

OUR MISSION

The mission of the Center for Empowered Learning and Development with Technology (CELDTech) is to conduct methodologically rigorous research on how students learn and develop with technology in schools and beyond. CELDTech draws on cutting-edge learning and developmental science to foreground students' histories, cultural assets and needs. We are committed to research that promotes equity, including partnering with schools to advance digital learning and computer science education that is meaningful, challenging and culturally responsive. Ultimately, our goal is to help educators leverage students' unique strengths in the design of dynamic learning environments that empower the next generation of tech innovators.



OUR WORK

Our work addresses longstanding inequities in technology and engineering literacy by bringing together interdisciplinary teams of researchers with extensive training in understanding students of color in their full humanity. Our teams also examine the systemic ways race, gender and class combine to impact student outcomes across settings.

» 1. TRANSDISCIPLINARY RESEARCH

Projects range from understanding best practices in teaching students to solve problems using technology to learning analytics or the impact of cyberbullying on academic and mental health outcomes. Our research designs cross disciplinary boundaries depending on our questions and may include hashtag ethnography, case studies, randomized controlled trials and longitudinal mixed-method online surveys.

» 2. DESIGN OF EMPOWERING DIGITAL TOOLS

We collaborate with computer and information scientists among other experts to create tools that center students of color. Two current projects are: creating an app that personalizes the development of critical media literacy for 8th-10th graders, and using augmented reality to expand K-12 computer science learning opportunities.

» 3. PROGRAMMING THAT ENHANCES STEAM IDENTITIES AND INNOVATION IN P-20 CLASSROOMS, AFTER-SCHOOL AND SUMMER PROGRAMS

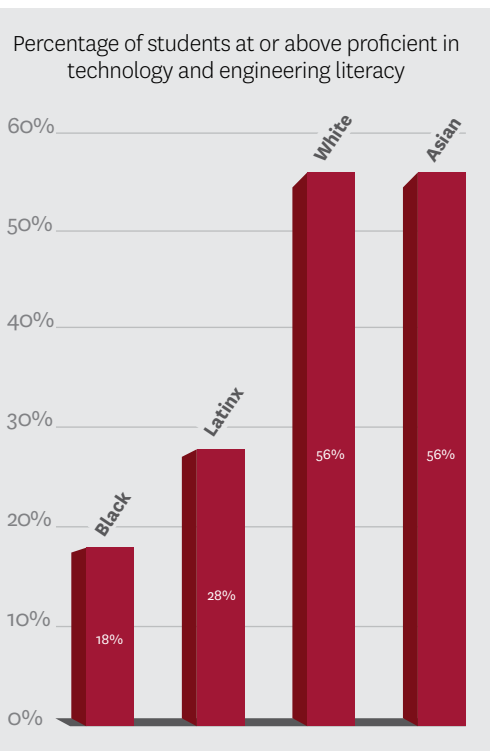
Our faculty are planning events such as hackathons in summer programs that bring together K-12 students from local communities, undergraduates, graduate students, faculty and parents to create prototypes of apps that solve community problems.

» 4. CULTURALLY RELEVANT PROFESSIONAL DEVELOPMENT FOR EDUCATORS AND RESEARCHERS

A key component of CELDTech's work is to train the next generation of educators and researchers. We will host online courses, platforms, webinars and workshops for teachers and tutors on integrating technology, critical computing and media literacy for those who serve underrepresented students. We also host an annual paper camp for graduate students and faculty who desire to do research on Black and Latinx students' digital media experiences.

WHY OUR WORK MATTERS

The fact that Black and Latinx students have fewer technology learning opportunities than their White and Asian counterparts is one of the most pressing civil rights issues of our time. Our research has shown that merely giving students access to technology or a computer science curriculum does not translate into improving student outcomes. Teachers and researchers have clear ideas about who can be a computer scientist. Their research and teaching reflect these perceptions. Our research, programming and training are geared toward ushering in a day when all students can live their full potential and participate in the tech workforce if they choose.



National Assessment of Educational Progress, 2014

USC Rossier
Center for Empowered Learning and Development with Technology

OUR FACULTY & DIRECTORS



Brendesha Tynes is an Associate Professor of Education and Psychology and Founding Director. She has a bachelor's in history and African American Studies, a master's in learning sciences from Northwestern and a PhD in human development and psychology from UCLA. Professor Tynes is a former history and global studies high school teacher and an award winning researcher with over twenty years of training and experience working with Black and Latinx populations.



Stephen Aguilar is an Assistant Professor of Educational Psychology and Associate Director. His areas of expertise include motivation and self-regulated learning as they relate to the design and implementation of educational technologies. Professor Aguilar specializes in learning analytics, data visualizations and gameful approaches to teaching and learning.

FACULTY AFFILIATES AT USC: Mary Helen Immordino-Yang, Erika Patal, Gale Sinatra (Educational Psychology); Paula Carbone, Fred Freking, Corinne Hyde (Teacher Education); Riana Anderson (Children, Youth and Families); Safiya Noble (Communication); Young Cho, Andrew Paul Goodney (Computer Science)

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LEARN MORE

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