



Stanford Graduate School of Education



## We envision a world where all learners are prepared to thrive in a dynamic future.

Now can be a transformational time in education. We are on the cusp of imminent breakthroughs that will change our abilities to improve teaching and learning for all.

Stanford Graduate School of Education can help students, educators, policymakers, parents and institutions maximize this new era for the betterment of society. By strengthening existing programs and creating new initiatives that catalyze the distinctive scholarship of Stanford, we can make headway in areas that were once out of reach.

We know there are significant obstacles to preparing all learners for a dynamic future. There are also unsurpassed opportunities for discovery, innovation and change for the greater good.

For more than 100 years, our community has been committed to rigor, daring and relevance in research and practice. We continue to build on that legacy. We invite you to join us.

Daniel L. Schwartz,  
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PHOTO BY ROD SEARCY

### **Our Mission**

We produce groundbreaking research, model programs and exceptional leaders in education to achieve equitable, accessible and effective learning for all.

## We pursue the greatest challenges and most promising opportunities.

### TRANSFORMATIVE TECHNOLOGIES

How will technology support learning in fundamentally new ways across the lifespan?

### BETTER SYSTEMS OF EDUCATION

What policies and organizations will decrease educational disparity and increase school and student excellence?

### THE PROMISE OF EVERY CHILD

How do we help those most in need of a good education and least likely to receive one?

### RESEARCH AND PRACTICE EXCHANGE

What innovations join research and practice to enable continuous improvement?

### A WORTHWHILE EDUCATION

What are the purposes of education and how do we prepare learners for a dynamic and unknown future?

### SCIENCE OF LEARNING

How far can scientific advances take us towards highly adaptive learning?

### A DATA REVOLUTION

How will new data and methods of analysis reveal pathways to success?

### EMPOWERED EDUCATORS

How do we equip educators to create schools that best serve all students, families, and communities?

### IDENTITIES AND PARTICIPATION

How do we help ensure that people's full identities are welcomed, developed and honored in a diverse society?

Discover. Innovate.

Drive Change.



**A data revolution.** Professor Sean Reardon created the Stanford Education Data Archive to harness data to help improve educational opportunity for all children. The archive, which is publicly available, includes a range of detailed data on educational conditions, contexts and outcomes in school districts and counties across the United States. Reardon's analyses of more than 300 million test scores has yielded new knowledge about achievement, race, income and gender gaps and given school leaders and policymakers evidence to help drive their decisions.

PHOTO BY HOLLY HERNANDEZ

# Discover



Discovery reveals what was previously unknown. Discoveries pave the way for new approaches and they create new opportunities.

The science of learning is a current area of rapid discovery. Advances in research have revealed multiple brain systems that learn in different ways. Stanford Graduate School of Education is home to brain scientists, psychologists, linguists and anthropologists who are discovering how people learn at the most fundamental levels; how learning differs across individuals, cultures and content areas; and the conditions that best foster educational success.

A data revolution is also changing how and what we can discover. Never before in history have we had so much raw information available for tracking and analysis. With a new flood of data from educational technologies, administrative records, sensors, digital video, genetic records and more, we will move

beyond theories of “average” individuals and systems to create precise accounts of variation. Our researchers are leaders in working on the challenge of meaningfully connecting data from the smallest scale to the largest. With our peers across campus, we are building the infrastructure and methods to harness data’s power.

With emerging tools and science, we can finally realize the promise of all children. Of special interest are children chronically underserved by education – children who have special needs; children who come from disadvantaged or minority backgrounds; and, young children. We have launched a doctoral program on race, inequality and language in education, and a cross-campus effort on learner differences and special education. Next, we will begin a focus on early childhood.

The discoveries we make now will shape learning – and lives – for the future.



**Science of learning.** Could singing, dancing and playing peekaboo help kids learn to recover from challenging experiences? Absolutely, says Associate Professor Jelena Obradović. Through her research, Obradović has discovered that playful activities can teach kids how to manage their emotions and behaviors. “We often want kids to behave in a certain way in the context of them acting out, showing anger or whatnot,” she says. “But there are a lot of ways to learn self-regulation in a positive way.”



**The promise of every child.** An applied linguist, Professor Guadalupe Valdés explores issues of bilingualism – how to prepare teachers and how to help families. “Children are complex. In education, we’re always trying to figure out what might work and be very precise for which population,” Valdés says. “If you tell me that works for an English Language learner, I will challenge you and ask, ‘What do you mean?’ Not all are the same.”

# Innovate



Innovation turns discovery and creativity into usable knowledge. Innovations are hard to anticipate and seem to come from nowhere. In fact, successful innovation comes from a culture of daring that prizes deep understanding of needs and possibilities.

Innovations in technology can transform education. Complementing new possibilities for teaching, new sources of feedback will renew all levels of education, and better inform students, teachers and policymakers. Artificial intelligence already delivers surprisingly thoughtful feedback on student assignments. Innovations will make it easier to collect data and deliver even more useful responses. With feedback, education can finally deliver evidence-based improvement and precision teaching.

With the convincing power of evidence, we can clarify what makes education worthwhile. We have a strong tradition of humanist and international comparative investigations into the role of education as it shapes society and learner's lives. We also help determine

educational standards at home and abroad, in part by continuously re-examining the changing needs of learners and the evolution of knowledge.

Innovation includes embracing diversity and inclusion and deepening our understanding of the interplay of culture, ethnicity, ability and disparate social advantage. Learners' identities, and those that people ascribe to them, determine where they feel they belong and can participate. The internet and social media have led to greater exposure to multiple points of view, stereotypes and echo chambers of values that create special challenges for identity development and participation.

We are innovating new ways to help individuals and communities develop strong identities that invite participation across the curricula and in multiple settings.



**A worthwhile education.** Professor Sam Wineburg thinks about what students need to learn to be able to participate fully in a civil society. His studies reveal an urgent need for guidance on teaching students how to read critically and with skepticism. Wineburg has partnered with news and technology organizations to create curricula around evaluating digital media. He says in an era where it's difficult to determine fact from fiction, educators should help students be analyzers, not just absorbers, of information.



**Identities and participation.** Assistant Professor Antero Garcia studies how technology and gaming shape youth learning, literacy practices and civic identities. His research has looked at learning, behavior and literacies in games like Dungeons & Dragons. "I am interested," he says, "in thinking about the civic lessons and responsibilities that can be found in how we support and guide student thinking with technologies in schools."

## Transformative technologies.

Education researchers are collaborating with Professor Jeremy Bailenson's Virtual Human Interaction Lab to discover how VR can influence learning. For one project, Professor Roy Pea helped build a free science education tool that takes viewers to the bottom of the ocean, where they get a close look at the damage that carbon dioxide emissions have on coral reefs. Research has found that this type of simulation generates a stronger sense of empathy in users than regular videos.



PHOTO BY LINDA A. CICERO



PHOTO BY HOLLY HERNÁNDEZ

**Research and practice exchange.**

Preparing children for better understanding – and maybe even careers – in science, technology, math and engineering is the goal of Associate Professor Bryan Brown’s annual science summer camp at Stanford. For a week, Brown engages in dozens of science lessons with young students. Brown’s scholarship centers on making science accessible to all learners. He says the key is tapping into students’ current knowledge. “There’s so much wisdom in what they already know.”

# Drive Change



Lasting change depends on sustained effort and leadership. Discoveries and innovations remain inert without additional efforts to put them into practice. Many players are trying to change education, which touches nearly everyone. In the midst of such a vast and complex enterprise, universities have a special responsibility – they must honor their unique trust to serve society through research and training. We need new ways to bring the fruits of scholarship to those who can transform education.

Policy is a primary lever of change to create better systems of education – systems that reduce disparity and foster excellence. Our policy research gives school leaders and legislators timely knowledge and explanations on which to base their decisions. Developing more infrastructure and talent for conducting and communicating policy research to legislators will drive improvements to large-scale educational systems at the national and international levels.

Interacting directly with educational providers, whether school districts or industries, provides another avenue for driving change. We are pioneering a distinct form of research-practice partnership, where faculty are responsive to the research needs of providers, and providers present unique opportunities for research. This collaboration provides support for local decision making, while also offering possibilities for the production of more widely used knowledge.

Teachers and school leaders are the most direct agents of change and advocates for improvement. We must empower them with knowledge, skills and societal respect. We bring state-of-the-art research to the Stanford Teacher Education Program, and we continue providing opportunities for leadership development. We are expanding professional development programs so that teachers and educational leaders can benefit from recent discoveries and innovations that improve learning.



**Empowered educators.** Professor Jo Boaler, a leading researcher in math education, is helping students and teachers adopt positive attitudes about math. Her research center, youcubed, provides free lessons that encourage depth of understanding over speed and memorization. “So many students with amazing potential get the message that they are not good at maths,” Boaler says. Her research shows that changing that mindset boosts confidence and test scores.



**Better systems of education.** Professor Thomas S. Dee says he finds inspiration for research from current topics in public debate. His scholarship has addressed the impact of delaying kindergarten, incentive pay for teachers, immigration laws on schooling and more. After his study in San Francisco on ethnic studies curricula found benefits to such lesson plans, the district changed its policies and California’s governor signed a bill urging similar programs.



PHOTO BY STEVE CASTILLO

## Strategic Initiatives

We are launching specific initiatives to accelerate progress on education’s grand challenges. The initiatives address areas where we can make significant advancements in discovery, innovation and impact. Each initiative has the capacity to address multiple grand challenges simultaneously, and they have been fashioned to capitalize on Stanford’s unique interdisciplinary strengths.

**Transforming Education with Data**  
Lead the field of educational data science and learning analytics and create teaching programs that develop new talent.

**Learning Differences and the Future of Special Education**  
Build a premier research and training program to advance interdisciplinary scholarship that pioneers new strategies to help diverse learners.

**Developing Leaders of Education**  
Innovate and sustain model programs that prepare teachers, administrators and industry leaders to continue learning, adapting and realizing positive change.

**Identities, Diversity and Equity in Learning**  
Foster diverse learning communities and grow a cross-disciplinary specialization that advances our understanding and abilities to address major factors that perpetuate educational disparities.

**Advancing Early Childhood Learning**  
Pursue strategies to understand and improve young children’s learning and development as it influences their opportunities to thrive in school.

**Ventures for Impact**  
Generate and test new models for accelerating inquiry to impact – leveraging partnerships with institutions and educators worldwide, and technologies to extend reach.

**Sustaining Excellence**  
Continue to invest in foundational research that deepens our knowledge of education at home and abroad, and maintain model training programs that cultivate leaders in the field.

**State-of-the-Art Spaces**  
Create the space, tools and technology to support conversations and collaborations that fuel modern educational research, convening and training.



## Who we are, where we work.

**History** In 1917, the Stanford Board of Trustees elevated the University's Department of Education to a school. In its more than 100 years, Stanford Graduate School of Education has been a leader in research, theory and practice further fulfilling the University's goals of improving life for all.

**Our Community** We are a vibrant community of scholars and practitioners with expertise that is both broad and deep. We align behind a mission of improving education yet bring distinct scholarship and viewpoints to the issues. Our professional learning ensures a culture of continuous improvement and reaches millions of people through on-campus, online and in-the-field learning experiences.

**Our Impact** Through partnerships, programs, convening and research collaborations, our faculty, students and alumni study with and learn from educators across the globe. This free exchange of ideas builds an intellectual diversity that is essential to solving the biggest challenges in education.



**SF Bay Area** District partnerships with San Francisco Bay Area schools unite research and practice to shape methods and policies that maximize learning for all students.



**Native Nations** With the Zuni Pueblo in New Mexico and the Cherokee Nation in Oklahoma, Professor Teresa LaFromboise designed the American Indian Life Skills Development Curriculum.



**Brazil** Scholars at the Lemann Center develop new approaches to improve learning in Brazilian public schools, train future researchers and host discussions on timely education topics.



**Afghanistan** Associate Professor Christine Min Wotipka conducts analyses of gender representation in school textbooks. In a recent study of Afghan textbooks, she found the portrayal of women and girls varied dramatically depending on the regime in power.



**Rwanda** For his dissertation, Elliott Friedlander, MA '08, PhD '15, worked with Professor Claude Goldenberg on literacy interventions in rural Rwanda – finding that efforts are most effective when they involve home and community interventions as well as teacher training.



**China** Assistant Professor Prashant Loyalka examines inequities in education in China, Russia, India and other nations. He recently published an article on how teacher incentives boost student learning in China's primary schools.



**Japan** Students and faculty from the Learning Design and Technology (LDT) program participate in a study exchange with Keio University during which students choose and work on a design project in both countries.



**New Zealand** Professor Arnetha Ball has done research investigations into teacher education programs in the U.S., South Africa, Australia and New Zealand, paying particular attention to how to teach students from diverse backgrounds.

Let us commit to being a purposeful university,  
a courageous university, a university of unlimited potential.  
Let us be fearless.

Marc Tessier-Lavigne, President of Stanford University



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To learn more about our Strategic Vision visit: [ed.stanford.edu/vision](https://ed.stanford.edu/vision)

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