education can be. Taubman helped SDE to bridge these two worlds, drawing on his undergraduate experience at Stanford in the Structured Liberal Education program to co-create the SDE course, Searching Together for the Common Good, with Stanford Lecturer Greg Watkins. (Taubman co-taught the course in his classrooms from 2022-25.) While at SDE, Taubman also contributed to developing lessons about AI for high schools. Beyond these individual projects, SDE relied on him for advice on strengthening relationships with Title I high schools and on supporting high school teachers involved in its courses. In the following note, Taubman shares his view of the legacy of SDE's four years.

I first connected with the Stanford Digital Education team in the fall of 2022 in a fitting way: on a cell-phone video call, from 3,000 miles away, having taken my Covid-era mask off for the day as I walked through leaf-strewn Brooklyn on my way home from school.

I left that initial conversation excited about the possibilities, like many educators around the country who connected with SDE from 2021 through 2025. And as happened to many educators, the actual experiences SDE made available to my students exceeded my expectations.

In the United States during SDE's four years, ideology became the driver for many social initiatives. Higher education has been swept up in these storms. It is possible to view SDE in this context, as perhaps both the product and the victim of this turmoil. But I think that misses a powerful truth. The opportunities that SDE provided can transcend political debates. They can inspire students, regardless of whether they live in a red or blue state, to have a love for learning and a confidence in their abilities to do so.

In the time I was fortunate enough to serve as an SDE fellow, I saw firsthand how the impact this initiative had on my classroom went so much deeper than I had anticipated. Although I value well-researched data to assess a program's efficacy, other types of evidence must be considered. Here are some moments that stand out from my own teaching of SDE material:

In my first SDE collaboration, at the end of our moral philosophy course *Searching Together for the Common Good*, my student Kayla reflected on reading such thinkers as Confucius and Aristotle while earning Stanford credit in the process: "To know I did this, and I went through it, and I rocked out – it feels amazing."

The next year when I ran the same course, I had a student who was evicted from her home by her family and had to finish high school living at a friend's house. On the final day of the class that young woman happened to make the last comment of the course, which left everyone — her classmates and the Stanford instructor and Stanford undergraduates who had joined the discussion via Zoom — all nodding in thoughtful agreement. The student then turned to her friend, smiling for what felt like the first time in days, and said, "I told you — I'm a philosopher."

The following year, when I piloted a new SDE AI literacy curriculum, my student Daniel used a custom chatbot to explore AI's role in his future psychology career and realized there are limits to AI's ability to read people in conversation. "That's where I come into play," he told me.

I also saw the impact SDE had on schools and classrooms all around the country:

In Iowa, after my helping with an SDE-led professional development workshop, one powerhouse teacher worked with her students to take our moral philosophy course to new heights via strategic conversation structures and carefully built classroom relationships.

With coaching from the SDE team, a first-year teacher in a school outside of Buffalo succeeded by the end of the spring 2025 semester to get students to overcome their shyness, enabling them to present interview projects related to AI and their community not only to their peers but also to invited guests on Zoom.

SDE brought teachers and administrators from districts in Kansas, New York, Tennessee, and California to the Stanford campus for a workshop that identified steps the participants and their schools could take to increase enrollment in Stanford and other dual enrollment courses.

Those transformative moments didn't happen by accident. They were the product of dedicated teachers and passionate students, and they were also the result of all the work the SDE team put in behind the scenes. SDE's effort stayed laser-focused on ensuring that students were personally and meaningfully engaged in the coursework and that digital tools helped to strengthen teacher-student relationships and build learning communities.

The SDE team's collective expertise and strategic collaboration helped it achieve impacts that belied its small size. Over the years I was on calls that included a project manager, an AI researcher, a philosophy scholar, a communication professional, a fellow educator, and a vision-setting vice provost. On those calls, everyone pooled their experience and insights into a unified effort on behalf of teachers and students far past the end of Palm Drive.

This was a group that punched above its weight. And in doing so, as this report shows, it set an example that similar teams can now follow.

When I was doing those first calls with the SDE team, the trees I was walking beneath were letting fall seeds as well as leaves. Like all educational efforts, SDE was partly an exercise in planting seeds.

This report has gathered many of those seeds together, in the hopes that these ideas and efforts will bear fruit again in the future. There are more Kaylas and Daniels out there who will benefit if they do.

Appendices

Appendix A

SDE Team Members

Khaulat Abdulhakeem, SDE Graduate Student Fellow
Michael Acedo, Assistant Director of Project Innovation and Technology
Debby Angus-Weberski, Administrative Associate
Cynthia Berhtram, Director of Project Strategy and Operations
Erik Brown, Associate Creative Director
Priscilla Fiden, Associate Vice Provost and Chief of Staff
Paloma Gutierrez, Program Support Specialist
Jonathan Rabinovitz, Director of Communications
Matthew Rascoff, Vice Provost for Digital Education
Jenny Robinson, Digital Community and Social Media Specialist
Annie Sadler, Assistant Director of Project Evaluation and Research
Parth Sarin, SDE Graduate Student Fellow
Michael Taubman, Stanford Digital Education Fellow

Appendix B

Playbook: Running a High School Course with National Education Opportunity Network (NEON)

By Stanford Digital Education, Oct. 6, 2025

This playbook provides a comprehensive overview of how Stanford Digital Education offered Stanford courses to high school students in partnership with the National Education Opportunity Network, known as the National Education Equity Lab when this document was published in fall 2025. The playbook presents a record of the steps SDE took to prepare and run courses, certain best practices, and lessons learned from prior collaborations.

The report is not intended to be a strict prescription for how Stanford or another university could offer NEON courses in the future, but rather to be read as a starting point for the next iteration of this work. There are many ways to streamline, reorient, and strengthen this program. This playbook should allow Stanford educators to make a fresh assessment of what to continue and what to leave behind. The goal is to lay the foundation for the next story in a collaboration between NEON and a higher education partner.

URL:
https://digitaleducation.stanford.edu/sites/g/files/sbiybj22191/files/media/file/playbook-running-a-high-school-course-with-the-national-education-opportunity-network_final-11-20-2025_tagged.pdf

Appendix C

Select Media Stories on SDE and Its Work

Newark students learn the basics of AI as they weigh its use in their future careers, Chalkbeat, Jessie Gómez, May 6, 2025

3 Questions on 'Digital Education for Access and Equity,' Inside Higher Ed, Joshua Kim, Maggie Debelius, and Edward J. Maloney, Feb. 20, 2025

Colleges reinstating the ACT/SAT should add a program like this too, Forbes, Michael Nietzel, May 23, 2024

Topeka High students' critical thinking draws visit from Stanford University professor, Topeka Capital-Journal, Stacey Saldanha-Olson, May 15, 2024

Inside the first-of-its-kind computer science class Antioch High offers with Stanford, Nashville Tennessean, Rachel Wegner, Dec. 11, 2023

Colleges must recruit scholars, Wall Street Journal, Daniel Pianko and Matthew Rascoff, July 14, 2023

South Valley high schoolers get a taste of Stanford University, Albuquerque Journal, Esteban Candelaria, May 3, 2023

Colorado Springs high school students getting free Stanford credits — entering a new frontier, Colorado Springs Gazette, O'Dell Isaac, April 27, 2023

These high school students were afraid to dream bigger. A Stanford class is changing that, Los Angeles Times, Alejandra Reyes-Velarde, Nov. 25, 2022

How COVID spurred online education innovation and empathy, Inside Higher Ed, Susan D'Agostino, Oct. 19, 2022

What I learned teaching a Stanford computer science class to high school students, Stanford Daily, Brian Sha, April 10, 2022

Stanford joins group offering classes to disadvantaged high-school students, Wall Street Journal, Lee Hawkins, Oct. 24, 2021

Appendix D

Select Videos About SDE

Academic Innovation for the Public Good conversation series

'An amazing opportunity for us to reach beyond campus': Stanford brings CS 105 to high schools

'Do I know my history?' Los Angeles teens study Malcolm X and Martin Luther King Jr. with Stanford professor

Easing the jump from high school to college: How teaching fellows support a Stanford course

'It proves I can do anything I put my mind to': Niagara Falls students excel in Stanford computer science course

In a high school in Brooklyn, high school students earn Stanford credits

What a moral philosophy course offers high school students, Michael Taubman '04, Structured Liberal Education 50th anniversary

Tasheena Thompson '26: Ready to serve

'I needed a challenge': Frida's story

Why I'm teaching writing online to students in high schools in low-income communities

Teaching computer science in low-income high schools

Malcolm and Martin, a dual credit course for high school students

Stanford pandemic education report: Interview with the authors

Appendix E

Lessons from Teaching and Learning at Stanford During the Pandemic: A Review, 2020-21

Stanford Digital Education undertook this review to help the university to learn lessons from its experience with “emergency remote instruction,” beginning in March 2020. The report uses that term to describe what occurred in the first phase of the COVID-19 pandemic rather than “online education,” because the latter involves careful planning and mindful design. Nevertheless, emergency remote instruction succeeded in providing academic continuity, and some of the innovations from that time will be of great benefit to education at Stanford in the future.

While making no claim to be comprehensive, this review, published in October 2022, covers how the Stanford community responded to the pandemic over a 22-month period, from March 2020 through December 2021. Although we seek to highlight potential advances made during this period, our report recognizes the difficulties that the Stanford community suffered. Existing inequities were exacerbated, and the mental health of many took a turn for the worse.

The authors’ observations are grouped thematically in four chapters and a conclusion:

* The first chapter examines steps taken at Stanford to adapt teaching and learning to the virtual world.

* The second chapter details the roles, communities, practices, and resources established to meet the challenges of remote education.

* The third chapter discusses how the deluge of information — the infodemic accompanying the move away from campus — led to new professional networks that transcended organizational silos.

* The fourth chapter documents how remote learning made more apparent students’ emotional difficulties and aggravated existing educational disparities, and it tells how efforts arose to address student well-being, with more of a focus on the whole student.

The closing chapter summarizes the lessons learned and listed questions for Stanford to consider as it returned to campus-based learning.

URL: https://purl.stanford.edu/yh717bh0732

Appendix F

Empowering Community Colleges: A Playbook for Integrating Google's Data Analytics Certificate into Curriculum

This publication is intended to help community college faculty to provide their students with opportunities to obtain the certificate as part of their community college education. While it focuses on Google's data analytics certificate, its tips can also be applied to adopting curricula from other career certificate programs.

Stanford Digital Education led the project to produce the playbook, in collaboration with the Bay Area Community College Consortium and Google. The effort was intended to help position community college students obtain jobs in the tech sector.

URL:
https://digitaleducation.stanford.edu/sites/g/files/sbiybj22191/files/media/file/playbook-for-empowering-community-colleges-with-google-certificfates.pdf

Editor’s Note

From 2021-25, Stanford Digital Education (SDE) attracted a staff and colleagues with a wealth of experience in higher education. In this report a dozen of them explain what they tried to accomplish, detailing an aspect of their SDE work and the impact it had on learners and on Stanford.

While two sections of the report (“SDE Projects and Their Impacts” and “Overview of SDE Program for Title I High Schools”) consist of information published on SDE’s website, the rest of the report — the introduction, reflections, and closing statement — are opportunities for the writers to share their experiences and perspectives.

The report does not represent the views of Stanford University.