



Why scientific literacy is students' first step towards civic engagement



FROM THE INTERIM DEAN

PAUL D. HASTINGS

Dr. Lindstrom has already proven adept at balancing administrative and leadership roles with her work as an engaged researcher and highly productive scholar. The School of Education community has been engaged in a search for a new dean this year, and I'm pleased to announce that we have recruited Dr. Lauren Lindstrom. Her term as School of Education Dean began on June 1. She comes to UC Davis from the University of Oregon's College of Education, where she was most recently Associate Dean of Research and Faculty Development.

Dr. Lindstrom has already proven adept at balancing administrative and leadership roles with her work as an engaged researcher and highly productive scholar. From my first meetings with her, I was struck by her remarkable enthusiasm and energy and by her commitment to educational equity for marginalized populations. She is known for her scholarship in the areas of gender and disability in education, and her far-reaching impact on high school students with disabilities in Oregon through a direct-service model that has been replicated in other states and recognized internationally. The School of Education will greatly benefit from her fresh and inquisitive perspective.

Thank you for the very warm welcome and support I received this year from so many members of the School's community—faculty, staff, Board of Advisors, supporters, students and alumni. It has been a pleasure serving the School of Education during this important time of transition.

Paul Hartings

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UC DAVIS SCHOOL OF EDUCATION

MISSION

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.

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ON THE COVER

A high school student conducts lab research during the Young Scholars Program, a summer science residency offered by the School of Education. Visit education.ucdavis.edu/ysp to learn more.

AT A GLANCE

A teaching credential candidate sports a decorated mortarboard cap at the School of Education commencement ceremonies on June 14, joining more than 9,000 educators who have completed School of Education credential and degree programs.

"The students assembled here will affect more than a million people during their careers," said Interim Dean Paul Hastings in his remarks that day. "That is responsibility. But it is also impact. It is change. It is a better future."





Lisa Sullivan.

SULLIVAN WILL DIRECT TEACHER EDUCATION

Lisa Sullivan, PhD, has been named Associate Director of Teacher Education. Sullivan earned her PhD in learning and mind science at the School of Education. She also holds a teaching credential and taught in elementary schools for eight years. She has experience in special education, and conducted program evaluation as a REEd staff member.

Sullivan will provide day-to-day program management, support students and work with faculty on program development. "We always look at the needs of the field," she said, "so this coming year we'll be responding to the increased need across the state for more bilingual teachers, and teachers with special education training."

Sullivan noted that the School wants to prepare the best possible teachers through our program, "But we also want to prepare them to go into schools and be transformative leaders for change, teachers who are truly advocates for their students."

DARNEL DEGAND JOINS FACULTY

Darnel Degand, EdD will join the School of Education faculty this summer as an Assistant Professor in digital technology and educational change. Degand was born in Brooklyn, NY but spent several years as a young child in Haiti, his parents' native country, and learned English while growing up in Queens, NY. His mother is a long-time public school math teacher.

Degand earned his BS in engineering at the University of Pennsylvania, where he studied robotics and programming. "I wanted to study design and create comics and cartoons," he said, "but my parents wanted me to focus on engineering."

Degand went on to earn an MS in digital imaging and design from New York University. Upon graduation, he combined his technical and creative training and collaborated on creating digital content for children based on Afro-Caribbean folk tales. "They were interactive stories for children," Degand said. "We had print books, online versions, soundtracks and voice-overs. Our goal was education as well as entertainment."

Degand's questions about how to evaluate his work's educational value led him to Teachers College, Columbia University, where he earned his doctorate in education in instructional technology and media. Along the way, his focus shifted.

"I initially planned to conduct research on my educational products in order to improve them," he said. "But I later decided to examine my participants' current media



Darnel Degand.

experiences instead of choosing the technology or product they would use."

Degand conducted a study of African-American male high school students and social success skills. "'Social success skills' is an umbrella term for emotional intelligence, non-cognitive skills, grit and much more," he said. "All skills and traits that encourage social success are included. I study how social settings and media experiences influence their development."

During his research, Degand also directly examined several popular video games to develop a repository of strategies, techniques and understandings of ways to create culturally relevant media. "I wanted to see what it means to create media that's respectful of cultures and also pro-social," he said, "media that improves lives instead of perpetuating stereotypes."

Degand was drawn to the School of Education by its mission and programming. "I was impressed with the Language, Literacy, & Culture and the Learning & Mind Sciences courses taught at UC Davis," he said. "I was also drawn by the mission. I think it's very important to have discussions about inequities in academic settings, and it's important to have a clear vision, like the School of Education has. It's not something you can skirt around—you have to be explicit about wanting to combat inequality."

SCHOOL OF EDUCATION RANKS 36TH IN NATION

U.S. News & World Report has released its rankings for 2018, and the School of Education has jumped 15 places to a new ranking of 36 out of 265 education schools in the nation. This is the School's highest ranking to date, and is cause for celebration for our entire community—students, alumni, faculty, staff and supporters.

SOLARI EVALUATES READING STANDARDS IN HONDURAS

Professor Emily Solari is evaluating national reading standards for first through sixth grade students in Honduras as a USAID consultant. "Honduras ranks near the bottom among Latin American countries on academic achievement assessments," said Solari. "Children's scores in reading have particularly lagged. I'm evaluating their reading standards to see if they align with international evidence-based practices, and also evaluating their teacher guides, textbooks and reading materials."

Solari's recommendations for improving Honduran reading standards will impact elementary reading instruction for the entire country, since Honduras has national standards. Using research she has conducted at the Reading and Academic Development Center, she will also provide training on scientific reading development methods for USAID staff, who will in turn train Honduran teachers.

Solari has also been named a 2016-17 Chancellor's Fellow at UC Davis, a title she will hold for five



Emily Solari.

years. The Chancellor's Fellow designation is one of the most prestigious faculty honors awarded at UC Davis. It recognizes rising stars for their teaching and campus citizenship, and acknowledges that their scholarly work already puts them at the top of their fields.

COOPER TO LEAD EDSOURCE

After two years serving on the Board of Directors of statewide nonprofit EdSource, **Susanna Cooper**, Managing Director of Wheelhouse, has been elected President. EdSource engages Californians on key education challenges by providing timely, useful and accurate information to key education stakeholders and the larger public through publications such as *EdSource Today*.

NIEMEIER ELECTED TO NATIONAL ACADEMY OF ENGINEERING

Professor Deb Niemeier, who holds a joint appointment in the School of Education and the Department of Civil and Environmental Engineering, has been elected to the prestigious National Academy of Engineering, which is among the highest honors in the profession. Niemeier was recognized for "developing groundbreaking tools to characterize the impact of transportation emissions on air quality and environmental justice." Her work combines studies of vehicle emissions, air quality, transportation modeling and the impacts of air pollution.



From left, Interim Dean Paul Hastings, Janet Gutiérrez, John Rogers and Janet Rogers.

JOHN ROGERS AND THE MARY STUART ROGERS FOUNDATION SUPPORT STUDENTS

When **Janet Gutiérrez** (Cred. '17) received a scholarship from the Mary Stuart Rogers Foundation, it gave her the motivation to keep going during her demanding year as a teaching credential candidate. "My parents couldn't help me pay for college or graduate school," she said. "My scholarship helped so much—without it, I don't think I would have been in school." Gutiérrez is not alone. Nearly 150 School of Education students applied for scholarship support for the 2018-19 academic year.

John S. Rogers, President of the Mary Stuart Rogers Foundation, knows of the need for financial support and has established scholarships at several universities. Rogers served as a pilot in the Air Force for 26 years, and never expected to one day manage a charitable foundation. Upon his mother's death, his family was surprised to learn that she had established a foundation in 1985 and had been quietly but generously funding various causes ever since. Rogers established the Rogers



John Rogers and 2016-17 scholarship recipient Savannah Stender (Cred. '16).

Scholarship Program for the School of Education in 2014 as part of the foundation's education focus.

Thanks to donors like Rogers, the School of Education is able to support outstanding students who otherwise might never have been able to launch teaching careers or earn their doctorates. "I'm the first in my family to attend college," Gutiérrez said. "This scholarship helped me to succeed so I can give to others. It helped make me be a better teacher. My family and I really appreciated it."

REEd INTRODUCES SIM LAB—AND MIXED-REALITY PROFESSIONAL LEARNING

REEd has established the SIM LAB, a new program that is developing a mixed-reality platform for our partner school districts that will help educators with professional learning. The platform allows users to rehearse, practice and perfect their ability to integrate new skills into their daily routines.

The SIM LAB is using software licensed from Mursion[™]. The software uses a combination of artificial intelligence and live actors to mimic some of the most challenging interactions teachers, instructional coaches and school leaders face.

The result will be compelling and plausible simulation events, and a safe space to practice interactions such as delivering challenging instructional strategies and lessons, communicating with parents, and providing instructional feedback to struggling teachers.

One of SIM LAB's first projects will be to create a series of scenarios to help educators implement practices that support student learning. Teachers will be able to practice new strategies for student engagement with avatars, and instructional coaches or peers will provide feedback.



Interim Dean Paul Hastings, Dean Lauren Lindstrom and Founding Dean Harold Levine.

SCHOOL OF EDUCATION WARMLY WELCOMES DEAN LAUREN LINDSTROM

The School of Education celebrated the arrival of **Dean Lauren Lindstrom** with a gathering of supporters, including **Interim Dean Paul Hastings** and **Founding Dean Harold Levine**. "When the School of Education began the search for our new Dean," Hastings said in his remarks, "we were looking for a true educational leader, someone with demonstrated excellence in research, teaching and administration. We wanted to find a leader who would understand the breadth and diversity of the field of teaching across all ages and across communities, someone who would be ready to work with us on making a high-quality education accessible for all. Dr. Lindstrom is all that and more." Hastings also thanked Founding Dean Levine for being in attendance as the torch was passed to the next leader of the School of Education.

GIVE DAY RAISES AWARENESS AND FUNDS FOR STUDENTS AND RESEARCH

When UC Davis held its first Give Day over Picnic Day weekend this April, the School of Education honored teachers and raised awareness and funds for student scholarships, community services and faculty research. Over 29 hours, the School received 62 gifts, 79 percent from new donors. Their donations totalled \$15,500 in four categories: scholarships for students who want to teach STEM subjects in public schools, Guardian Teacher scholarships for former foster youth, support for the Reading and Academic Development (RAD) Center, and the Annual Fund.

The School of Education received three challenge gifts to encourage participation: **School Services of California** made a gift in support of Guardian Teachers, alumni **Tom and Nancy Patten** supported teachers in STEM, and the **Solari Team at RE/MAX Gold** made a gift in support of families receiving services at the RAD Center—the first challenge met out of 50 campus-wide. Overall, Give



Krishna Borja-Cruz (Cred. '16) in a scene from the School of Education's Give Day video honoring teachers.

Thanks to everyone who supported the School of Education's success on Give Day by sharing information on social media or making a donation. We hope you'll participate next year to increase support for students, families and faculty.

Day raised more than \$1.2 million for UC Davis programs from 3,022 gifts, far exceeding expectations.

Lifelong Learner

"I became a college student because I wanted a better life for my sons," said Dr. Linda Rose, President of Santa Ana College. "I became a president because I wanted to inspire my students and staff to be the best selves they can be. When I first stopped teaching I missed it, because I loved teaching—there's no place I'd rather be than watching a student learn something. But I've come to realize that as president I'm still an instructor in some ways. I'm in a different venue, but I'm still guiding and coaching people and seeing all the changes that can come from that."

Like many of Santa Ana's students, Rose began community college classes later in life while working full-time and raising her children. She went on to earn a doctorate, teach college English, and serve in roles including dean, department chair and chief instructional officer before becoming president of Santa Ana.

Rose is a member of the School of Education's first Wheelhouse Institute cohort. Along with other sitting and aspiring community college presidents and chancellors, she's coming to UC Davis four times per year for multi-day Wheelhouse Institutes featuring intensive professional learning and peer support. "I'm doing this because I'm a learner," she said, "and I want to be the best president I can be. I'm continually educating myself and turning what I learn into actions that can change my college for the better."

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I'm turning what I learn into actions that can change my college for the better."

PRESIDENT LINDA ROSE, SANTA ANA COLLEGE

Rose



Improving K-12 alignment with postsecondary education is a critical equity issue because it disproportionately affects students of color and those in less academically rigorous high schools."

PROFESSOR MICHAL KURLAENDER on the double and triple impact felt by students entering college identified as not ready for college level work, from her presentation "Evaluating Remediation Reforms at the California State University" at Policy Analysis for California Education's seminar for policymakers.



Participants in the first Wheelhouse Institute listen to a case study from Professor Michal Kurlaender.

WHEELHOUSE RECEIVES MULTIPLE GRANTS

Wheelhouse: The Center for Community College Leadership and Research has received two recent grants to support its leadership institutes and research. The James Irvine Foundation has provided \$200,000 to support a statewide survey and case study development, as well as the coaching component of this year's Institute on Leadership. And the Evelyn and Walter Haas Jr. Fund has provided \$100,000 to support a case study of the accreditation crisis at San Francisco City College, to be produced in partnership with the Harvard Graduate School of Education.

In addition, the College Futures Foundation has provided a \$170,000 grant to support two new research briefs by **Professors Michal Kurlaender** and **Paco Martorell** and **Postdoctoral Scholar Elizabeth Friedmann**, as well as a summer

BALLARD TO LEAD MAJOR COLLABORATIVE PROJECT

Professor Heidi Ballard and the Center for Community and Citizen Science, in partnership with the Natural History Museum, London, have secured a \$1.2 million fouryear award through a joint grant from the National Science Foundation, the Economic and Social Research Council, and the Wellcome Trust. The project, titled "How natural history museums can design citizen science research projects to maximize the learning outcomes for young people," will be led by Ballard in the U.S. and Lucy Robinson at the Natural History Museum, London in the United Kingdom. Research will be conducted by Ballard's team at UC Davis, Open University and Oxford University in the United Kingdom, and citizen science practitioners, educators and environmental scientists at the Natural History Museum, London, California Academy of Sciences, San Francisco, and the Natural History



Heidi Ballard with Advisory Board members and Project Partners for the Center's Youth-focused Community and Citizen Science Research project.

Museum of Los Angeles County. Ballard also recently received, with the Public Laboratory for Open Technology and Science, a Moore Foundation grant for \$300,000 to research Public Lab's community science model for building science literacy for civic engagement.

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Too many children in the child welfare system aren't getting the special education services they need, and the problem is worse for girls than boys."



PROFESSOR KEVIN GEE

on his research evaluating the rates at which children in the child welfare system are qualified for special education services but are not receiving them, from his presentation "Left Behind: Gaps in Special Education for Maltreated Children."

research convening bringing together scholars from UC Davis, UCLA, UC Irvine, Stanford and USC to map future research and publications under the Wheelhouse umbrella.

REEd RECEIVES \$3.2 MILLION IES GRANT

REEd senior leaders **Susan O'Hara, Joanne Bookmyer and Renee Newton** have been awarded a five-year, \$3.2 million grant from the Institute of Education Sciences. As Principal Investigator, Susan O'Hara will lead a team of researchers, including AIR staff, to test the efficacy of a REEd-developed professional growth model designed to improve academic language and literacy outcomes for English learners in upper elementary classrooms.

REEd will test the efficacy of the model through a randomized controlled trial conducted in 80 elementary schools in Southern California. Earlier this year, REED received an award from the Office of English Language Acquisition to develop and test a similar professional growth model to meet the needs of the state's youngest English learners in grades TK-2. With the current funding from IES, the REEd team will take the results of their previous research and modeling and improve outcomes for English learners from transitional kindergarten through 12th grade.

TRANSFORMATIVE JUSTICE IN EDUCATION CENTER TO HOST SYMPOSIUM

The Transformative Justice in Education (TJE) Center has been awarded a \$50,000 Spencer Research Conference Grant for "Toward a Restorative Teacher Education Focused Symposium" in Fall 2017. The symposium will convene an intergenerational community of scholars across disciplines to align and act on what it means to teach and learn in the age of mass incarceration. Attendees will engage in a dialogue about how to best prepare teachers to disrupt educational inequality through their pedagogical stances in the classroom, including mindset, curricular choices and classroom culture.



TJE Co-Directors Lawrence (Torry) Winn and Professor Maisha T. Winn.

MARTINEZ AT MICHIGAN STATE UNIVERSITY

Professor Danny Martinez presented this spring at Michigan State University on his recent publication "Imagining and leveraging a language of solidarity for/with Black and Latinx Youth in English classrooms." Martinez presented to the Department of English, Department of Writing Rhetoric and American Cultures, and Department of Teacher Education.

RUIZ PRESENTS IN SPAIN

This spring, **Lecturer/** Supervisor Nadeen Ruiz was one of two keynote speakers at the international conference "Evidence-Based Strategies to Support Bilingual Education



Nadeen Ruiz

in Spain and the U.S." at the Universidad de Salamanca, Spain. Ruiz's address included a presentation of work conducted by this year's School of Education MA students.

ABEDI TO CO-LEAD CENTER

Professor Jamal Abedi is one of six coprincipal investigators establishing a virtual Science-based Innovation in Learning Center (SILC) through a UC Office of the President Multi-Year Award. The center will address issues associated with education and health disparities with a particular emphasis on underrepresented populations, with an ultimate goal of providing all children with the best educational and health outcomes. An initial focus will be on services, advocacy, training and research that will lead to early identification and intervention of children at risk for learning challenges in English.

FEATURE

Looking Forward

LAUREN LINDSTROM, THE SCHOOL OF EDUCATION'S NEW DEAN, CONSIDERS THE ROAD AHEAD

New Dean Lauren Lindstrom was first drawn to the School of Education by its mission. "It's so clearly about social justice," she said. "The mission to eliminate educational inequities—that really spoke to me. It's an important part of what I already do, and I felt I could add to that mission. I immediately said, 'That's the job for me.'"

It was a big decision. Lindstrom had spent all of her extensive academic career at the University of Oregon's College of Education. Was UC Davis going to be a good fit for her? Any doubts she had were resolved on her first day of interviews. "I met with the search committee," she said, "and then they told me I was going to meet with Acting Chancellor Ralph Hexter next. It's very unusual to have someone at that level of leadership talk to candidates in the early stages of a recruitment. That showed me the dedication that UC Davis has to the School of Education, and that we'd have the continued support and resources we need to grow."

Chancellor Hexter's questions heartened Lindstrom even more. "He said he was very concerned about the inequities for children in California public schools and he wanted to know what I'd do about that as dean," she said. "That's the right question—not how much money I might raise, or how many more students I might bring in, even though those things are important too. That question It's very attractive to me to come into a place that is still really fresh and that has a huge horizon out there. There are such wonderful opportunities.

LAUREN LINDSTROM

told me something about the values of UC Davis, because that's what a school of education should be doing—we need to be preparing the best teachers and doing cutting edge research that makes a difference in schools."

Making the Transition

Lindstrom's most recent role at University of Oregon was Associate Dean, where she supported the College of Education's 200 faculty members. "After I stepped away from that, I was thinking that the rest of my career would be in research," she said. "But something in me said 'What's next? What will push me to grow a bit?""

Becoming Dean of the School of Education gives Lindstrom the opportunity to not just excel in her own work, but to join the leadership of UC Davis, a larger, world-class institution. "As Dean I can look at all the parts and set the tone, and I wanted the opportunity to do that," she said. "I wanted my next challenge to be to lead a school of education. This is my time to integrate everything I've learned—all the work I've done since 1990 is going to inform my tenure as dean."

The School of Education was an ideal home for the next phase of Lindstrom's career. "There are so many similarities with University of Oregon," she said. "Both are public research universities with missions to think about the common good. Both are producing research that has a broad impact on public schools."

Lindstrom was excited that the School of Education is still growing and evolving as an institution—another factor in her decision. "It's very attractive to me to come into a place that is still really fresh and that has a huge horizon out there," she said. "There are such wonderful opportunities. As the Dean, my role will be to understand all the different components and points of excellence and to see how they fit together within our larger mission."

Forecast for the Future

Those opportunities are balanced by significant challenges that the field of education is facing as a whole. "It feels like public education is a bit under siege right now with our with new federal administration," Lindstrom said. "I see a very challenging short-term situation of disinvestment at the federal level and a lack of resources at the state level. That creates a lot of uncertainty and makes it challenging to think about all the areas we need to address. This isn't the status quo in any way, shape or form."

Lindstrom is undaunted, however. There are a number of areas where she would like to see the School of Education take a leadership role. She's interested in the national need for recruitment of more teachers from underrepresented ethnic groups. She wants to see more support for children who have experienced trauma, poverty and homelessness. She wants to address bullying and harassment of children of color, immigrants and children who are LGBTQI. And she's ready to roll up her sleeves and get to work.

"We need to be at the edge of these social problems, designing effective solutions," Lindstrom said. "We're uniquely positioned to do that at the School of Education."

A WEALTH OF EXPERIENCE IN ADMINISTRATION AND RESEARCH

Lauren Lindstrom, PhD has spent her 25-year academic career at the University of Oregon, where she earned a BS in human services with a concentration in intellectual and developmental disabilities, an MS in special education with a focus on transition planning for youth with disabilities, and a PhD in educational leadership. She wrote her dissertation using case studies of young women with learning disabilities who were entering the workforce.

As a researcher, Lindstrom's areas of expertise are in autism and developmental disabilities, career and college readiness, families and poverty, special education, and transition services for youth with disabilities. Much of her work looks at the intersection of disability and other oppressed identities, such as living in poverty, sexual minority status, mental health issues, and involvement in the foster care system.

Over the last 20 years, Lindstrom has been the principal investigator, co-principal investigator or project director for 16 federal grants and state contracts totaling over \$19 million. She will continue her research while serving as dean, and brings several active research grants.

After becoming a tenured professor at the University of Oregon's College of Education in 2009, Lindstrom held multiple, far-reaching leadership positions. Most recently, as Associate Dean of Research and Faculty Development, she oversaw more than \$42 million in research grants and contracts secured by the college's 200 faculty members. She was the Director of the Center at Oregon for Research in Education, an administrative unit that supported 13 externally funded research and outreach centers focused on improving educational outcomes for children and families.

Lindstrom also directed the Western Regional Resource Center, which provided services in the field of special education to the western states and Pacific territories. Prior to that, as Associate Dean of Research and Academics, she administered research and outreach units and four of the college's academic departments.



Alexis Patterson, Candice Guy-Gaytán, Rick Pomeroy, Arthur Beauchamp, Ira Young and Heidi Ballard.

COVER STORY

From Science to Civic Action

ESTABLISHING SCIENTIFIC LITERACY IS ONLY THE FIRST STEP— EDUCATORS NEED TO HELP STUDENTS TAKE UP AND IDENTIFY WITH SCIENCE FOR SUCCESSFUL CIVIC ENGAGEMENT

In an age of unparalleled access to the wealth of human scientific knowledge, scientific literacy—knowing enough about the content and process of science to make informed life decisions—would seem to be easier to acquire than ever. Then how do we explain why so many people, including our elected representatives, reject well-established scientific theories on subjects like vaccines and climate change and the resulting public health and environmental crises? School of Education faculty, staff, alumni and students explore what science educators can do to turn the tide.

The problems we face today are partly rooted in confusion about how science advances knowledge, according to Professor Alexis Patterson, who has taught the School's foundational class on scientific literacy and who studies science education, diversity and access.

"It's so important for people to understand the nature of science," Patterson said, "because science isn't a static set of facts. Science is dynamic and evolving. There are some concepts where there's a great deal of agreement in the scientific community, and it's unlikely that they would be shifted dramatically or debunked. But there are other things we're still learning about and as scientists continue to do research, the ideas evolve and change." Without that context, people who are unfamiliar with scientific practices may become disillusioned about the reliability of scientific information.

Candice Guy-Gaytán (PhD '17), a former K-8 science teacher who now researches Next Generation Science Standards, teacher education and equity in education, notes that social media has brought the need for increased scientific literacy to the forefront.

"Scientific studies are more accessible and come into the conversation much more often now," she said. "That means that even if we have thousands of studies showing no link between vaccines and autism, and only one debunked study saying there is a link, that one study gets foregrounded and people are afraid to vaccinate their children. Climate change is another example. There's a 97 percent scientific consensus that climate change is caused by human behavior, but the 3 percent that disagree receive disproportionate attention. When you look at things in that very binary way, there's no room for nuance. It makes it seem as if there are two equal sides."

Making Science Content Accessible for All Students

Guy-Gaytán applauds the Next Generation Science Standards approach for positioning







students as a source of scientific knowledge in the classroom, allowing them to see how their own ideas change over time as they engage in investigations, and giving them insight into the scientific process that will hopefully serve them into adulthood.

But the new science standards alone can't break down all the barriers that exist in science classrooms. "Our job is to make sure that every student has the opportunity to learn," said Rick Pomeroy, Lecturer and Supervisor in the School's science credential program. "That means if English is their second language, we have to do everything we can to prevent language issues from holding them back. The same goes for students who are affected by trauma, who are in foster care, who have learning disabilities—everybody deserves the opportunity to obtain scientific literacy. Every student deserves an opportunity to gain scientific knowledge and to pursue science as an area of interest or a career."

While researching ways to make science teaching more effective and accessible,

Arthur Beauchamp, the School of Education's Senior Director of Professional Learning Systems, noted that much of science is accessed via literary strategies and techniques, leading him to research the concept of "literacy in science" as a precursor to science literacy.

"Reading is a set of process skills that allow you to access content," he said. "In order to access science curricula, students need to understand vocabulary, dialogue, context and subcontext. They need to be able to read, process and write about what they're learning." Literacy is given short shrift in most science classes, however. Beauchamp found that science teachers generally weren't being given the tools to support their students' literacy skills, and often considered the issue of literacy to be outside the realm of science classes anyway.

"We need to equip science teachers with the knowledge and tools to help students access and comprehend text," Beauchamp said, "and help them structure their classrooms so that happens. It's a very

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We continue to see inequities in terms of who is participating in science fields, and who feels like they're part of the scientific enterprise.

ALEXIS PATTERSON

different way of teaching than just listening to a lecture about facts. Students benefit when science teachers have the goal of literacy while keeping science in the driver's seat, with literacy as a navigator. That's how we're going to help students acquire scientific literacy—through literacy in science."

Fostering Scientific Identity

Educators also need to consider whether their students feel excluded or included in science learning—because students need to begin seeing themselves as scientists in order to fully make use of what they've learned, whether or not they ever pursue a career in science. Students who feel included are those who "identify with science" and feel a sense of belonging in the scientific world.

"We continue to see inequities in terms of who is participating in science fields, and who feels like they're part of the scientific enterprise," said Patterson. "That comes back to how we define the nature of science learning, and how we present it to students, including how we present what it means to be a scientist."

The Next Generation Science Standards are a step in the right direction, Patterson said, but her research and the research of others has found that implementing reforms doesn't always eliminate the

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SCIENTIFIC LITERACY CONTINUED FROM PAGE 11

presence of inequities in classrooms.

"For example, I researched students working in groups engaging in dialogic interaction," she said. "While it's positive that this kind of activity mirrors the practices of scientists, I found that students still tended to recreate social hierarchies. A related study found that in working groups in STEM classes, girls and students of color talked and engaged less and were excluded more. Despite knowing the content, they were less likely to feel like smart science students. Group work research has shown that the less students engage, the less they learn, so it's important to engage in more inclusive ways. We need to figure out how teachers and teacher educators can build ways to address that as we implement Next Generation Science Standards."

Ira Young, an EdD student and Director of Diversity Programs for the Mathematical and Physical Sciences at UC Berkeley, sees these issues play out at the college level as well. His program provides professional guidance, mentorship, coaching and networking for UC Berkeley students from groups who are historically underrepresented in the physical sciences.

"Your science identity is aligned with scientific literacy," he said. "If you do not have a sense of belonging within the scientific community, your likelihood of succeeding as a young scientist is greatly diminished."

Young helps his students find a sense of belonging as they challenge the status quo. "It's part of helping them cultivate their identities as scientists," he said. "And I encourage them to mentor others, including high school students, so we can see generational change."

Science Agency and Civic Engagement

Students who recognize their own expertise in science are more able to evaluate information and engage in civic action for themselves and others, especially to address environmental problems. Professor Heidi Ballard, who founded the Center for Community and Citizen Science, describes this as agency toward environmental science. Ballard sees scientific practices as tools that can enable people to live well on the planet, and her team researches how public participation in scientific research—known as citizen science—can help people increase their environmental science agency.

"Environmental science agency means having the ability and confidence to use scientific practices to make a change," she said. "For example, if you're worried about the water quality in your community, you don't have to wait for someone else. You can test it yourself. Or if you get sick, you know how to find reliable sources of information about your condition. You're able to use scientific reasoning practices to ask the right questions, such as asking to researcher asked her elders about which plants were better at inhibiting sand dune movement, and the community is now conducting mitigation efforts based on her studies," she said. "Conversely, when you leave communities out of the conversation about what counts as science, what happens in science classrooms, or who is a scientist, they become further marginalized."

Young encourages his students to make a difference by learning how to communicate their science effectively and precisely to non-scientific audiences, including policymakers. "It's particularly important that these student scientists' voices be heard in the current political environment," he said, "when policies that have major impacts on science are being implemented and also disassembled on a national level. We need them to have a seat

When you don't understand science, you're letting other people, like the government or private industry, make decisions for you.

HEIDI BALLARD

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see the evidence that statements are based on, and you know how to evaluate that evidence."

Even a single individual or small group of individuals can make an enormous difference to one community through acts of science-based civic engagement. "You see folks taking what they know back to their communities and helping to improve them," said Guy-Gaytán. "I know indigenous scholars doing rich research concerning ongoing problems on their Native reservations who have incorporated their traditional knowledge and western science to improve lives."

Guy-Gaytán described one Native community in which sand dunes were taking over homes due to erosion from mining and loss of native plants. "A at the table. What they articulate may well determine which programs are funded or defunded."

"It's important that we help people develop critical science agency so that they can fully engage in civic life and address the environmental and health issues in their communities," Ballard said. "The danger right now with our current national situation is that so many people don't understand the role of science in society that they're decreasing funding for a lot of important science research supported by the federal government."

Most importantly, Ballard said, "When you don't understand science, you're letting other people, like the government or private industry, make decisions for you. That's why access to science matters."

FEATURE

Words Take Wing Takes Center Stage

Program announces new Mondavi Center partnership

The School of Education's acclaimed Words Take Wing program will join the Mondavi Center's school matinee series in 2018. "It's a mutually beneficial partnership," said founder and former School of Education faculty member Joanne Banducci. "The Mondavi Center will be adding new Common Core programming to their series, and Words Take Wing will reach a broader audience. We're really excited."

Words Take Wing has served more than 14,000 schoolchildren, educators and community members since it was founded by Banducci in 2005. The program has been presented at the Mondavi Center for many years, but never before as part of the matinee series. The partnership grew out of a mutual admiration.

"I was so impressed with the program," said Marlene Freid, Audience Services and Volunteer Engagement Manager for the Mondavi Center. "It was very well done, and I saw how the children's eyes lit up, and the fact that the authors they chose were so diverse was hugely important. I thought we should be more involved in this event than just providing the space."

Jeremy Ganter, the Mondavi Center's Associate Executive Director & Director of Programming, was drawn in by the schoolchildren at Words Take Wing programs. "I attend nearly all the events held here," he said, "and the Words Take Wing audience is one of the most diverse we have. They're doing real work in the community to ensure it. They've done an extraordinary job."

Words Take Wing is well-aligned with California Common Core standards,

making it a perfect fit with the matinee series, which offers local schools an opportunity to take field trips that promote teaching Common Core through arts and culture.

Words Take Wing will continue its mission of bringing a notable author or illustrator of diverse children's literature to share their personal journey and creative process. "There's just enormous value in children's literature in the lives of both elementary students and in students preparing to become teachers," said Banducci. "We want children to not only learn to read for pleasure, but to read in order to broaden their world." Words Take Wing developed as a natural extension of Banducci's long-time commitment to children's literature. Back when she was a third-grade classroom teacher and reading specialist in Dixon, Banducci began inviting local children's book authors, including Newbery-award winning author Ashley Bryan, to meet her students.

When Banducci joined the School of Education's teacher education faculty in 2004, she expanded her scope by reaching out to student teachers, making the case that children's literature should be an integral part of their curricula. In keeping with the School's commitment to educational equity for all students, she also wanted to promote children's authors and illustrators from groups that were underrepresented in the field.

Banducci teamed with school librarian and UC Davis volunteer Wendy Chason to formally establish and manage the Words Take Wing program. "As a school librarian I knew it was really important that if I was reading a picture book to the children and CONTINUED ON PAGE 20



From left, Joanne Banducci, 2017 Words Take Wing author Naomi Shihab Nye, and Wendy Chason.

FEATURE

High-Impact Teaching

HAVING EVEN ONE AFRICAN-AMERICAN TEACHER MAY HAVE LONG-TERM BENEFITS FOR AFRICAN-AMERICAN STUDENTS

Professor Cassandra Hart's recent research reveals the educational reality facing African-American students: if you never have a teacher from your same ethnic background, it's that much harder to succeed in school—and African-American teachers are few and far between. Conversely, having even one African-American teacher is correlated with increased academic success. These results—and the nationwide shortage of African-American teachers—are a clarion call for school districts and teacher education programs. We must do better.

How bad are the statistics? A national study of public schools found that youth of color make up 44 percent of students, while 83 percent of teachers are white. And while 14.4 percent of students are African American, only 6.4 percent of teachers are African American, meaning that these students may graduate from high school without ever having an African-American teacher.

These numbers dismay, but don't surprise, Lorraine Wilkins (PhD '17), who had only one African-American teacher by the time she graduated from high school. None of her five children had even one. When she attended community college, Wilkins was inspired by her African-American math department chair—the only African-American professor she'd had—to pursue her bachelor's degree in math. "He was my catalyst, my impetus, my inspiration for majoring in math," she said. "I loved that discipline. I wanted to become a math teacher."



Lorraine Wilkins.

But when she transferred to UC Davis to complete her degree, Wilkins felt isolated. "I was the only African-American student in the math department," she said, "and there were no African-American professors." Wilkins eventually changed her major to African American Studies, where she found a great sense of community, and went on to earn her PhD at the School of Education, writing her dissertation on the experiences of African-American students in a well-resourced suburban town.

Wilkins now teaches Ethnic Studies classes as an adjunct at Sacramento City College. "We need more African-American teachers so that African-American students can have role models," she said, "but also so that all students—and their parents—can see that African-American people can and do excel in education."

Exploring Benefits of Same-Race Teachers

Hart was troubled by the fact that African-American students have lower rates of educational success than other groups, and wanted to explore the potential impact that having African-American teachers might have on their rates of success. "Research suggests that students of all races benefit from being exposed to same-race teachers—you see better outcomes on test scores, for example," she said. "So if that's true, it suggests that students of color are getting far fewer of those benefits. I wanted to look at what could be done to ameliorate some of these gaps for African-American students. Would having a same-race teacher help on those outcomes?"

Hart teamed up with researchers from American University and Johns Hopkins University to study the long-term impacts of same-race teachers, using student-level administrative data on over 100,000 students from North Carolina public schools. They found that African-American students who had even one samerace teacher in their elementary school years had lower rates of dropping out of high school, and were more likely to graduate with the intent to pursue college. The effect was strongest for persistently low-income African-American male students: having at least one African-American teacher in third through fifth grades increased their probability of high school graduation by 9 percent.

"These are really exciting findings," said Hart. "They suggest that exposure to same-race teachers can make a difference in the educational trajectories for African-American students. Also, some earlier studies with test scores found that white students did better with white teachers, which suggests that exposure to nonwhite teachers would have a negative impact on them, but we didn't find that with these results. African-American students saw benefits with being matched to African-American teachers in terms of suspensions and graduation outcomes, but non-African-American students didn't see any disadvantages. It's a really nice example of a change that can help one group without harming other groups."

In a separate study with an American University researcher, Hart also analyzed data on over 500,000 North Carolina public school students to see whether having same-race teachers affected disciplinary rates for African-American students. "African-American children are subject to a higher rate of exclusionary discipline such as suspension and expulsion," Hart said. "We wanted to know if having same-race teachers would reduce that rate."

Hart found that African-American students who had the greatest exposure to same-race teachers had lower rates of reported disciplinary incidents and lower rates of exclusionary discipline, particularly for the types of offenses that required more subjective evaluation, such as defiance. "It was a modest decrease," said Hart, "but it was consistent across elementary and middle school for both male and female students, and regardless of whether the students qualified for free and reduced-price lunch. We saw a pretty solid pattern suggesting that access to same-race teachers decreased the likelihood of suspensions and expulsions."

Interpreting the Results

These results don't indicate why same-race teachers are making a difference for these students. "The modeling hypothesis—that seeing a teacher who looks like you is a motivator and a role model—is one of the strongest hypotheses we have for why student success increased," said Hart. "Other research suggests that teachers of color tend to have higher expectations for students of color, so it's possible that students are getting implicit messages for success."



Cassandra Hart.

Hart can't tell from the data what the reasons are for the reduced rate of exclusionary discipline for African-American students who have had more African-American teachers. "The difference might be attributed to teaching styles or more tolerance for mild misbehavior, or perhaps African-American students respond differently to African-American teachers," she said. "There may also be multiple mechanisms at work."

Transforming Research into Classroom Results

Hart believes that her results have clear implications for teacher education programs. "It suggests that outreach to try to make sure we're getting African-American teachers into teacher education programs is really important," she said. "It would also be good for school districts to put in place retention efforts to keep African-American teachers in particular in the teaching workforce."

Hart also suggested that principals might want to take these results into consideration and strategically match African-American students with same-race teachers, with a goal of every African-American student having at least one same-race teacher in their early elementary school years. Further research into classroom management practices may also give teachers better responses to disruption, reducing exclusionary discipline. "But I think overall, these results make an argument for the benefit of having a diverse teacher workforce," said Hart.

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African-American children are subject to a higher rate of exclusionary discipline such as suspension and expulsion. We wanted to know if having same-race teachers would reduce that rate."

CASSANDRA HART



Stephanie Li (Minor '16, Cred. '17) received a scholarship from the Education Faculty Scholarship Fund.

FEATURE

Passing It On

EDUCATION FACULTY SCHOLARSHIP FUND HELPS BUILD THE NEXT GENERATION OF TEACHERS

When many of the School of Education's faculty members earned their degrees, the cost of going to college was significantly lower than it is today. Around 2008, active and emeriti faculty and lecturers, including Doug Minnis, Julius Sassenrath and George Yonge, decided to establish a scholarship to support the next generation of educators and also recognize important milestones for current and retired faculty members. The Fund has since provided scholarships to its first two students through gifts honoring or memorializing 20 current or retired faculty, as well as Founding Dean Harold Levine and several alumni.

"There's no doubt in my mind that the Teacher Education program produces great people," said Senior Lecturer Emeritus Doug Minnis, who has donated to the Fund. "Any time we're supporting a student through the Fund it's like a multiplier. You prepare a teacher and they go out and if they're good, they're going to transform the lives of their students too."

The Fund reached its full endowment level and began supporting students thanks to a group effort. Minnis, Yonge and Sassenrath were among many to make donations, and others like Barbara Merino and Jo Skinner provided matching funds. Skinner also helped coordinate a major fundraiser. It all added up.

"Just a little bit of support can go a long way," said Yonge, who is now a professor emeritus. "It's like if bus fare is a dollar and you've only got 99 cents. If someone gives you a penny, it makes a big difference. You don't have to donate a lot to help these students."

Lecturer Emeritus Dave Wampler was one of many who contributed to the Fund. "It's a different world than when I went to college," he said. "It's more expensive. My wife graduated from UC Davis in 1963 and was paying \$50 a year. But today you hear about how much students owe when they're done with their graduate education. And beyond the financial support, when they get a scholarship, it's such an honor. It helps them feel that they made the right choice to go into this field. That's why I give."

The Power of Education

The first student to receive the Education Faculty Scholarship was Juan Avelar (Cred. '16, MA. '17), who arrived at the School of Education with a goal of working in underserved communities with students who would benefit from seeing an example of someone from a similar background. "I came from a small town in the San Joaquin Valley where the vast majority of families were migrant workers," he said. "My parents always emphasized the importance of an education. I wanted to pursue a graduate degree to serve as a positive example to my younger siblings and my community."

This year multiple subject teaching credential candidate Stephanie Li (Minor '16, Cred. '17) received the second Education Faculty Scholarship. She and her brother were the first in her family to attend college. "My dad worked at a restaurant when he and my mom first immigrated," she said. "Part of the reason they wanted us to go to college was that they didn't want us to do the same kinds of jobs he had." Li was drawn to the School of Education's teaching credential program because of its social justice values. "Not every program has that," she said. "I got to teach in the kind of school where I wanted to spend my student teaching year. It's a Title I school, so 90 percent or more of the students receive free or reduced-priced lunch, and they have a really diverse student body."

Receiving the Education Faculty Scholarship was a huge help. "The School told us that we wouldn't have time for a job during our credential year," Li said, "but I didn't want to burden my parents or

Any time we're supporting a student through the Fund it's like a multiplier."

DOUG MINNIS

take out too many loans. This scholarship meant I didn't have to worry about finances and instead I could focus on student teaching and lesson planning. If I'd tried to work also it would have taken away a huge part of my program." These are stories that come full circle for retired faculty like Minnis and Yonge, who are themselves testaments to the power of education to change lives. Neither was a high-performing student in high school. Both entered the military after graduation, attended college and graduate school while in the service or on the GI Bill, and found satisfying and meaningful employment in the field of education.

Minnis and Yonge are now enjoying retirement after long careers that seemed out of reach back in high school. "I don't know what my life would have been like if I hadn't gone to college," said Yonge.

Student Scholarships Report

School of Education donors very generously provide support to our students through the Annual Fund and endowed scholarships. **Thirty-six students received a total of \$199,406 in 2016-17.** These scholarships make it possible for low-income students to earn teaching credentials and graduate degrees, launching them into sustainable, rewarding careers where they can make a difference for others in turn. Many other worthy students also need support to reach their dreams. **For information on giving, visit give.ucdavis.edu/go/catalyst.**

\$199,406 AWARDED

Agricultural Student Enhancement Award Christine Dyer, Justin Nunes, Stacy Stroing

Alumni Council Scholarship Award Stephanie Li, Yesenia Martinez

Anthony Barcellos Education Award Bahareh Abhari

Bob and Kinzie Murphy Guardian Teacher Scholars Award Malika Martinez

Boyd Family Teaching Scholarship Adriana Bricerno

Brad Davis Alpha Gamma Rho Award Stacy Stroing

The Davis Family Scholarship Yesenia Martinez Education Faculty Scholarship Award Stephanie Li

Farrer-Patten Award Jasmyn Starke

Frank E. Isola Award Audrey Tang

Guardian Teacher Scholarship Malika Martinez, Carlie McCoy, Sarah Palmer

Heather Marie Award for Guardian Teaching Scholars Carlie McCoy

KLC Adler Award Reece Morgan

Laura E. Settle Scholarship Audrey Tang

Lydia and Ronald Baskin Family Scholarship Award Yesenia Martinez Mabel Outler Scholarship Tessafay Craig, Stephanie Li, Yesenia Martinez

Marilyn G. Reisen Early Education Scholarship Award Tessafay Craig

Mark Cary Reflective Learner Award Emily Harris

Marten & Nell Bakker Award Yolanda Ayala

Mohini Jain Family Foundation Award Orlando Carreón

Next Generation STEM Teaching Award Hanna Moore

Orville & Erna Thompson Family Award Raven Castro, Kelsey Drain PhD Scholarship Award, funded by the Meg Stallard Catalyst Fund Yanira Madrigal-Garcia

Rogers Scholarship Program Janet Gutiérrez

School of Education Annual Fund Award Aaron Lanser, Nataliya Polichshuk

Sandi Redenbach "Students at Promise" Award Hanna Moore

Susan Schnitzer Fellowship in Teacher Education Stephanie Li, Hanna Moore

Teaching Credential/Master's Student Scholarship Tessafay Craig

Announcing a New Scholarship

Sandi Redenbach ('72, Cred. '73) and Ken Gelatt ('67, Cred. '68) honored Founding Dean Harold Levine on his retirement through the Sandi Redenbach and Ken Gelatt Teaching Credential STEM Scholarship in Honor of Dean Harold Levine. The fund's focus is on teaching credential students who plan a career focus on STEM subjects in public schools, and will support its first student in Fall 2017.

From the Air Force to Teaching

Two veterans discuss the transition from military to classroom

We asked Slilma Tukey (Cred. '17) and Steve Platt (Cred. '17), both Air Force veterans beginning their teaching careers later in life, to talk to us about why they joined the military, why they're making the change to teaching, and how their experiences in the military affect their teaching practices.

Why did you choose an Air Force career?

SLILMA: It was something I always wanted to do. I'm from Nicaragua and I remember when the U.S. Marines came when I was a child and all the good they did. I was very grateful even at a young age, and I wanted to do something to repay that. STEVE: I would love to tell you I wanted to serve my nation when I joined the Air Force at 18 years old, but I was just an 18-year-old boy who wanted to fly jets. Over time I came to understand the gravity of what I was doing and to grow a much greater appreciation for serving my country. So I'd say thankfully my reasons matured to a much more community- and service-oriented rationale.

What were your roles in the Air Force? STEVE: I retired from the Air Force after



Slilma Tukey and Steve Platt.

25 years. I flew F-16s, which was what I always wanted to fly. And I went to war, which is what I thought I wanted to do for my country. But after going through wartime for many years, I understood the seriousness of what I was doing, and the broad-based implication of a foreign policy that rests on our projection of power. I began to understand how my role was very much a part of where our nation was going, and days like September 11 were very significant to me based on what I was doing at the time.

SLILMA: I was in the Air Force Security Forces for six years. Security Forces includes military police, heavy weapons, law enforcement, airbase defense, and canine units. We're responsible for the security of military personnel and civilians inside bases, military assets, and the perimeter of the base. We're overseas and also in the air with the heavy jets like C-5s and C-130s. Security Forces is responsible for the security of those areas.

I did a little bit everything, both incountry and overseas, in training scenarios and war scenarios, from a bird's-eye view to a boots-on-the-ground view. You get to really appreciate your purpose in life and your job, and you get to see how you're really just one nut and bolt of this great machine that can have devastating effects, but also can have incredibly positive effects. STEVE: We refer to Security Forces as defenders for a reason. They're the protectors for all of us. It's a big deal because we'd be hunkered down in our bases, deployed at different locations, and they're the folks who are out there looking out for threats and keeping us safe while we prepare to fly our missions. Defenders are really a big deal in the Air Force. SLILMA: Likewise it was very comforting for us to know we had eyes in the sky.

Why did you make the transition to a teaching career?

SLILMA: Oh, I always wanted to be a teacher. I just felt I had to pay back something to the country that adopted me first. I was able to fulfill that debt and now I'm doing something I always wanted to do. STEVE: I'm retired, so I don't have to do anything—our country does a really nice job of giving you your retirement after your military career. It's a very fair pay. But I had teachers in high school, old folks who are about my age now, who had been there and done that, and sort of guided me. I think they planted the seed for the things that matured when I was ready for them, things like national service, things like a community of interests where we come together and try to mold the future. Those are the kinds of ideas I wasn't ready for at 18 years old, but I heard them. So it's a circle, a karmic wheel we're repaying, same for both of us. You come back around and you owe the next generation for the life you've had. And I've had a pretty darn awesome career and would like to give people insight into what that means, and the seriousness of what that means.



From left: Steve Platt at his Air Force retirement ceremony; Slilma Tukey's official portrait while she was still a Security Forces 1st Lieutenant, before her promotion to Captain.

SLILMA: In a way we're both still serving, still doing something that will benefit our country, and there's a lot of pride in that. STEVE: Oh yeah.

What has student teaching been like for you during your credential year?

SLILMA: I'm teaching kindergarten at a Spanish-immersion school and I love it. I'm the oldest in my cohort, so it's been a different perspective, seeing all these amazing young professionals. I could be their mother, but they take time to work with me and teach me. In return I feel like I have sort of an auntie or big sister role. It's been a really good give and take. In some ways it's been similar to being back in the service where you have that camaraderie and you know who has your back. I've formed a network of friendships that I know are going to be longstanding. It's so exciting to find that where I didn't expect it.

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I always wanted to be a teacher. I just felt I had to pay back something to the country that adopted me first."

SLILMA TUKEY

STEVE: My cohort members have been lovely as well. They help out the old guy, which has been nice. I'm teaching high school physics and biology and I've had some really memorable moments of connecting with students. I had a mom leave a message on my voicemail saying, "I don't know what you're doing in class but my ninth-grader has never come home talking about a class, but he's says he's kind of into yours, so keep doing whatever you're doing."

SLILMA: That's exciting, to get that feedback.

STEVE: Yeah, it really is. I went, "I think this teaching thing is going to work out all right." It felt good.

How does your military experience help you as a teacher?

SLILMA: I'm definitely drawing on a lot of things I learned and experienced. Persistence, definitely, and organization, and the leadership perspective. And I guess, I don't know about you Steve, but you know the bad days...they're not so bad. I've seen worse.

STEVE: Oh yeah, you have context. Also, I was the boss when I left the Air Force.

CONTINUED ON PAGE 20

WORDS TAKE WING CONTINUED FROM PAGE 13

held it up, those children needed to be able to see their own faces in it," said Chason. "I worked really hard to get books into the library that featured Black, Latino and Asian characters. I remember reading one of those books out loud to a group of children and an African-American student told me, 'Mrs. C., I never knew there were books like that for a person like me.""

That message of the importance of inclusion was echoed by many Words Take Wing authors, including Patricia McKissack, who told the audience in 2007, "We learn how to make decisions from the books we read as children. If you don't see yourself in those stories, you think you can't participate. That's a real tragedy."

In addition to McKissack, Words Take Wing has featured authors as wide-ranging as Newbery-award winning Cuban-American author Margarita Engle, Native American author and musician Joseph Bruchac, and Robert San Souci, author of over 100 books for children and the screenplay for the movie Mulan.

The School of Education will continue to sponsor Words Take Wing when it debuts in the Mondavi Center's matinee series in 2018 with Newbery Honor winner Grace Lin, a *New York Times* bestselling author and illustrator of picture books, early readers and middle-grade novels. ■

In Memoriam: Bob Chason

The School of Education is saddened to report the passing of our friend and supporter Robert E. Chason, retired chief executive officer of the UC Davis Medical Center. Per his family's request, contributions in his honor may be made to Words Take Wing at education.ucdavis.edu/wtw.

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"As a commander, you have great insight into people's lives—the wonderful things and the not-so-wonderful things...It allows me to have empathy for my students."

I was a colonel and I had a couple of hundred people working for me, so I can command a room. Classroom management is not an issue for me. I can walk into the room and attract the attention of my students and keep them engaged.

But I think that's really a small part of what I bring to the job. As a commander, you have great insight into people's lives—the wonderful things and the notso-wonderful things, and you see people operating under all these conditions. And I think it sensitizes you. I know that what's happening outside the classroom can impact my students' performances and ability to engage with me. It allows me to have empathy for my students. SLILMA: You're right—I hadn't thought about that. I'm in kindergarten so it's like herding cats, but still you can definitely see what they bring from home.

Should other veterans consider teaching?

STEVE: Oh goodness yes. In the military you're constantly learning new skill sets, and the Air Force itself is evolving, and that makes you flexible. So when you walk into a teaching program as a veteran, you're receptive to continuing to be a student and learning. You have a storehouse of experience and knowledge and empathies that are ready at your disposal to apply to the new skills you're learning. SLILMA: I agree. We're constantly learning and growing-that's the military in a nutshell. I ran training programs for Security Forces, I was a commander as well overseas, so there's a lot that you learn. With Security Forces you're always on the front lines, always teaching someone something-I could compare that to classroom management, it's just one-on-one, so the transition into education is seamless, nice and easy. 🖪



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LAST WORD JUSTIN NUNES (AG ED CRED '17)

Ag Ed Is My Passion

For my tenth birthday my parents turned our greenhouse into an aviary so I could raise birds. Our elementary school actually took field trips to our backyard to see all our pets and animals. These experiences ignited my passion for sharing agriculture.

I earned my bachelor's degree in Agricultural and Environmental Education at UC Davis and then earned my agricultural education teaching credential. It's perfect for me. I like being in a small cohort because we each have our individual personalities and we all come together for one main goal. I have five new best friends now. Student teaching is one of the best opportunities I've had in my life—I love meeting new students and working with my master teachers.

I think every high school student should take an agricultural education class. For one thing, agriculture affects everyone in ways they don't realize, and I want to increase awareness. And students get everything in ag ed that they would in a traditional college-prep or career-prep class but they also learn skills like time management, public speaking and leadership. Along with the traditional teaching in a classroom to learn the material, they're out in the field or woodshop or barn applying those skills.

One of my best moments happened with a student who was struggling with a concept in class. He kept on pushing until the moment the light bulb switched on for him and you could see it on his face that he finally got it. But what made it even better was watching him go around to the other students who were struggling and teach them himself. It was a chain reaction from myself to a student to another student. It was a small picture of the potential impact I have as an educator.

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We Welcome Dean Lauren Lindstrom

The School of Education is pleased to announce the appointment of Dr. Lauren Lindstrom to the position of Dean. She began her new role on June 1.

"One of the things that drew me to UC Davis is that it's a public research institution," said Dean Lindstrom in her first public address. "That means the important research the School of Education is conducting is for the public good. I believe that the School will hold that value as central as we move forward. This is an outstanding school of education and an exciting place to be. I very much look forward to getting to know all of you and working with you as we move toward the future. I'm honored to be your Dean."

See page 8 for more about Dean Lindstrom's experience and vision.