

# advancing

UCI SCHOOL OF EDUCATION

Fall 2017





IMPROVING LIVES THROUGH ADVANCING THE SCIENCE OF EDUCATION

Above: School alumnus Blaine Jones teaches Environmental and Earth Sciences at the Samueli Academy, a project-based, college preparatory high school in Santa Ana for under-served and foster youth.

## » FEATURES

4



### Advancing Through Research

Professor Mark Warschauer, director of the Digital Learning Lab at UC Irvine, oversees a range of research projects related to digital media in K-20 education, in and out of school.

26



### UCI Writing Project

Established in 1978, the UCI Writing Project hosts conferences, conducts research, and provides training for teachers and youth in developing reading, writing, and critical thinking skills.

29



### Project CRYSTAL

By engaging 4th-6th grade students in habitat preservation and restoration at Crystal Cove State Park, Project CRYSTAL promotes academic achievement while developing life-long science learners.

32



### Poverty and the Brain

Distinguished Professor Greg Duncan and his team are researching the extent to which young children's cognitive development and health are affected by increases and decreases in parental income.

## » DEPARTMENTS

2 Dean's Message

35 Class Notes

38 Giving



**Advancing**  
Fall 2017  
Volume 1, No. 1

Produced by the University of California, Irvine School of Education

**Design**  
Vince Rini Design

**Dean**  
Richard Arum

**Associate Dean**  
Elizabeth van Es

**Director of Communications**  
Nancy Christensen

**Director of Development**  
Jennifer Stameson

**Contact**  
Have a comment or suggestion?  
Address correspondence to:

UCI School of Education  
3200 Education  
Irvine, CA 92697-5500  
949-824-5118  
educadvise@uci.edu  
education.uci.edu



Richard Arum | Dean; Professor of Sociology and Education

Welcome to the inaugural issue of “Advancing” – the UCI School of Education magazine, to promote our ethos of transforming education through innovative research and cultivating the next generation of exemplary educators. This new magazine is a first step in sharing the excitement about what UCI has accomplished and where it is headed.

When I decided to leave New York University last year to become Dean at UCI's School of Education, the School was in the midst of an amazing trajectory, establishing itself as an engaged network of internationally prominent social, behavioral, cognitive, and institutional-improvement scientists working together to solve high-leverage problems in education. A quick perusal of the following pages will illustrate why my decision to join the UCI community was so easy to make.

While the school has achieved much, as you will see, it is not resting on past accomplishments. We are continuing to grow and have plans to increase systematically the size of our faculty and graduate students through 2022. Our rankings have risen from 88 ten years ago to this year being ranked a top 25 School of Education by *US News & World Report*. These developments have been made possible by the strength of our alumni community, support from university leadership, and through generous philanthropic support, which we also highlight in the pages that follow.

Over the past year, the UCI School of Education has responded to the historic challenges facing our country by renewing its commitment to serving students and the community. It is meaningful and fulfilling work. We have demonstrated a practice of ongoing assessment, reflection, and iteration around the design of our pedagogical offerings. We are strengthening collaborations with faculty outside the School, who share with us a commitment to expanding educational opportunities and equity. We are developing closer relationships with local schools, districts, and other community stakeholders. And we are beginning to build international partnerships with the best universities in China and elsewhere that we will work with to develop research collaborations that generate innovative solutions to addressing shared pedagogical challenges facing educational systems worldwide.

In the years ahead, we look forward to engaging with you and celebrating progress in advancing our shared ambitions that all students are adequately prepared to lead successful and productive lives in a democratic society.

Join us in this important endeavor.

Richard Arum, Dean  
UCI School of Education



**MISSION:** The School of Education seeks to promote educational success and achievement of diverse learners of all ages through our research, teaching, and service activities that foster learning and development in and out of school.

# Advancing through Research



► J A C Q U E L Y N N E E C C L E S

## Eccles Honored with APA Distinguished Scientific Award

The American Psychological Association (APA) has selected UCI School of Education professor Jacquelynne Eccles as the 2017 recipient of its Award for Distinguished Scientific Applications of Psychology.

Jacquelynne Eccles, Distinguished Professor of Education, has spent her career searching for answers to a deceptively simple question: *Why does anyone do anything?* This lifelong fascination with decision making and motivation has led her to become one of the leading developmental scientists of her generation. In May, the American Psychological Association recognized Eccles' significant contributions to the profession by honoring her with its 2017 Award for Distinguished Scientific Applications of Psychology.

This award, one of the "highest honors for scientific achievement by psychologists," according to the APA, is the latest in a long line of scholarly accolades Professor Eccles has garnered over the years. But to focus only on her scientific achievements, remarkable as they are, would be to overlook her contributions as a teacher, mentor, and colleague; on top of maintaining an active research agenda, Eccles has served the UCI School of Education as Associate Dean of Graduate Studies and currently is Director of the Ph.D. in Education program.

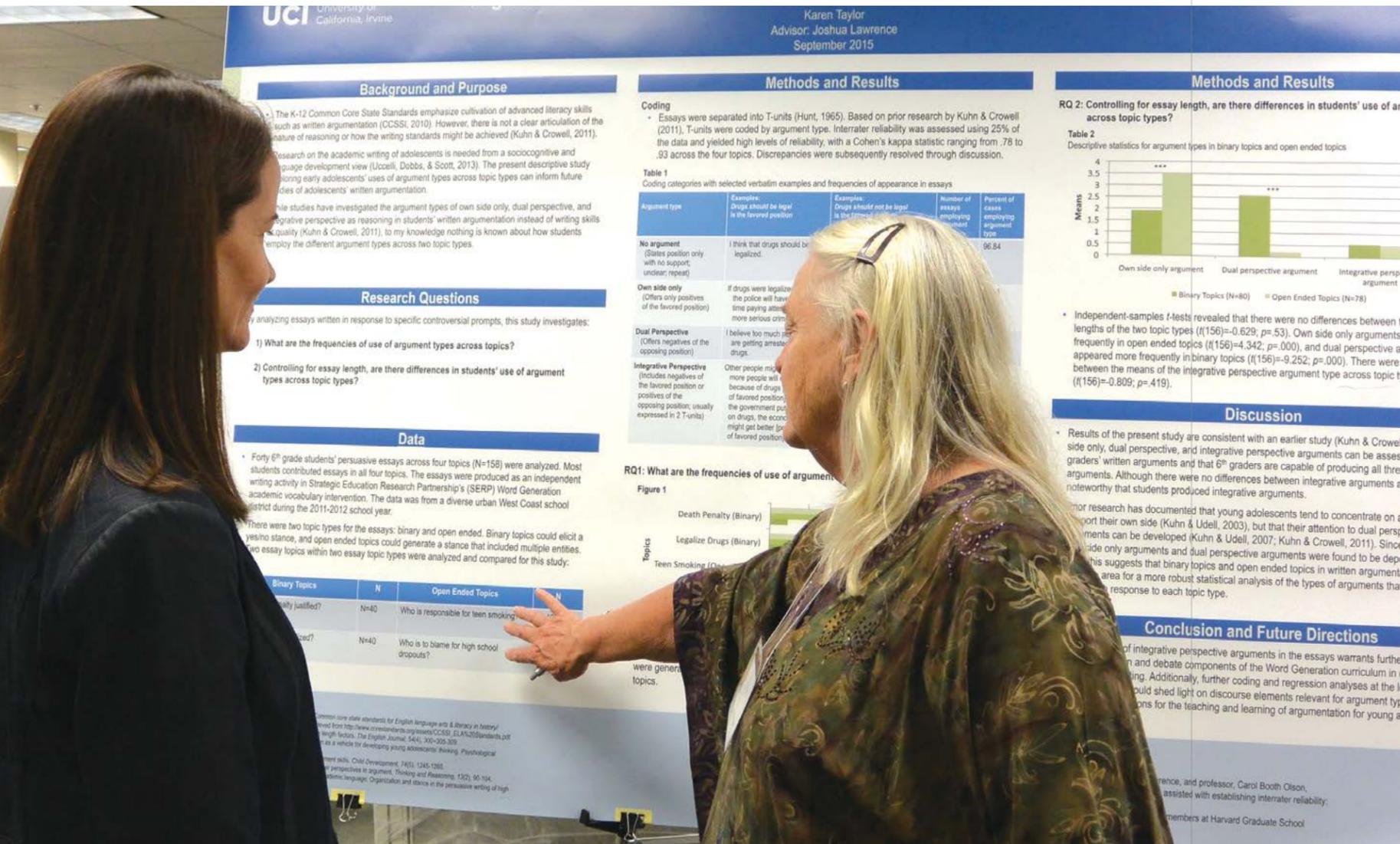
Reflecting on her decision to join UC Irvine in 2013 after a successful 33 years at the University of Michigan, Eccles has no regrets:

"I was delighted when Dean Vandell asked me whether I might be interested in coming to UCI. She was putting together an outstanding new School of

Education and had already attracted several excellent faculty members. The time was right for me professionally, and I am extremely blessed that my coming to UCI has worked out so well."

Looking to the future, Eccles plans to continue her search for insights into human motivation by representing UCI on the UC Consortium on the Developmental Science of Adolescence and serving as co-PI on numerous research grants, including an NSF-funded project entitled "Hispanics in the Pipeline: Foundations of Persistence from Middle School to STEM Careers."

*Interested in learning more about Eccles' research? Visit her faculty profile on the UCI School of Education's website ([www.education.uci.edu](http://www.education.uci.edu)).*



Professor Jacquelynne Eccles provides feedback to Ph.D. student Karen Taylor on her first-year research project during the School's annual fall poster presentation. Each September second-year doctoral students discuss their first-year research findings with faculty and the public before initiating their second-year research project.

Why does anyone do anything? This question is at the core of all my research. Throughout high school and college, I was fascinated by individual and group differences in things like career choices and leisure activity pursuits. I was particularly interested in gender differences. I wondered why so many of my female friends in high school had not gone on to challenging universities. My interest in gender differences in life choices led to the creation of the Eccles et al. Expectancy-Value Theory of Achievement Related Behavioral Choices.



▶ CAROL CONNOR

# Faculty Recruiting Initiative Brings the Best and Brightest to UC Irvine

UCI's School of Education is collaborating with the Departments of Cognitive Sciences and Sociology to build an all-star team of faculty to work on creating opportunity for children living in poverty.

Four years ago, former UCI Provost Howard Gillman launched the High Impact Hiring Plan, an ambitious faculty recruiting initiative designed to bring together interdisciplinary clusters of faculty to work on issues of critical concern to the campus and nation. Since then, a handful of clusters dealing with subjects ranging from air quality to critical theory have been established. One of the more recent ones to be formed, "Creating Opportunity for Children Living in Poverty through Effective Educational Interventions," joins scholars from the School of Education, the Department of Sociology, and the Department of Cognitive Sciences.

From the outset, the Creating Opportunity cluster has been envisioned as a multi-faceted research consortium focused on creating innovative, research-based approaches for transforming the classroom learning experiences of low-income children.

The first step in building out the cluster was to find a distinguished scholar to serve as its leader. To this end, the School of Education recruited Professor Carol Connor from the Learning Sciences Institute at Arizona State University. Connor is recognized as one of the foremost reading researchers in the nation, having been awarded millions of dollars of NSF funding to study the types and amounts of reading

instruction that are most effective for students with differing levels of knowledge and skills.

In Connor, the Creating Opportunity cluster has found an enthusiastic leader who is eager to make a difference. "The High Impact Hiring Program is an exciting opportunity to bring expertise to critical issues facing our nation by fostering collaboration among scholars from different disciplines," she explained.

Using her expertise in developmental psychology, cognitive science, and educational technology, Connor has put together a vibrant group of faculty who share her passion for creating innovative, research-based approaches for transforming the classroom learning experiences of low-income children. Following Connor, the second recruit for the cluster was Professor Young-Suk Kim from the Florida State University's Florida Center for Reading Research. Kim, an expert in language, cognition, and literacy acquisition, is a strong believer in the cluster approach: "Tackling a complex problem such as education and consequently having an impact on children's lives requires a team effort from multiple disciplines. I am thrilled to participate in this exciting, transformative initiative."

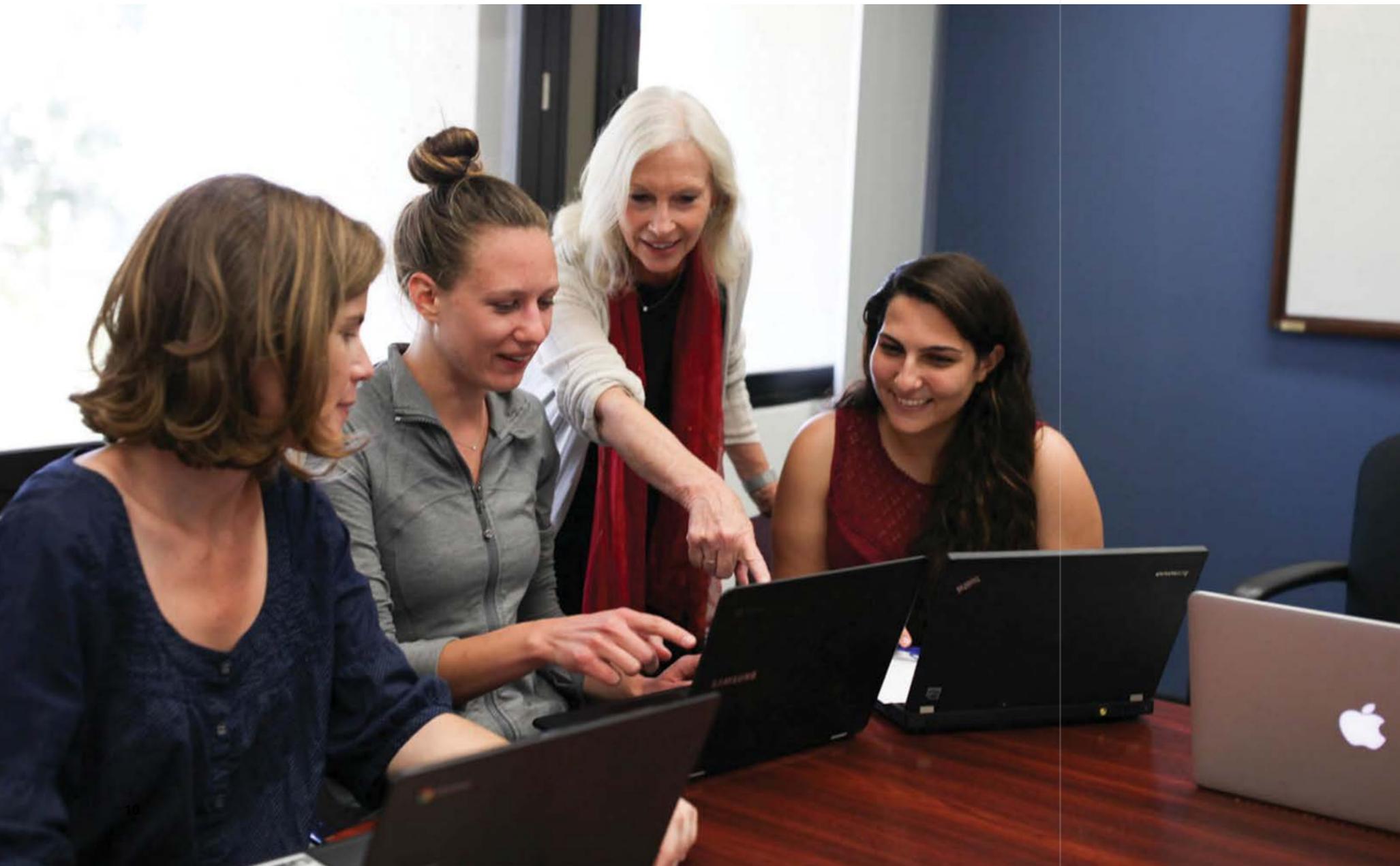
Three additional faculty joined the cluster in July. Assistant Professor of Sociology Paul Hanselman, hired from a postdoctoral position with Irvine Network on Interventions in Development; Assistant Professor of Sociology Julia Lerch, who received her Ph.D. in Education from Stanford University in 2017; and Assistant Professor of Cognitive Sciences Nadia Chernyak, hired from a postdoctoral position at Boston University. An additional School of

Education researcher is slated to be hired during the fall quarter of 2017.

The full complement of Connor's team will focus on the use of technology and other learning strategies to support gains in foundational literacy and mathematical skills in preschool and early elementary grades – the time when children's achievement gains are the largest.



Recent SoE hire  
Professor Young-Suk Kim



**The High Impact Hiring Program is an exciting opportunity to bring expertise to critical issues facing our nation by fostering collaboration among scholars from different disciplines.**

# UCI's Digital Learning Lab Explores the Future of Education

**W**hat do robots, virtual environments, and text parsing engines have in common? They are all new avenues for improving educational experiences and outcomes for diverse learners, and for rethinking educational research in the digital age.

UCI's Digital Learning Lab, founded by Professor Mark Warschauer in 2007, brings together more than 25 graduate and undergraduate students, postdoctoral scholars, and faculty to examine how English learners, people with disabilities, first-generation college students, and others use technology to learn. Below, we highlight a few of the exciting projects currently underway at the lab.

Students are expected to read and understand progressively more difficult texts as they get older. Many of these texts are complex both in their language and in their structure. Research has shown that one way to help students better understand what they read is to adjust the text itself; even changing the size or spacing of letters can help students' reading comprehension.

In this project, researchers are examining whether Visual Syntactic Text Formatting (VSTF), an innovative software tool that rearranges phrases to highlight the meaning of a piece of text, can be used to improve students' reading and writing skills.

To do this, they are conducting a randomized control trial with a group of nearly 5,000 seventh and eighth grade students. Students in both the treatment and the control conditions will be exposed to the same instructional conditions and materials, with one exception: the treatment group will read for 50 minutes each week using the VSTF software. The control group, by contrast, will read for the same amount of time and on the same kinds of devices (iPads or Chromebooks), but the text will be presented in traditional block formatting.

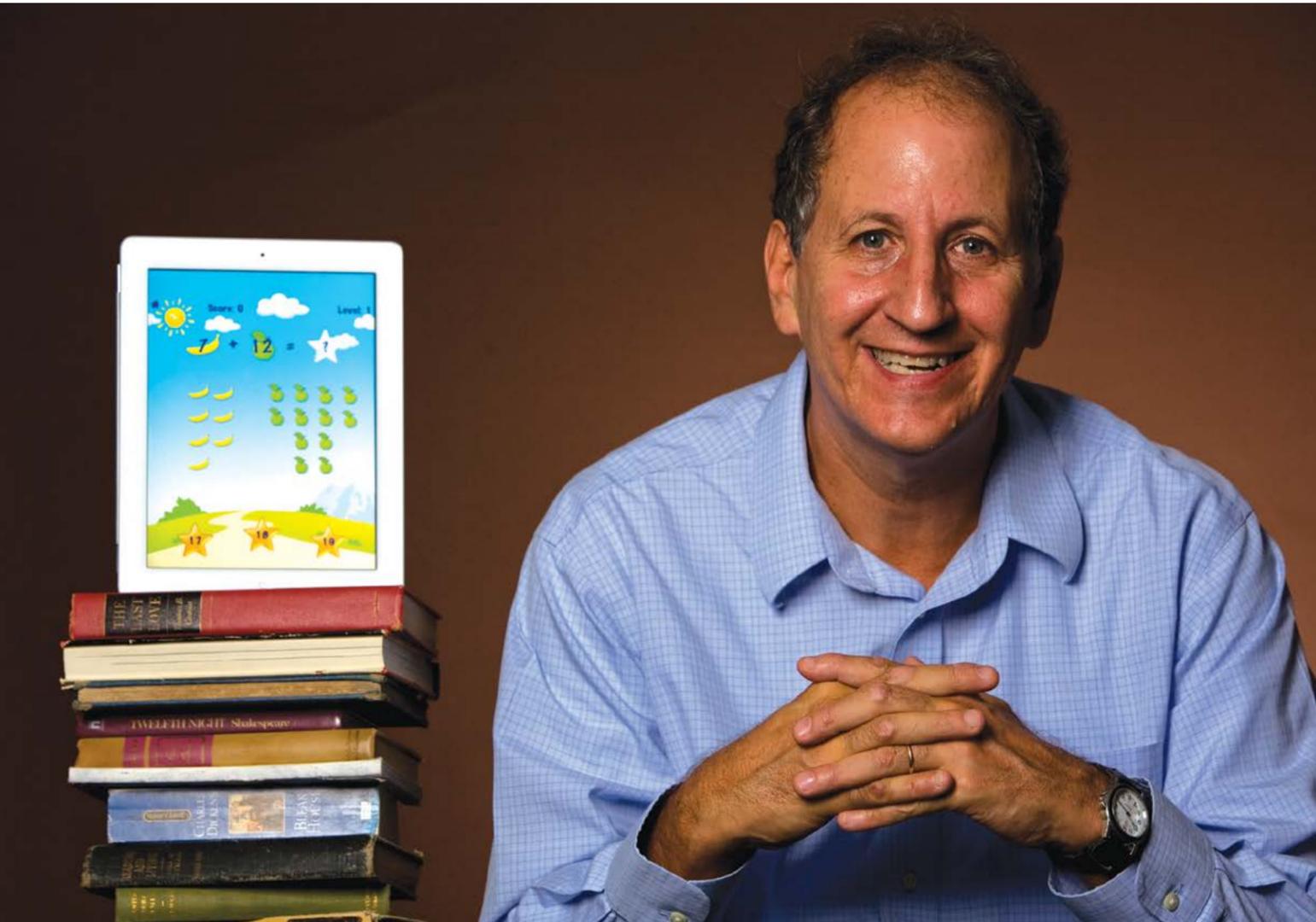
"Initial results show that students who read in VSTF show faster gains in English language arts," said Tamara Tate, a Ph.D. student researcher on the project, "with the greatest gains for students with special needs."

*Digital Scaffolding for English Language Arts is funded by a \$3.5 million grant from the U.S. Department of Education's Institute of Education Sciences (R305A150429).*

## Digital Scaffolding for English Language Arts

**Four score  
and seven years ago,  
our fathers  
brought forth  
upon this continent  
a new nation,  
conceived in liberty  
and dedicated  
to the proposition  
that all men  
are created equal.**

*VSTF software transforms complex sentences into easy-to-understand blocks of text.*



▶ MARK WARSCHAUER

## Virtual Inclusion via Telepresence Robots

Every year, large numbers of K-12 students are unable to attend class due to illness. Extended absence from the classroom has negative and overlapping educational, social, and medical consequences as students may fall behind in instruction, feel isolated from their peers, and experience difficulties in their recovery due to loneliness and depression. The recent development of *telepresence robots* provides a possible means for addressing this situation.

Telepresence robots, currently used by a few dozen homebound children across the U.S., allow for two-way audio-visual communication between the classroom and the homebound child, and can be

operated by the homebound child for movement around the class or the school. Because these robots have gone straight from production to consumer, however, little is known about the effectiveness or implications of this potentially promising technology.

Researchers at UCI's Digital Learning Lab conducted an exploratory case study on the use of telepresence robots during the fall of 2013. Armed with promising preliminary findings, their next step is to conduct a more in-depth study of the academic, social, and health experiences of children with chronic illness.

*Virtual Inclusion via Telepresence Robots is supported by funding from Children's Hospital of Orange County Hyundai Cancer Institute, the National Center for Research Resources, and the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant UL1 TR000153.*

## Investigating Virtual Learning Environments

Universities across the country are rushing to implement new forms of online and hybrid instruction, both to save money and to provide new educational opportunities for working students. Unfortunately, students typically do worse in online courses than when studying face-to-face, and low-performing students—who may lack the skills or motivation for self-paced study—typically have the least success when taking courses online.

The researchers behind UCI's Investigating Virtual Learning Environments (IVLE) are working to resolve this dilemma by digging into, and improving, online, hybrid, and blended classes. The project combines experimental comparisons of student performance in online and face-to-face instruction, data mining studies to investigate how different groups of students engage in online learning, and “nudging” experiments to help learners use more effective learning strategies online. Overall, with ten to twelve separate studies per year planned over a five-year period, IVLE represents one of the most extensive investigations of online learning ever conducted at a U.S. university.

In initial stages of the project, researchers have developed new tools for extracting and analyzing data from Canvas, which is the fastest-growing learning management system in the U.S. These tools have allowed the team to produce heat maps comparing the video-watching behavior of students who received different grades in an online Physics course, and showing that students receiving A's spread their learning activities throughout the week, whereas C/D/F students complete most of their assignments on or after the Friday deadline.

Fernando Rodriguez, a postdoctoral researcher who is helping lead IVLE, reported that the research is gathering attention from learning scholars across the country: “Faculty and graduate students from UCI and other universities have been attending our training sessions on how to access and analyze clickstream data and are starting to put that training into practice for groundbreaking research.”

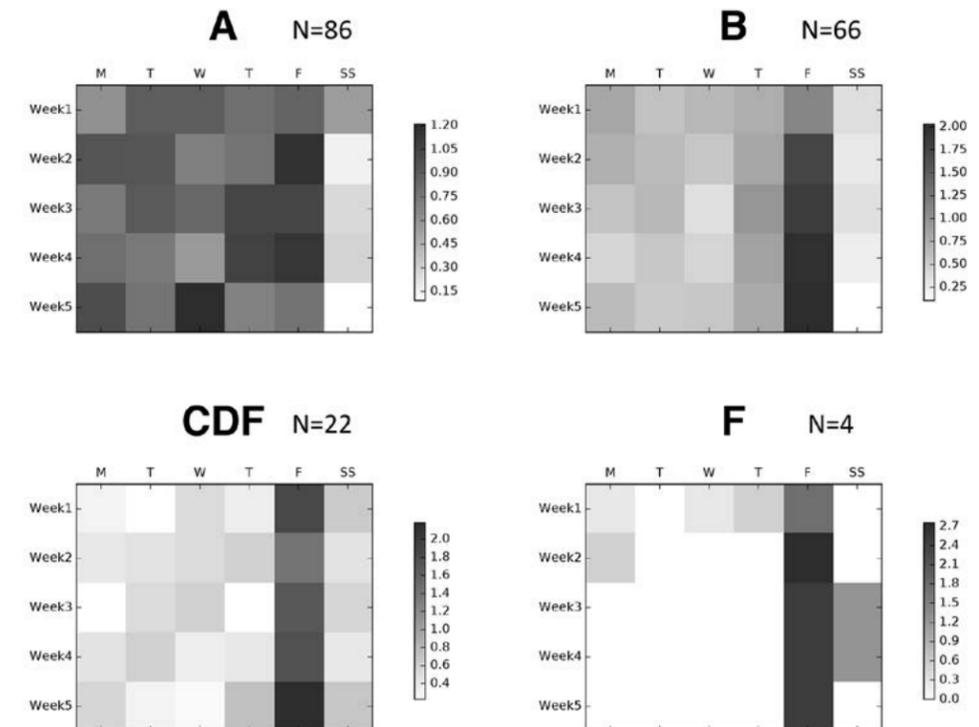
*Investigating Virtual Learning Environments is supported by a \$2.5 million grant from the National Science Foundation (1535300).*

Other studies at the Digital Learning Lab are examining the use of Google Docs in the classroom, the use of digital storytelling by children of migrant farmworkers in California, the integration of computational thinking and literacy for low-income Hispanic children in Southern California, and the use of new online resources created by the Smithsonian. A number of these projects, including a study on computer science education and a study on data mining, are conducted in partnership with UC Irvine's Bren School of Information & Computer Sciences (ICS). Looking to the future, the School of Education plans to work with faculty from ICS's Connected Learning Lab to develop a new master's program in learning design technology.

*To learn more, visit the Digital Learning Lab's website at [www.digitalllearninglab.org](http://www.digitalllearninglab.org).*



*School of Education researchers are studying how chronically ill children can use telepresence robots to connect with their teachers and classmates.*



*Researchers used data from Canvas, a learning management system, to compare the video-watching behaviors of students who received different grades in an online Physics course.”*



▶ STEPHANIE REICH

# The Future is an Open Book

## Using Baby Books to Support Young Children and Their Parents

**A**ssociate Professor Stephanie Reich researches socio-emotional development and parent-child interactions. As a scholar and mother, she knows that young children love to have books read to them. “They adore being held, delight in hearing their parents’ voices, and relish the colorful images on the pages. Often, they want to hear the same book, over and over again.”

So, she reasoned, why not use baby books as a way to promote parent-child interactions and teach parents about child development, injury prevention, and co-parenting?

With a \$2.9 million grant from the National Institute of Child Health and Human Development, Reich and her colleagues are embedding educational information into baby books designed specifically for new moms and dads. Using material researched and

recommended by the American Academy of Pediatrics and developmental experts, the research team designed a series of board books to provide low-income English and Spanish speaking parents with parenting information: how children develop from 9 to 30 months; ways for parents to work together as a team; and how to prevent injuries, support language development, teach early mathematical skills, and manage behavior.

Reich’s prior research with baby books demonstrated that embedded information can increase parents’ knowledge, influence their parenting practices, reduce preventable injuries, and promote children’s language development. Her current research will expand upon these findings while also documenting whether baby books can improve co-parenting relationships and help mothers and fathers feel more confident and less stressed about parenting.

“They adore being held, delight in hearing their parents’ voices, and relish the colorful images on the pages. Often, they want to hear the same book, over and over again.”



▶ DEBORAH LOWE VANDELL

# Beyond the Classroom

## UCI Professor Deborah Lowe Vandell Investigates the Long-Term Effects of Out-of-School Activities

**T**wenty-six years ago, in 1991, a network of researchers from across the country launched the National Institute of Child Health and Human Development's (NICHD's) Study of Early Child Care and Youth Development (SECCYD). As the name suggests, the aim of the study was to understand the effects of early child care and education on children's cognitive and social development. Over a fifteen-year period, the SECCYD research team followed a group of 1,300 children from birth through ninth grade, gathering extensive amounts of data on their early education experiences, in-school and out-of-school activities, and family life. By the time the study participants had completed ninth grade, the project had emerged as one of the most comprehensive youth development studies ever to be conducted.

One of the original researchers on the SECCYD project was Deborah Lowe Vandell, Founding Dean of UCI's School of Education (2012-2015), who first joined the UCI Department of Education in 2006. From the beginning, Vandell was excited to be part of the study, as it gave her an unparalleled opportunity to investigate the long-term effects of early child care and out-of-school activities. So when it came time to close out the project at the end of year fifteen, she wasn't ready to let go. Seeing the value in continuing to track the study participants' trajectories, Vandell applied for a grant from the Charles S. Mott Foundation to follow up with them three years later, at the end of high school.

Findings from this follow-up supported her prediction that both early child care and out-of-school

experiences would have enduring effects on student outcomes. Specifically, she found that receiving higher quality early child care predicted higher grades at the end of high school as well as admission to more selective colleges. Vandell also found enduring effects of organized out-of-school activities during elementary school on participants' math, reading, and social competencies in high school. In sum, her analyses indicated that both early care and afterschool activities were meaningful contributors to children's success at school.

In the summer of 2017, Vandell received a second grant from the Mott Foundation to follow up with the SECCYD participants once again, this time at age 26. The goal of this phase of the study will be to identify the enduring effects of both early care and organized out-of-school activities on adult outcomes, including educational attainment, earnings, occupation, family formation, physical and mental health, and civic engagement.

Concurrent with this follow-up study, Vandell's team will be compiling and synthesizing a comprehensive record of research and evaluation studies of both afterschool and summer programs to identify meaningful student outcomes in academic, social, and behavioral domains.

Throughout her career, Vandell has complemented her SECCYD research with other studies of the effects of afterschool programs, extracurricular activities, and unsupervised time on academic and social outcomes. This work has further underscored the importance of out-of-school time. As she explains, "Afterschool

and summers are now recognized as an important part of children's learning, development, and success at school. This is a big change from when I conducted my first research study of afterschool programs way back in 1983. It is exciting (and gratifying) to be at UCI where out-of-school time is central to the research, teaching, and community outreach of so many of us."

In addition to her research, Vandell has implemented programs designed to improve the quality of care offered in afterschool and summer settings. In 2007, she led the development of UCI's Certificate in Afterschool and Summer Education (CASE), an undergraduate certificate program considered an important stepping-stone for any student interested in exploring a teaching career. Vandell explains, "The Certificate in a one-of-a-kind opportunity to

take six education courses and participate in 100 hours of field work that will lead to a specialization in a field that predominantly targets the needs of over 10 million children and youth that live in low and moderate income neighborhoods."

Recognizing the critical need for afterschool and summer programs to be able to measure program quality and student outcomes, Vandell also was instrumental in the development of the Afterschool Outcome Measures Online Toolbox. The toolbox, which includes surveys and user reports, has been used since 2010 at over 1,600 afterschool and summer program sites nationwide for internal program improvement and for reporting to funders and stakeholders.

CASE: <http://case.education.uci.edu/>  
Afterschool Outcome Measures Online Toolbox: <http://www.afterschooloutcomes.org/about.html>



The hours before and after school — and during the summer months — provide opportunities for children to engage in learning, and encourage curiosity, creativity, and confidence. Dr. Vandell's ground-breaking work in documenting long-term effects of afterschool programs has informed educational policy and shaped practice that will sustain and increase the quality of programs across the U.S. That's why we have supported her work for over 10 years.

**Gwynn Hughes**, Senior Program Officer  
Charles Stewart Mott Foundation

# Looking Inward, Looking Outward: *Building Stronger Connections with the Surrounding Community*

The School of Education's new Director of Community Engagement and Student Success is strengthening the School's ties with the on-campus and off-campus community.

UCI's School of Education, like most schools of education, has a special connection to its surrounding community. Student teaching programs for pre-service teachers, professional development programs for teachers in the field, outreach programs for potential future teachers, research collaborations with local schools—none of these things would be possible without close ties between the School and the community.

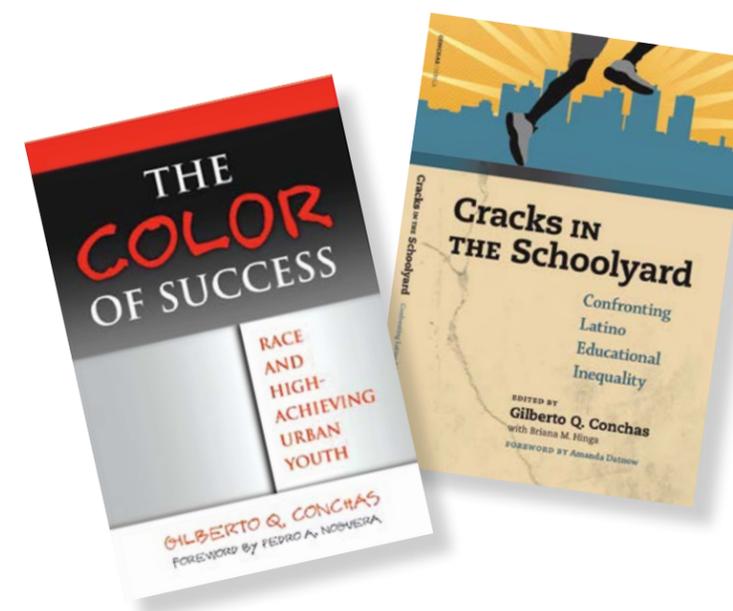
Recognizing the importance of these relationships, and hoping to build on them in meaningful ways, Dean Richard Arum has made enhancing the School's engagement with Southern California communities one of his top priorities. Recently, he asked Professor Gilberto Conchas to serve as the School

of Education's inaugural Director of Community Engagement and Student Success.

"Professor Conchas is a highly respected sociologist focused on student success, a native Southern Californian, the son of Mexican immigrants, and a firm believer in the importance of collaboration," Dean Arum said. "As Director of Community Engagement and Student Success, he draws upon his experiences as Senior Program Officer at the Bill & Melinda Gates Foundation, Executive Director of the Career Academy Support Network at UC Berkeley, and Faculty Equity and Diversity Advisor for UCI. His background is particularly relevant as UCI became the second AAU-member campus identified as a Hispanic-serving institution."



▶ GILBERTO CONCHAS



Shown here are two of the books by Gilberto Conchas – *The Color of Success: Race and High-Achieving Urban Youth*, and *Cracks in the Schoolyard—Confronting Latino Educational Inequality*.

Conchas is taking a two-pronged approach to his new role. First, he is working to foster an active community engagement dialogue on the UC Irvine campus. In so doing, he hopes to foster the exchange of ideas, leverage internal resources, and promote collective action around issues of common concern. As a first step, he is focusing on building stronger connections with UCI's ethnic studies programs and the Center for Educational Partnerships.

Second, Conchas is working to expand the School of Education's portfolio of off-campus programs. In partnership with local schools and school districts, he hopes to establish a new tutoring and mentoring program for secondary students, starting with a program at Valley High School in Santa Ana. In addition to providing support and encouragement

to the secondary students, this program will serve as a valuable service-learning opportunity for UCI students.

Conchas' commitment to engaging with the surrounding community is driven by a desire to put faculty, student, and community knowledge to work on behalf of youth and young adults:

"I am particularly committed to encouraging Orange County's diverse student populations to plan for their future college education. This is in keeping with my goal to develop collaborations that benefit all students while they are in P-12 education and facilitate their transition to a successful post-secondary experience. I consider this not just a social justice imperative, but also an economic one."

I am particularly committed to encouraging  
Orange County's diverse student populations  
to plan for their future college education.

## Meet Our New Arrivals



**Shanyce L. Campbell**

Assistant Professor Shanyce L. Campbell is joining UCI from her postdoctoral research position at the University of Michigan School of Education. Campbell studies how policies and practices influence access to quality learning opportunities for marginalized student populations. Employing both quantitative and qualitative methods, she explores three institutional factors associated with advancing opportunities to learn – instructional quality, school-community partnerships, and curriculum.



**Brandy Gatlin**

Assistant Professor Brandy Gatlin joins UCI from her postdoctoral position in the Urban Child Study Center at Georgia State University. Her research focuses on the relations between language and literacy development for children from culturally and linguistically diverse groups, especially those from lower socioeconomic status backgrounds. A former special education teacher, Gatlin has engaged in a variety of teaching and research experiences, including studies in the Multidisciplinary Learning Disabilities Center at the Florida Center for Reading Research.



**Elizabeth Peña**

Professor Elizabeth Peña joins UCI from the Moody College of Communication at the University of Texas-Austin, where she was the George Christian Centennial Professor in Communications. She is a certified Speech-Language Pathologist and a Fellow of the American Speech Language Hearing Association. Peña's research focuses on the goal of differentiating language impairment from language difference. These interrelated areas include dynamic assessment, semantic development in bilinguals, and child language impairment.



Director Carol Booth Olson, third from left, with 2016 Summer Institute Faculty

# UCI Writing Project:

**39 YEARS AND COUNTING**

Professor Carol Booth Olson's work with the UCI Writing Project exemplifies the School of Education's commitment to improving the lives of Orange County teachers and students.

The UCI Writing Project (UCIWP), established in 1978 and housed at the School of Education, has been dedicated to the improvement of teachers' and students' reading and writing skills for nearly four decades. Directed by Professor Carol Booth Olson since its inception, UCIWP conducts innovative research, organizes conferences and professional development programs for Orange County teachers, and hosts an annual summer program for area youth.

UCIWP's most recent research study—the Pathway Project—developed, piloted, and assessed the effectiveness of an intensive professional development program for secondary school teachers. The 46-hour program focuses on ways to incorporate certain kinds of cognitive strategies for reading and writing into the classroom. Ninety-five teachers from the Anaheim Union High School District participated in the pilot phase of the program, described by Olson as follows:

"In the professional development program, teachers were shown how to teach reading and writing as a process that includes pre-reading, during-reading, and post-reading activities. These activities have been shown to enhance students' abilities to summarize, make inferences, interpret, draw conclusions, evaluate, assess, revise, and reflect as they read and write about complex texts. Teachers were instructed to use a tool kit analogy and visual aids that identify the different techniques for reading comprehension and analytical writing. They were also taught to encourage their students to think of themselves as craftsmen who reach into their mental tool kit to construct meaning from, or with, words."

Olson's research found a positive correlation between participation in the cognitive strategies program and improvements in academic writing by English learners in grades seven through twelve. Students of teachers who participated in the Pathway Project scored higher on an academic writing assessment and had higher pass rates on the California High School Exit Exam than students whose teachers did not receive the training. Based on these results and other past studies, Olson has applied for an Education Innovation and Research grant from the U.S. Department of Education that, if awarded, will allow her to scale up the Pathway Project to seven other states with partners from the National Writing Project network,

The highlight of my career at UCI has been my work side-by-side with amazing, motivated classroom teachers who enthusiastically take up research-based practices, implement them in their classroom, and make a difference in the lives of their students.



which has sites in all 50 states, Washington, D.C., Puerto Rico, and the Virgin Islands.

The Pathway Project is just one example of the high-impact work that UCIWP has become known for. In addition to conducting research, UCIWP organizes conferences, workshops, and summer programs for teachers and youth from Orange County and beyond.

UCIWP's Summer Institute on the Teaching of Composition and Literature, introduced in 1978, is in many ways the centerpiece of Professor Olson's efforts to enhance the literacy instruction expertise of Orange County teachers. Over the course of its 39-year history, over 980 teachers from 90 local school districts and 14 colleges have participated in the intensive four-week, 100-hour seminar on the UC Irvine campus.

During the Summer Institute, veteran teachers participate in group presentations and writing workshops, are guided by expert consultants, and engage in summer research. The educators develop techniques for teaching listening, speaking, reading, writing, and critical thinking to their students; enhance their own abilities as writers; and subsequently impart what they have learned to other teachers by leading in-service workshops in their local schools and districts.

Looking to the future, Olson hopes to continue to improve and expand upon UCIWP's research and programming: "The highlight of my career at UCI has been my work side-by-side with amazing, motivated classroom teachers who enthusiastically take up research-based practices, implement them in their classroom, and make a difference in the lives of their students."



## UCI Writing Project's Signature Programs

Program	YEAR ESTABLISHED	PARTICIPANTS OVER TIME
▶ Summer Institute for Teachers	1978	<ul style="list-style-type: none"> <li>980 teacher trainers</li> <li>90 local school districts</li> <li>14 colleges/universities</li> </ul>
▶ Literacy Conference for Teachers	1995	<ul style="list-style-type: none"> <li>+12,000 teachers</li> </ul>
▶ Summer Youth Program	1983	<ul style="list-style-type: none"> <li>+35,000 K-12 youth</li> </ul>
▶ California Governor's Initiative	1999	<ul style="list-style-type: none"> <li>900 teachers</li> </ul>

# Training Citizen Scientists

Project CRYSTAL integrates science knowledge and systems thinking capabilities that enable youth to understand the complexity of natural systems and the role of STEM research in managing them.

**W**hen Jennifer Long joined UCI's Ph.D. in Education program in 2009, she knew she wanted to build on her prior experience with STEM education and experiential learning, gained during her time as Director of Instructional Services at Dana Point's Ocean Institute. UC Irvine's commitment to interdisciplinary research served her well to accomplish these goals. She conducted her doctoral research at Crystal Cove State Park in collaboration with UCI's Center for Environmental Biology. Her dissertation, *Developing an Understanding of Systems in the Context of Ecohydrological Citizen Science Research*, detailed how she introduced fourth and fifth grade students from El Morro Elementary School in Laguna Beach to a systems approach in analyzing the impact of water movement through natural and degraded landscapes at Crystal Cove State Park.

In 2015, Associate Professor Rossella Santagata expanded Long's pilot project with the creation of Project CRYSTAL (Cultivating and Researching Youth Systems Thinking through Authentic Learning), a partnership among UCI's School of Education, UCI's Center for Environmental Biology, the Crystal Cove Conservancy, Crystal Cove State Park, and local school districts. Project CRYSTAL is designed to bring together undergraduate teaching, the learning sciences, environmental science research, and community engagement. Through classroom activities and fieldwork at Crystal Cove State Park, Project CRYSTAL involves students in grades four through six in citizen science research focused on the water cycle and land conservation and restoration.

In 2016, children from two Santa Ana schools serving low-income, predominantly Latino students participated in the program. Two additional districts, Newport Mesa and Placentia Yorba Linda, joined the project in 2017, with more than 250 fifth graders and their teachers engaging in authentic scientific research that bridges classroom learning with field experience. Explains Santagata, "These children have



Rossella Santagata, left, and Jennifer Long, right.

important work to do as the data they will collect will inform recommendations to the State Park manager for restoring the park land."

Santagata and her colleague Assistant Professor Hosun Kang bring their expertise in STEM teaching and teacher education to the project and are involving both undergraduates and graduate students in analyzing Project CRYSTAL's learning outcomes. All partners are united by a shared belief that tomorrow's decision makers—today's youth—must build the integrated science knowledge and systems thinking capabilities that allow them to understand the complexity of natural systems and the role of STEM research in managing those systems.

Santagata believes that state parks and similar open spaces are underappreciated assets that provide substantial opportunity to advance STEM programming and youth science learning:

"The California Department of Parks and Recreation manages 280 parks. Crystal Cove State Park alone hosts over 1.5 million visitors each year. We believe it

is important to engage youth in serious consideration of issues that emerge between serving public interests and needing to preserve fragile environments and limited resources. We expect that the model we are implementing at Crystal Cove will serve as a template that can be replicated at other state parks."

*Project CRYSTAL has received support from The Nicholas Endowment, the Crystal Cove Conservancy, and UC Irvine.*



The Nicholas Endowment and UCI share a vision for STEM education and citizen science learning experiences. Project CRYSTAL is an innovative partnership for elementary schools to develop life-long science learners with a passion for sustainability.

**Daniel Stetson**, Executive Director of The Nicholas Endowment, along with Jennifer Long, Rossella Santagata, and Hosun Kang, review 5th and 6th grade students' Project CRYSTAL research presentations at Davis Magnet School in Costa Mesa.



# Poverty and the Brain

Investigating Income and the Developing Brain During the First Three Years of Life



Greg Duncan, UCI Distinguished Professor of Education

A fellow of the National Academy of Sciences, American Academy of Arts and Sciences, and American Academy of Political and Social Science, UCI Distinguished Professor of Education Greg Duncan is recognized nationally and internationally for his research on poverty, economic mobility, and early childhood development. His work on poverty and early child development, in particular, has highlighted how factors such as economic deprivation can have a damaging effect on young children's brain development, but also how certain types of policy interventions might be able to reduce or mitigate those effects.

Duncan, an economist by training, began his career at the University of Michigan, where he worked on and eventually directed the Panel Study of Income Dynamics (PSID), the longest running longitudinal household survey in the world. From there, he went on to direct the Joint Center for Poverty Research at Northwestern University and the University of Chicago. In 2008, Duncan joined the faculty at UC Irvine as a Distinguished Professor of Education.



In 2013, five years into his tenure at UCI, Duncan received the prestigious Klaus J. Jacobs Research Prize, an award given each year to an international scholar who has made outstanding scientific contributions to improve the development and living conditions of children and youth. The prize, which came with an endowment of one million Swiss Francs (the rough equivalent \$1M USD), gave Duncan the resources he needed to launch a pilot study of a larger project that would test causal connections between poverty reduction and brain development among very young children.

The pilot study produced some evidence that higher monthly income reduced household chaos and increased mother-child learning activities and child care expenditures. While Duncan viewed the results with caution because of the small sample size, the findings suggested that a larger project was feasible.

“Studies by our team and others,” Duncan noted, “have reported correlations between poverty and brain structure/function in several neural regions that support language, memory, executive function, and socioemotional skills. In our forthcoming experimental study, we will be building on these prior correlational

studies to test whether such associations are causal.” In the next phase of his research, Dr. Duncan and his team will recruit 1,000 mothers and their newborns with low socioeconomic status and income no greater than the federal poverty threshold in four ethnically and geographically diverse U.S. communities. They will be assigned to either (1) an experimental group that receives \$333 in cash payments each month (\$4,000 each year) for each of the first 40 months of the children’s lives, or (2) a control group that receives much smaller payments (\$20 per month). Waves of data collection will provide information about family functioning as well as developmentally appropriate measures of children’s cognitive and behavioral development.

“Our study,” Duncan said, “will be the first to provide definite evidence on the extent to which young children’s cognitive development and health is affected by income reductions or enhanced by income increases, or whether income itself does not matter at all. Such evidence is critical for meaningful public debate of existing and proposed programs and is expected to help inform policy proposals across a host of federal and state programs.”

“Studies by our team and others have reported correlations between poverty and brain structure/function in several neural regions that support language, memory, executive function, and socioemotional skills.”



**Ed.D. Alumnus Dr. Reginald Sample, (2009)**  
*2017 UCI Lauds & Laurels Distinguished Alumnus*

Reginald Sample has contributed more than 20 years of educational service as a teacher and administrator. As Dorsey Miller Principal, he established a medical clinic, parent support group, firefighter academy, AP computing STEAM program, and Microsoft Showcase site. He currently is LAUSD Instructional Director of Secondary Schools, District South Division.



**Ph.D. Student Veronica Newhart (2017)**  
*Public Impact Distinguished Fellow*

Selected as one of four academically exceptional students at UCI with potential to significantly improve the lives of people in California and beyond, Public Impact Fellow Veronica Newhart is researching how telepresence robots can be used in classrooms by homebound chronically ill students to maintain academic engagement and social connections with classmates and teachers.



**Master of Arts in Teaching Alumnus Joel Medina (2017)**  
*Mary Roosevelt Honor Scholar in Teaching and Learning*

M.A.T. student Joel Medina exemplifies UCI’s commitment to service. From his time in Peru - building an art center in an Amazon village, starting a non-profit for environmental education in San Roque de Cumbaza, teaching in Cuzco - to his recent activities as a M.A.T. student, GED instructor, and volunteer with Building Skills Partnership, Joel has been building connections and bridging cultures.



**Bachelor of Arts in Education Sciences Alumna Taysheona Brodie (2017)**  
*President, Theta Nu Chapter, Kappa Delta Pi International Honor Society in Education*

Taysheona Brodie completed a double major in Education Sciences and Psychology & Social Behavior. During her senior year, she served as president of Lambda Sigma Gamma Sorority, as a peer advisor for Education undergraduates, and as an Education Abroad student studying in England and France.



**CalTeach Students Martin Lopez and Snow Liu (2017)**

*Major in Physics + California Teaching Credential*

As undergraduates, Martin Lopez and Snow Liu introduced elementary students to the wonders of physics during a series of hands-on workshop assemblies they conducted throughout Orange County. Both Martin and Snow earned their STEM bachelor's degree plus their California Teaching Credential in UCI's four-year CalTeach Science and Mathematics program.



**Ph.D. Alumnus Adam Sheppard (2014)**

*Samueli Academy Student Life Coordinator & Athletic Director*

Adam Sheppard's academic and vocational interests focus on youth social development and youth involvement in out-of-school activities. As the person in charge of the Samueli Academy's work-based learning initiatives, afterschool enrichment, school-day culture building activities, and athletics department, he values the Academy's dynamic approach to schooling that sees students as co-collaborators in the design of the learning environment.



**M.A. in Ed Tech Leadership Alumnus Terry Walker (2002)**

*Superintendent, Irvine Unified School District*

Alumnus Terry Walker was named "2017 Outstanding Administrator of the Year" by the Fourth District Parent Teacher Association (PTA), Irvine Unified School District. The awards panel praised Terry for "going above and beyond in partnering with PTAs in his district to support students and provide quality programming for Irvine USD communities."



**Master of Arts in Teaching Alumna Giovanna Osornio (2017)**

*Rudy Hanley (SchoolsFirst) Scholarship Recipient*

M.A.T. student Giovanna Osornio received the 2017 Rudy Hanley Scholarship in recognition of her outstanding potential for future success as an educator. As part of her teacher preparation, Giovanna taught Algebra I to ninth grade students in the Anteatler Academy at Valley High School in Santa Ana and assisted in Geometry in the Newcomer Academy focused on providing instruction to English learners.



**Bachelor of Arts in Education Science Alumna Pauline Ho (2017)**

*2017 Keith Curry Scholarship Recipient*

Arriving in the U.S. in 2010 with few English language skills, Pauline Ho progressed to excel as a UCI undergraduate. With a double major in Education Sciences and Social Policy & Public Service, Pauline earned academic distinction as a Chancellor's Awardee for cutting-edge research, leadership, and service to UCI as a student assessment assistant, research assistant, peer mentor, and student advisor.



**Master of Arts in Teaching Alumna Devon Zangger (2017)**

*2017 Laura E. Settle Scholarship Recipient*

Devon Zangger knew that she wanted to be a teacher from a young age, growing up in a multicultural household. After working two jobs to earn her B.A. in Sociology (2014), Devon was rewarded in 2017 with the Laura E. Settle Scholarship that recognizes a student with excellent academic performance, exemplary character and citizenship, and demonstrated potential to become an outstanding teacher.



**Ph.D. Alumnus Tyler Watts (2017)**

*2017 Michael E. Martinez Prize for Outstanding Research & Service*

In awarding Tyler Watts the Michael E. Martinez Prize, the Education committee recognized that Tyler has conducted excellent research, excelled in all of his classes and collaborated with a wide group of students and faculty on an impressive list of publications. Additionally, he served as mentor in Education's DECADE program, Student Rep for Associated Doctoral Students in Education (ADSE), and statistics instructor.



**Ph.D. Alumnus Christopher Stillwell (2017)**

*2017 ADSE Service Award*

In 2017, Christopher Stillwell was honored with the UCI Celebration of Teaching award for Most Promising Future Faculty Member and was recognized as one of "30 Up and Coming" professionals by TESOL International on their 50th anniversary. In addition to his service to students and faculty members in the School of Education, Christopher has delivered workshops, provided educational consulting services, and organized symposia to address critical issues in education.



**H**aving been involved with Orange County educational initiatives for the past 22 years, I profoundly admire the faculty and graduates from UCI's School of Education not only for their achievements in the discovery and application of knowledge, but also for their determination to serve the public good. That's why we hired so many Anteater alumni to teach at the Samueli Academy!

It has been a privilege to be involved in the growth and distinction of UCI's School of Education. While much has been accomplished, the future holds great promise. In the heart of culturally diverse Orange County and widely regarded for its first-generation student body, UCI is uniquely positioned to facilitate K-12 public education in cultivating human ingenuity for all students and building the next generation of diverse innovators who fuel our economy.

Earlier this year, Dean Arum was named by *Education Week* as a top influencer in the field of education for his outstanding work in informing educational policy and practice. He is breaking down the silos that separate us as concerned citizens and bringing together community leaders, educators, researchers, and philanthropists to change the education system so that all young people see their futures filled with promise.

I invite you to join me in supporting the School of Education.

**Sandi Jackson, Chair, Dean's Leadership Council  
Co-Founder, Samueli Academy**

## Looneys Honor Aunt with a Bequest in Her Name

**A** charitable bequest by community leaders Jim and Claudia Looney will establish the Aunt Mabel Looney Endowed Fund for Teacher Education. Endowment income will be used for research and programmatic opportunities in teacher education, with particular emphasis on early literacy. This new endowment creates tremendous opportunity to translate research into illustrations of best practices for teachers, administrators and parents.

Aunt Mabel taught first grade in the Buena Park school district for over 45 years and never missed a day! There is now a school named in her honor in Buena Park. The new endowment permanently recognizes her dedication to developing lifelong learners and productive citizens. Through years of service, she positively impacted the lives of countless children and families in our community.



Jim and Claudia Looney



Aunt Mabel Looney

**Creating the Aunt Mabel Looney Endowed Fund for Support of Teacher Education is our way to ensure that Aunt Mabel's legacy lives on through the work of future teachers and educators.**

Jim and Claudia Looney

# Service, Integrity, and Kindness: A Shared Passion for Teachers



*Richard Arum, Dean, School of Education; Kristin Crellin, Vice President, School and Community Relations, SchoolsFirst Federal Credit Union; Bill Cheney, President and CEO, SchoolsFirst Federal Credit Union*

**F**or many years, SchoolsFirst Federal Credit Union has been a tremendous partner in supporting programs and fellowships for teachers in UCI's School of Education.

To date, the generous support of SchoolsFirst FCU has totaled more than \$200,000 in the form of job fairs, graduation events, professional development for educators, and more. SchoolsFirst FCU is committed to helping shape the next generation of teachers and is always looking for ways to support the incredibly important work they do.

"It is our privilege to support teachers and their dreams for a better future," said Bill Cheney, President/CEO of SchoolsFirst FCU. "When our former CEO Rudy Hanley was retiring after 30-plus years of service, we could think of no better place to establish an endowment honoring his commitment to the education community than the one that helped Rudy get his start."

Hanley ('72) received a math degree and teaching credential from UCI. "I am involved not only as a UCI alum, but because I believe that education is the key to a brighter future," he said. "The partnership between UCI and SchoolsFirst is a wonderful example of philanthropy leading to more opportunities for young teachers who will then go out and change our community for the better."



*Rudy Hanley  
Retired President/CEO, SchoolsFirst Federal Credit Union*



3200 Education  
Irvine, CA 92697-5500

**[education.uci.edu](http://education.uci.edu)**



# UCI School of Education At a Glance

## Community-Focused Activities

The School of Education partners with local educational institutions, afterschool programs, and community-based organizations to advance educational opportunities for pre-schoolers through adult learners. We recognize that mutually beneficial collaboration provides important services to local communities while strengthening our understanding of community interests and needs.

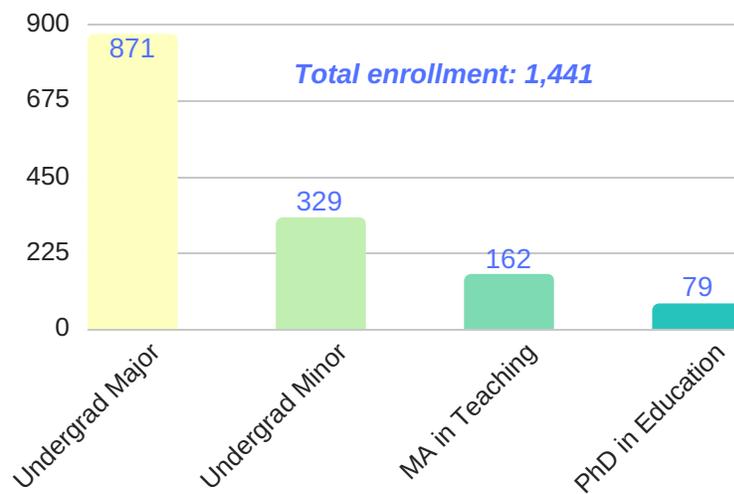
School of Education students and faculty volunteer more than **25,000** hours per year as tutors, mentors, teachers, and board members in schools, afterschool programs, and community organizations.

Each year teacher credential candidates fulfill their student teaching requirements in **55** schools in **16** districts.

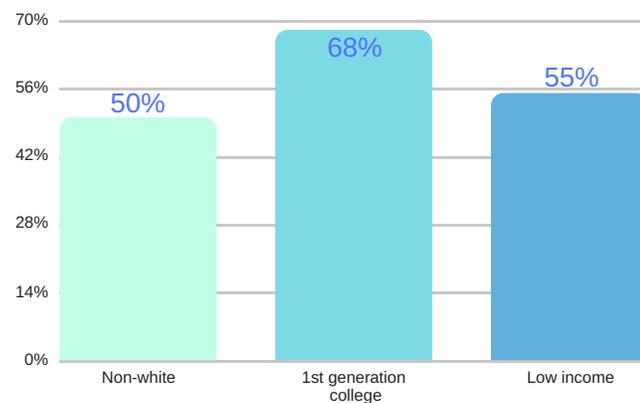
The UCI Writing Project partners with **40** school districts to improve the teaching of English Language skills.

Faculty are partnering with **52** districts, **129** schools, and **10** colleges to conduct research and share findings to improve educational opportunities for children, youth, and adults.

## 2016-2017 Enrollment



## Diversity of Student Population



## Graduate Student Placement



**K-12 Teachers**

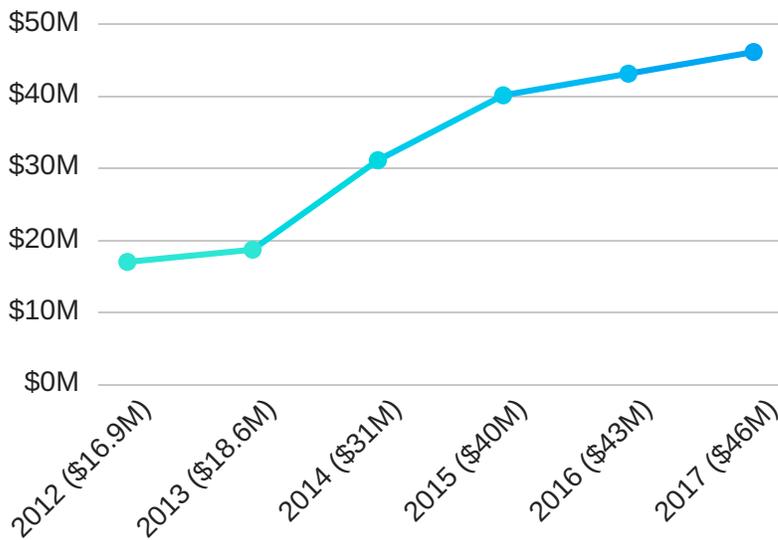


**K-12 Administrators**



**College Faculty/  
Administrators**

## Rise in funded research by year



We are ranked

**#15**

in US Public Schools  
of Education by

**U.S. News** & WORLD REPORT

**31**  
Faculty

**59**  
Instructors

2016 — 2017

## RECENT MAJOR RESEARCH GRANTS

### Carol Connor

*Optimizing Learning Opportunities for Students*  
Institute of Education Sciences  
2016 — 2021

**\$2M**

### Jacquelynne Eccles

*Hispanics in the Pipeline: Foundations of Persistence from Middle School to STEM Careers*  
National Science Foundation  
2015 — 2018

**\$1.5M**

### Susanne Jaeggi

*Working Memory Training in Older Adults*  
National Institute on Aging  
2015 — 2017

**\$2.4M**

### Carol Booth Olson

*The Pathway Project: Improving Academic Outcomes for Secondary English Learners*  
U.S. Department of Education  
2014 — 2018

**\$11M**

### Mark Warschauer

*Investigating Virtual Learning Environments*  
National Science Foundation  
2015 — 2020

**\$2.5M**

## Funding

We receive funding from federal, state, county, and city government agencies, foundations, and private industry, including

- American Educational Research Association
- Bill & Melinda Gates Foundation
- Carnegie Corporation
- David and Lucile Packard Foundation
- Google
- William T. Grant Foundation
- John Randolph Haynes Foundation
- National Institute of Child Health and Human Development
- National Institutes of Health
- National Science Foundation
- National Writing Project
- Nicholas Endowment
- Rockefeller Foundation
- SchoolsFirst Federal Credit Union
- Spencer Foundation
- U.S. Department of Education
- Samueli Foundation
- Charles Stewart Mott Foundation
- AT&T Foundation
- Smith Richardson Foundation