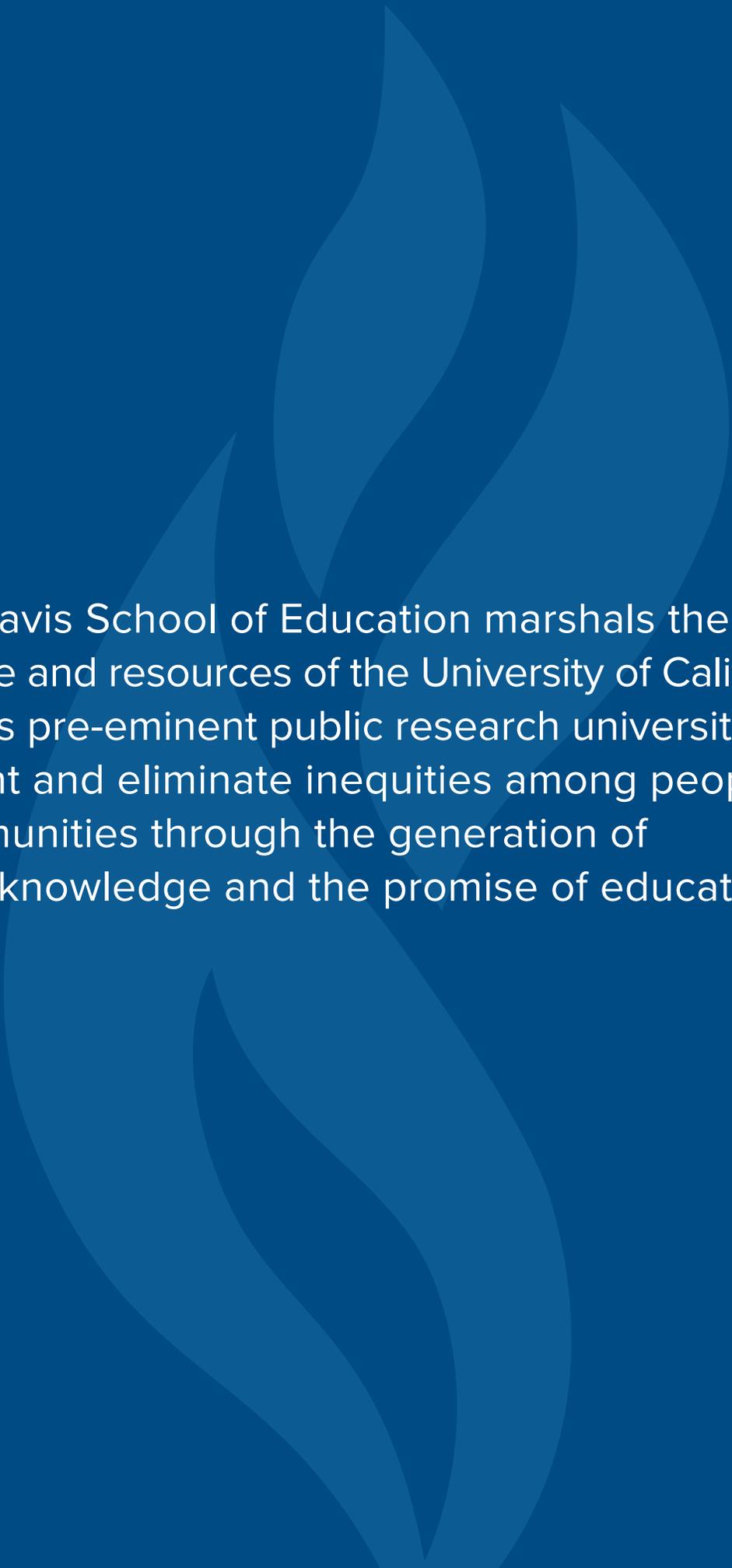




# Research and Innovation Centers Impact Report

JULY 1, 2020 – JUNE 30, 2021

A large, stylized graphic of a leaf or flame shape, rendered in a lighter shade of blue than the background, positioned behind the text.

The UC Davis School of Education marshals the knowledge and resources of the University of California, the world's pre-eminent public research university, to confront and eliminate inequities among people and communities through the generation of impactful knowledge and the promise of education.

# Introduction

The University of California, Davis School of Education is committed to advancing research that will transform education for all learners, and our nine research centers are at the forefront of those efforts. Our center researchers partner with both decision-makers and educators to improve student outcomes across all levels of our state’s education system – leading the way in addressing timely, relevant issues in education and informing policy that can shape a brighter future for all students. This report highlights our centers’ research activities during fiscal year 2020–2021.

Established by faculty with wide-ranging areas of expertise, the centers represent approximately 58 diverse externally funded projects led by faculty and staff. These projects offer rich research opportunities for graduate and undergraduate students, and for the development of partnerships with organizations such as universities, school districts and community agencies. In keeping with our mission, much of the research conducted examines issues of diversity, equity and inclusion.

These efforts are rooted in the School’s aspirational goals, adopted from the UC Davis Strategic Plan to serve as guideposts for our major activities:



**Improving Student Experiences**



**Leading Innovative Research**



**Advancing Diversity, Equity and Inclusion**



**Expanding Visibility and Growing Partnerships**



## OUR IMPACT

- > Ranked in the **top 14%** of graduate education schools in the U.S.
- > California’s **go-to source** for K–16 policy guidance
- > Houses **nine research and innovation centers** generating new knowledge that supports education policy and practice
- > Offers **one of the largest UC Davis undergraduate minors**, with 250+ students
- > Reaches **11,000 K–12 students** annually through teaching credential candidates

# Our Centers

The School of Education's nine research and innovation centers investigate critical issues in the field from pre-K to higher education, exploring how students, teachers and education leaders can best learn and grow, support each other and make lasting change in their schools and communities. Many centers also provide programming, curricula and other resources that have a direct impact on thousands of learners in California and beyond.



## Beta Lab

**Lee Martin**

The Beta Lab investigates the nature of learning that occurs during extended, youth-driven maker projects. The lab designs equitable learning environments and tools to support learning through making and the development of adaptive expertise in engineering and design. Beta Lab features a mobile maker studio to expand access to underrepresented and underserved student populations.



## California Education Lab

**Sherrie Reed, Michal Kurlaender, Paco Martorell**

The California Education Lab is a collaborative group of researchers investigating questions of education policy and practice in California, exploring how young adults are prepared for, transition into, and succeed in college, and understanding and improving persistent inequalities in educational attainment for students from different racial/ethnic and socioeconomic backgrounds. The lab's expertise includes K-12 school and teacher quality, college quality, peer effects, educational achievement gaps, school climate, facilities, finance and school choice.



## Center for Applied Policy in Education

**Christina Murdoch**

The Center for Applied Policy in Education (CAP-Ed) facilitates applied practice, research and policy implementation for state educational leaders in California through nonpartisan engagement and commitment to an education system grounded in equity. CAP-Ed's pioneering programs foster collaboration and effective inquiry with guest faculty to develop and implement research-informed strategies for student improvement, placing teaching and learning at the center of districts' work and recognizing district leadership as the cornerstone of change.



## Center for Community and Citizen Science

**Heidi Ballard, Ryan Meyer**

Through its research and programming, the Center for Community and Citizen Science helps scientists, communities, teachers and schools collaborate on science to address environmental problems as a part of civic life. The center researches ways to broaden and improve participation in science by diverse communities, use citizen science to improve scientific learning, and develop resources and tools for building citizen science programs.



## Center for Shakespeare in Diverse Classrooms

**Steven Athanases**

The Center for Shakespeare in Diverse Classrooms is a unique partnership between the UC Davis School of Education and Globe Education, Shakespeare's Globe, London. Through our teacher professional development programs and ongoing research, we seek to develop and document engaging and equitable K-12 classroom practices for the study of Shakespeare, and other complex texts, with a particular focus on drama-based pedagogy as an arts and embodied mode of engagement and learning across subjects and grades.



## Resourcing Excellence in Education

**Carlas McCauley**

The Resourcing Excellence in Education (REEd) Center is a university-based intermediary with deep ties to the TK–12 education community across the state. The center is committed to moving research findings into practice and building the capacity of education systems to improve teaching and learning. The center's goal is to reduce education inequities by testing professional growth systems for building capacity and using research–practice partnerships to spread and deepen this work in districts across the state and beyond.



## Sacramento Area Science Project

**Cynthia Passmore**

The Sacramento Area Science Project (SASP) conducts science education research and provides professional development in K-12 science instruction. SASP is an education partnership between the UC Davis, and California State University, Sacramento. SASP is a regional site of the California Science Project and provides support to teachers, schools and districts for the Next Generation Science Standards and Common Core State Standards for Science.



## Transformative Justice in Education Center

**Maisha Winn, Torry Winn**

The Transformative Justice in Education Center (TJE) is a community–university collaborative serving practitioners and researchers committed to disrupting racial inequities in education by creating restorative, humanizing, justice-seeking teaching and learning communities. TJE's focus areas are restorative and transformative justice practices, teacher education and community-centered/humanizing research methods.



## Wheelhouse: The Center for Community College Leadership and Research

**Susanna Cooper, Michal Kurlaender**

Wheelhouse strengthens leadership and practice in the California Community Colleges, the nation's largest system of education. Its Institute on Leadership delivers professional and peer learning to select annual cohorts of college presidents and chancellors, with a focus on equity, purposeful disruption and individual and organizational agility. The Center also convenes a statewide scholar network, bringing research to practice through the publication and dissemination of relevant, digestible, independent briefs for decision-maker audiences.

# Achievements 2020–2021

Throughout the School of Education, faculty and staff are engaged in cutting-edge research that includes partnerships with other campus colleagues in areas ranging from engineering to marine sciences and public health. Despite the challenges associated with the COVID-19 pandemic, the School continued to succeed in securing external support for research. As of June 30, 2021, the School’s individual and center researchers have over \$56 million in active awards, including:



> \$46 Million Federal Grants

> \$7.1 Million Private Grants

> \$100,000 State Grants

> \$3 Million Private Contracts



**Published more than 30 research briefs and papers** by centers and faculty directors, which were disseminated through scholarly publications and directly to stakeholders and policymakers

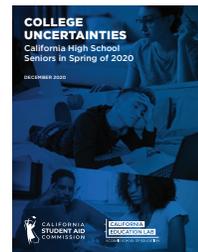
**Created podcasts** that highlight issues in education and offer a visionary lens for a hopeful future for all students – especially for historically marginalized students of color



**Created or continued partnership efforts** with over 60 organizations across the region, statewide and nationally



**Collected data** from the websites of 168 unified school districts, serving 40% of the state’s K–12 students, to better understand early responses to the global pandemic and the closure of school buildings



**Surveyed all financial aid applicants in California** about the impact of COVID-19 on their college plans and experiences, the largest such survey in the nation



**Designed, developed and hosted a series** for the youth researching the

Histories for Better Futures program (Youth in Action) that provided high school students with the experience, resources and skills to examine and research local problems in their schools and communities

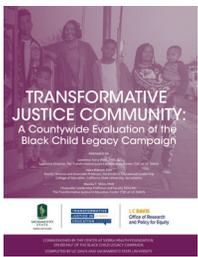
**Provided direct college readiness programs** to 7,000+ middle- and high-school students at 36 schools in 23 districts across eight counties



**Developed and piloted** a full year of Earth science integrated high school biology curriculum



**Worked** with Los Angeles Unified School District coaches and teachers **to integrate essential practices for math and English Learners**



**Published** the “Transformative Justice Community: Countywide Evaluation of the Black Child Legacy Campaign” as part of the evaluation of the Black Child Legacy Campaign at the Sierra Health Foundation

**Positioned high school students** from seven Ojai Valley schools as leaders in the Ventura River watershed monitoring project in anticipation of the removal of the Matilija Dam



**Convened 21 remote leadership development sessions** for 15 community college presidents

**Developed 100 at-home maker kits** with supplies and 15 instructional videos, so that K-12 students could do hands-on projects during remote learning



## LENDING OUR EXPERTISE

Because our research and innovation centers are led by nationally recognized experts in their respective fields, center faculty and staff represent their centers and the School of Education through service on local, state and national boards including:

- Advisory Member, Provost’s Advisory Council on Education Equity, University of California Office of the President
- Advisory Member, Governor Newsom’s Education Recovery with Equity Advisory Group
- Advisor, Inside California Education
- Affiliated Scholar, Mindset Scholars Network
- Board member Results for America Education Advisory Board
- Co-Director, Policy Analysis for California Education
- Committee Member, Research Subcommittee of the Governor’s Cradle-to-Career Data System Workgroup
- Committee Member, Statewide Student Identifier Subcommittee of the Governor’s Cradle-to-Career Data System Workgroup
- Director, James B. McClatchy Foundation
- Member, California Department of Education, College and Career Readiness Indicator Workgroup
- President, Board of Directors of the statewide nonprofit EdSource
- Research Advisory Board, Center for Advocacy and Policy, The College Board
- Special advisor, The Stuart Foundation
- Technical Advisory Group (TAG), California Department of Education, California Assessment of Student Performance and Progress



(Clockwise from left) High school students in REEd’s Upward Bound program visit the Capitol; teachers and graduate students meet during the Center for Shakespeare in Diverse Classroom’s Summer Institute; community college leaders convene for a Wheelhouse Institute.

## Challenging Inequities

The School of Education is committed to confronting and eliminating inequities among people and communities through the generation of impactful knowledge and the promise of education. As such, a central theme of the work of the research and innovation centers over the past year has been to engage in equity-oriented, humanizing research, as well as establishing relationships with schools, families and institutions across the Sacramento region.

For example, the Transformative Justice in Education (TJE) Center developed and taught a course at UC Davis’s Aggie Square designed to engage undergraduate students in the community by using out-of-school programs, art and poetry workshops, and community-based learning as the entry point. The course, entitled “Transformative Research, Teaching, and Learning: A Social-Cultural-Community Justice Education,” leveraged the center’s scholarship and existing local partnerships to facilitate opportunities for undergraduates to engage in historiographies of social movements and make the connection with present-day social, political, economic and educational issues such as redlining, gentrification, school suspensions, Black child deaths, police brutality and community trauma.

“ Our research centers play a key role in the School’s ability to build new partnerships and expand educational opportunities. Collectively, their work is innovative, timely and integral to achieving the goals of our strategic plan.”

LAUREN E. LINDSTROM, PhD, Professor and Dean

As the research and innovation centers plan for future years, issues of equity continue to surface as a major theme for our work moving forward. Proposed areas of work include:

- > **Developing anti-racism pedagogical practices** to inform student- and teacher-focused programming
- > **Collaborating with the children of migrant farmworkers** who spend time in Northern California and Mexico
- > **Developing meaningful and relevant high school science curriculum** to understand and combat climate change and environmental injustice
- > **Creating a Future Leaders Institute** for aspiring community college CEOs
- > **Offering graduate student training in community and citizen science**
- > **Addressing learning loss during the 2020–21 school year** through distance and remote instruction
- > **Evaluating the impact of COVID-19 on K–12 and college students**
- > **Studying school leadership and equity driven decisions**
- > **Working with incarcerated people to conduct science** that has local, personal meaning, while contributing to broader scientific efforts

The School of Education faculty and staff continue to be a driving force behind policy and practice improvements that respond to the significant needs of the state at every level, from pre-K to post-graduate. Collectively bringing together equity-focused work across a wide range of disciplines, the School’s research and innovation centers continue to build strong networks and forge powerful partnerships with educators and policymakers throughout the state. These efforts contribute substantially to strengthening educational practices and outcomes in California public schools and colleges, while sharpening the efficacy of the leaders across the state and nation – impacting millions of students across California.



**It’s been exciting to see the reach and impact of the School of Education research and innovation centers. The growth of the partnerships throughout the pandemic is a testament to the trusting relationships that the centers have established and speaks to the collective commitment to improving the lives of students across education.”**

CARLAS MCCAULEY, EdD  
Director of Research and Partnerships and  
Executive Director of REEd



(Left to right) Superintendents exchange ideas at a CAP-Ed leadership forum; an audience member asks a question during a Transformative Justice in Education Center speaker series presentation.

# Partnerships

Collaboration is a key element of the School of Education’s strategic plan and foundational to the work of our centers, expanding the reach and impact of our research and programming. Our center partners include other public and private universities, K-12 and community college districts, and nonprofit agencies.

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## REGIONAL

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Alice Waters Edible Schoolyard Project  
Anderson Union School District  
Center for Environmental Policy and Behavior  
Center for Regional Change (CAES)  
Coastal and Marine Sciences Institute  
Elk Grove Unified School District  
Enterprise Elementary School District  
Fairfield-Suisun Unified School District  
Folsom-Cordova Unified School District  
Gateway Unified School District  
Glenn County Office of Education  
Green Schools Coalition  
Hamilton Unified School District  
Insight Garden Program  
Lake Tahoe Community College  
Ohlone College  
Orland Joint Unified School District  
Pierce Joint Unified School District  
Red Bluff Union Elementary  
Redding Elementary School District  
Sacramento City Unified School District  
San Juan Unified School District  
Shasta Union High School District  
Scott Valley Unified School District  
Twin Rivers Unified School District  
UC Davis Center for Environmental Policy and Behavior  
UC Davis Center for Poverty Research  
UC Davis Department of Evolution and Ecology  
UC Davis Department of Pharmacology  
UC Davis Development and Alumni Relations (DEVAR)  
UC Davis Diversity, Equity and Inclusion Office  
UC Davis Feminist Research Institute  
UC Davis Imagining America  
UC Davis Men’s Basketball Team and Coaches  
UC Davis MIND Institute  
UC Davis Office of Public Scholarship and Engagement  
UC Davis Student Farm  
UC Davis Watershed Sciences Center  
UC Davis Women’s Basketball Team and Coaches  
Vallejo Unified School District  
Yreka Union High School District  
Washington Unified School District  
Williams Unified School District  
Willows Unified School District  
Winters Joint Unified School District  
Woodland Joint Unified School District

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## STATE OF CALIFORNIA

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California Academy of Sciences  
California Community Colleges Chancellor’s Office  
California Department of Education  
California Department of Fish and Wildlife  
California Naturalist Program  
California Student Aid Commission  
California State University, Bakersfield  
California State University, Sacramento  
California Ocean Protection Council  
Los Angeles Unified School District  
Policy Analysis for California Education (PACE)  
Public Policy Institute of California  
Sierra Streams Institute  
Southern California Professional Development Federation  
University of California, Berkeley California School Leadership Academy Center  
University of California, Los Angeles  
University of California, San Diego Department of Education Studies  
University of California, San Francisco  
University of California Office of the President  
University of San Francisco  
Ventura County Office of Education

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## NATIONAL AND INTERNATIONAL

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Boston Public Schools  
BSCS Science Learning  
Citizen Science Association  
Cornell Lab of Ornithology  
District Leadership Design Lab, University of Washington  
Federal University of Bahia, Salvador, Brazil  
FieldScope  
London Natural History Museum  
Los Angeles County Museum of Natural History  
Max Planck Institute of Animal Behavior, Germany  
MERITO Foundation  
National Geographic  
New Pedagogies for Deep Learning, Ontario, Canada  
North American Association for Environmental Education  
North Carolina State University  
Northwestern University  
Oxford University  
SciStarter  
University College London  
University of Michigan  
University of Vienna  
University of Washington  
Zooniverse



I believe that the School of Education's research centers provide one of the School's most important functions: The outreach of the School to the education community in a very real and practical way. The support they provide in their various areas of expertise is invaluable to the application of research to practice.”

DAVIS CAMPBELL

Chair, Dean's Board of Advisors, Executive Director (ret.), California School Boards Assoc.



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Davis, California 95616-8609

 For more information about our centers, contact Carlas McCauley, EdD, Director of Research and Partnerships/Executive Director of REEd, at [clmccauley@ucdavis.edu](mailto:clmccauley@ucdavis.edu) or go to [education.ucdavis.edu/centers](https://education.ucdavis.edu/centers).

All photo subjects in this report were following official University masking and distancing guidelines in effect at the time the photos were taken.