

educationviews

UNIVERSITY OF COLORADO AT BOULDER SCHOOL OF EDUCATION

Best Should Teach Initiative Honors Faculty, Teachers, and 100 Years of Licensure

Several hundred attendees partook of the annual Best Should Teach event that was a virtual trifecta of professional recognition, a centennial celebration, and a special faculty announcement.

A cooperative venture of the Graduate School, the School of Education, and the College of Arts & Sciences at the University of Colorado at Boulder, the Best Should Teach Initiative is the brain-child of the late Dr. Lindley Stiles. He and his wife, Marguerite, wanted to promote the ideal that "The Best Should Teach." The Aug. 19 event featured faculty and teacher recognition as well as a special School of Education celebration of 100 years of statewide teacher licensure.

During the event, Interim Provost Stein Sture named new School of Education faculty member, Professor Kris Gutiérrez, the inaugural recipient of the Provost's Chair. The Provost's Chair recognizes faculty of extraordinary academic distinction and is intended for recruitment or retention of exceptional senior faculty. To be considered, a faculty member must be recognized both nationally and internationally for distinguished contributions in research, in classroom teaching



Whittier Elementary in Boulder was known as the Pine Street School until 1903. Lindley Stiles and Bud Davis (bottom right) have each made unique contributions to CU's history.



Classroom photo courtesy of Carnegie Branch Library for Local History, Boulder Historical Society Collection

and mentoring, and in public service.

Gutiérrez is renowned for her groundbreaking research in language, literacy, and human development. She recently served on President Obama's Education Policy Transition Team. We are proud to note that she earned her PhD in Curriculum and Instruction with a specialization in English education from CU-Boulder and has joined the School of Education faculty here after 21 years of stellar accomplishments at the University of California, Los Angeles. (Read portions of her keynote address on page 4.)

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Lindley Stiles, the Baldwins, and Bud Davis Acknowledged

Lindley J. Stiles was a lifelong educator who died at age 94 in 2008. He held high-level academic positions, including deanships at the University of Virginia and the University of Wisconsin, and a professorship at Northwestern. Stiles was a policymaker, instrumental in the *Brown v. Board of Education* 1954 Supreme Court decision, and was known for his advocacy on behalf of under-represented minorities.

Stiles believed the most gifted should be informing others through teaching, which he considered the ultimate profession because it nourished the other professions. Stiles and his wife, the former Marguerite Croonenberghs, initiated and generously funded the Best Should Teach program at CU-Boulder.

Ira and Ineva Reilly Baldwin were friends and mentors of Dr. Stiles and generous supporters of education, contributing to the Best Should Teach on multiple occasions. Their gifts established an endowment to create the Ira and Ineva Baldwin Lecture that is a key part of the Best Should Teach event.

William E. "Bud" Davis earned his bachelor and doctoral degrees at CU-Boulder and served as Alumni Director, Head Football Coach, and Dean of Men.

Davis's doctoral dissertation, a comprehensive history of CU, was published in book form in 1965 as *Glory Colorado!* Davis's work is an

immense undertaking and is used widely for citing CU's past. It was an invaluable resource for the compilation of historical information used for the 100-year anniversary celebration of state teacher licensure for the Best Should Teach event.

"One of the chief reasons for founding universities," Davis said during a phone interview from his home in Corrales, N.M., and for offering education curriculum as one of the first areas of collegiate study, "was because the territories had no licensed teachers. To have requirements for teaching was important to prepare teachers who had graduated from college." ■

MESSAGE FROM THE DEAN



“Perhaps the most surprising element in our report is our attention to the issue of curriculum.”

In late September, the National Governors Association and the Council of Chief State School Officers released new, end-of-high-school Common Core State Standards. Forty-nine states have signed on to this project. For good or ill, the common standards effort represents a significant intensification of the standards-based reform effort that has been around for 20 years. By December, this group plans to have developed grade-by-grade standards in English-language arts and mathematics.

The National Academy of Education (NAEd) has just released an Education Policy White Paper, “Standards, Assessment, and Accountability,” which I helped write in my capacity as NAEd President. Other members of the committee included top scholars in the areas of educational policy, literacy and mathematics education, school and workforce readiness, economics, educational equity, curriculum reform, and assessment. The idea of the White Papers project was to provide policymakers in the new administration and Congress with a distillation of the best available research evidence.

Some of the findings in the Standards paper will be familiar to you. Although the original vision of standards-based education reform called for profound changes in teaching practices and assessments to enable students to reach more challenging standards, implementation of standards has almost always devolved to the more familiar policies of test-based accountability.

Studies on the effects of standards and accountability have shown substantial redirection of effort toward curricula aligned with state standards and increasing use of interim tests to monitor progress toward mastery of standards. In the years since 1992, there has been a corresponding improvement in achievement, especially in mathematics, as measured by the National Assessment of Educational Progress, but the improvements have not been as dramatic as had been hoped,

and there have been negative side effects. Intense focus on raising test scores in reading and mathematics has reduced or eliminated attention to science and social studies, especially in low-performing schools. And, teaching math and reading in ways that closely resemble test formats results in “test-score inflation,” meaning that scores on state tests go up without there being a corresponding increase in real learning.

Predictably, the “Standards, Assessment, and Accountability” paper calls for an intensive program of research and development to create the next generation of performance assessments that better represent important outcomes for learning. We also call for substantial reforms of accountability systems—to include both growth and status measures—and urge that poor test scores serve only as a “trigger” for closer investigation of what is going on in schools before remedies or sanctions are imposed.

Perhaps the most surprising element in our report is our attention to the issue of curriculum. In the U.S., state standards are developed through political processes, often resulting in encyclopedic lists of facts and skills. By contrast, curricula in top-performing countries, developed by content experts, are notably more coherent. They are hierarchically sequenced (with fewer topics per grade), and they provide better guidance for teachers about how to move students progressively toward advanced topics. Solving the problem of curriculum coherence does not mean imposing one nationally. (Many high-performing countries have regional curricula.) But, it does mean that states or consortia of states need to develop coherent packages of standards, curricula, assessments, and teacher professional development programs. Otherwise, good intentions will continue to be undone by bad tests.

Copies of the “Standards” paper are available at www.naeducation.org, or write to me and I’ll send you a copy. ■

Lorrie Shepard, Dean
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The Best Should Teach *continued from page 1*

Dean Lorrie Shepard introduced the celebration of 100 years of teacher licensure in Colorado. She noted that 1909 was the year the Colorado state legislature passed House Bill 423, providing a statewide license to teach to college graduates who fulfilled certain education studies requirements.

“Teaching has deep roots at the University of Colorado,” she said. “As early as 1874, when the territorial legislators first conceived the University in the law leading to statehood, they outlined the departments that the university *might* have, but they *required* the

Regents to establish a ‘normal and preparatory department.’ At that time, completing the college preparatory curriculum—in other words, graduating from high school—was sufficient to become a teacher.”

“The legislation in 1909 that we celebrate was significant because it formalized the expectation that to teach in Colorado required a college degree AND specialized preparation in pedagogy,” Shepard said. “House Bill 423 paved the way for a well-defined curriculum to educate future teachers. As a result, the stature of teaching was said to rise from that of a

‘trade’ to one of a ‘profession.’”

“Teacher education is hotly contested political terrain in this country today—sometimes making a war between content expertise and social justice goals. Here at CU-Boulder, we are deeply committed to both,” the dean said. “We recruit the best academically prepared students and—in a program that works like a second major—we ensure pedagogical skills that will attend to the needs of every student—from the most advanced to those said to be at risk.” ■

A WISE Investment Involves Support For Research, Outreach, and Instruction

By Margot Neufeld

With the blessing of the School of Education Development Advisory Board, a passionate, inspiring, and generous group of local alumnae and community leaders gathered in August to launch a new support group for the School of Education. Called WISE, Women Investing in the School of Education, the group consists of 18 women who have committed \$1,000 for three consecutive years in support of research, outreach, and/or instruction.

The unique feature of this group is that collectively, the women decide how to spend their pooled resources by reviewing brief proposals from within the School of Education. Before they allocate their gifts, they will hear about each of the projects directly from the faculty who submitted proposals. To the best of our knowledge, this is the first-ever “giving circle” for the University of Colorado.

One member commented after the initial WISE meeting, “I think this is great—what a wonderful way to stay connected to education and help in a way that is so informative and meaningful. I am eager to read the applications and so pleased to know that we get to choose how our gifts support the school.”

WISE women can already see the value of this group (before granting even one award) and said they intend to help Dean Lorrie Shepard grow the membership so that additional School of Education projects can receive support.



WISE women meet for the first time in August and set processes in motion for resource allocation to School of Education faculty. Fifteen proposals were later submitted for consideration.

If you are interested in joining this group—it is not too late—please contact Dean Shepard at Lorrie.Shepard@colorado.edu or call Margot Neufeld, Sr. Director of Development, at 303-492-2990. ■



Ruth Lopez, one of three Miramontes Doctoral Scholars, addresses the crowd at the Scholarship Dinner. The late Professor Ofelia Miramontes, for whom the scholarships are named, was a former Associate Vice Chancellor of Diversity, Professor in the School of Education, and bilingual education scholar. Lopez, a student in the School of Education's doctoral program, hails from the University of Texas at Austin and hopes to influence how school districts decide to prepare underserved students for college.

Scholarships Awarded to 70 Students at Annual Dinner



Jackie Colt speaks at awards dinner held at CU Oct. 9.

Photos by Casey A. Cass

The School of Education's 2009 Scholarship Awards Ceremony honored 70 scholarship awardees during the annual event. Speakers included Jackie Colt (shown in photo), whose family established the Jeanette L. Dooley Scholarship; Hunter Cuchiaro, Noyce Fellowship recipient; Melissa Tobin, Rosellen E. Siegel Scholarship recipient; and Ruth Lopez, Miramontes Fellowship recipient. Dean Lorrie Shepard hosted the

event and acknowledged the students receiving awards as “inspiring, talented, dedicated, scholarly, and passionate about education.” The awards amounted to \$317,000 in scholarships. ■

Kris Gutiérrez:

Notes from the Best Should Teach Keynote Address

Editor's Note: The announcement of Professor Kris Gutiérrez as the inaugural Provost's Chair was made at the Best Should Teach ceremonies, where Gutiérrez was also the keynote speaker. Below are remarks from her speech, "The Pedagogical Imagination: Teaching toward Possibility." Gutiérrez completed her graduate work in English and Education at CU-Boulder in 1987 and was a professor at the University of California at Los Angeles for 21 years before joining CU's School of Education faculty this year.

"CU-Boulder served as a crucible for the development of so many of the theories and models that have animated my work here at Boulder and throughout my academic career at UCLA," Gutiérrez told the Best Should Teach event attendees. While at CU, she developed programs and pedagogical models that were designed at the intersection of rigor, intervention, and social responsibility and organized around a pedagogical imagination that incited meaningful teaching, learning, and educational change. She added that this recognition of the centrality of quality teaching to the learning enterprise has continued to motivate her to "design new and robust learning environments where all students could be smart."

Gutiérrez reminded the audience that many people, when asked about positive learning experiences, mention a particular teacher's impact. But, she added, students also profoundly influence their teachers, professors, and mentors, which allows teachers to expand students' learning. Gutiérrez explained that learning is relational to its contexts of development, including the social relations that constitute that learning environment.

Gutiérrez identified several teaching models, such as the banking model, in which "knowledge is simply deposited in your head" via recitation—such as the interaction between teacher and student along these lines: Teacher's question: What is the capital of Colorado? Student's answer: Denver. Teacher's response: Very good. This method, she explained, closes the instructional conversation, leaving no space for inquiry, joint activity, or learning resonantly.

School learning has become encapsulated and narrow in ways that produce what Gutiérrez called "inert knowledge." Such closed teaching experiences result in "synthetic stupidity" (a term coined by German educator Martin Wagenschein). She referenced the work of Finnish researcher and educator Yrjö Engeström, who challenges commonplace notions that students' misconceptions are NOT indications of immature thinking or "naïve" conceptions. Instead, he and Gutiérrez believe that misunderstandings are culturally produced artifacts, which often persist regardless of the students' level of maturation.

Instruction needs to organize for the synthesis and relation of big ideas, of important conceptual information. This is a radically different way of ensuring students develop deep understanding of the principles,



Professor Gutiérrez

concepts, and ideas that are central to disciplines in which we teach.

Gutiérrez showed that knowledge can become fragmented and alienated from reality and can alienate the student from learning. She said that high-quality teaching is not about the teaching of fragments.

She suggested several examples of teaching models that enhance learning.

- Rise to the concrete—teach from the abstract to the concrete

This approach entails starting with the big ideas that grow into the facts, the details, and the students' personal history. Rather than dichotomizing everyday and school-based or scientific concepts, scientific concepts grow down into everyday practices.

- Escape the encapsulation of schooling—This involves expanding our notions of teaching and learning and of what counts as learning by accounting for both vertical and horizontal expertise. She described horizontal expertise as the push for

the boundary crossing that comes with learning interdisciplinarily; by seeking new sources from other places, other disciplines, other paradigms, and other people, and from our examined experience. By doing so, we develop networks of possibility that help us see and understand things in more expansive and complex ways.

Gutiérrez invoked C. Wright Mills (1959) in her call for a new pedagogical imagination. As Mills once wrote, "In this age of fact, information often dominates students' attention and overwhelms their capacities to assimilate it—what they need, and they feel they need, is a quality of mind that will help them to use information and to develop reason in order to achieve lucid summations of what is going on in the world and of what may be happening within themselves," Gutiérrez quoted. "It is this quality, I am going to contend, that journalists and scholars, artists and publics, scientists and editors are coming to expect of what may be called the sociological imagination."

And, Gutiérrez noted, any discussion of high-quality teaching and learning must include the ideas of John Dewey. She resonated with this passage of his in *Democracy and Education*:

"The more the educator knows of music, the more he can perceive the possibilities of the inchoate musical impulses of a child ... [T]he various studies represent working resources, available capital ... [yet] the teacher should be occupied not with subject matter in itself but in its interaction with the pupils' present needs and capacities." (pp. 182-183)

"The good teacher is not preoccupied with entertaining but with inciting inquiry, problem-solving, and a new imagination in all of her students. Good teaching is part of the democratic process," Gutiérrez concluded. ■

CU Teach Develops Prospective Teachers

Across the nation, there's a trend that may not be spreading as quickly as the H1N1 virus, but is gaining momentum just the same. The concept is replication and it was developed to encourage bright math and sciences majors to select teaching as a career choice. The School of Education is a prominent leader in this effort.

As one of 13 institutions to replicate the UTeach program initiated at the University of Texas at Austin, CU's program, called CU Teach, was spearheaded by both the School of Education and the College of Arts & Sciences.

CU Teach is a four-year academic program that follows the precept of UTeach, preparing current students to become future secondary math and science teachers. The CU Teach program leads to a degree in a mathematics or sciences major coupled with a Colorado teaching license. At CU, four additional majors, applied mathematics, geological sciences, integrative physiology, and molecular, cellular, and developmental biology, have just been added to the previously approved majors, which include mathematics, astronomy, chemistry, ecology, evolutionary biology, and physics.

Professors Valerie Otero from the School of Education and Mike Klymkowsky from Arts & Sciences are co-directors of CU Teach, overseeing the requirements established by UTeach. University faculty members who are veteran secondary math and science teachers, called Master Teachers, lead CU Teach students in their field experiences in area schools. CU Teach participants receive guidance in

areas such as lesson planning, teaching strategies, and classroom management from their Master Teachers and from Mentor Teachers currently teaching in participating local schools. There is also a student group, WeTeach@CU, to provide professional, academic, and social support.

"CU Teach's job is to take the UTeach's experiences and guidance and modify our secondary

AmeriCorps and Noyce Fellowships, as well as paid internships.

One of the concepts practiced at CU Teach is to recruit students into the program through classes known as Step 1 and Step 2.

"The Step classes are unique in that they are career exploration courses for which students receive one credit. Students come in and learn the basics

and get to try out teaching very early on in the program," said CU School of Education Senior Instructor and Master Teacher Karen Germann. Step 1 (EDUC 2020) students observe two lessons and teach three lessons in elementary schools in Colorado's Boulder Valley and St. Vrain school districts and then move up in Step 2 (EDUC 2030) to additional training in middle schools. Master Teachers mentor the CU students to help them explore teaching as a career choice.

"We are trying to use those Step classes to encourage really talented undergrads who are math and science majors to choose teaching as their career path early on in their CU experience," Schneider said.

"We want CU Teach students to realize that teaching is an intellectually challenging career that also addresses the national need for math and science teachers," said Germann.

Following graduation, CU Teach students may continue their teaching education through the School of Education's Partners in Education program or other master's degree offering. ■

For more information about CU Teach, visit <http://colorado.edu/cuteach>.



CU Teach prepares current students to become future secondary math and science teachers.

math and science teacher licensure program to fit the model of UTeach," said CU School of Education Senior Instructor and Master Teacher Craig Schneider. "We take the best of their course material to improve our program."

The UTeach replication efforts undertaken at colleges across the country are funded by replication grants from the National Math and Science Initiative. UTeach provides the model for the courses, course syllabi, and weekly agendas. CU Teach offers up to \$15,000 in scholarships per student, including



Craig Schneider taught high school mathematics for eight years and also worked as a research assistant and professional development designer/facilitator for the National Science Foundation-funded Supporting the Transition from Arithmetic to Algebraic Reasoning grant. As a post-doctoral research specialist at the University of California at Santa Cruz's NSF-funded Center for the Mathematics Education of Latinos/Latinas, he was part of a research team investigating mathematical discourse practices of Latino youth. Currently, he is a Senior Instructor and a Master Teacher with CU Teach.

Schneider earned his BA in Business Economics and his MEd in Teaching and Learning from the University of California, Santa Barbara, and his PhD in Curriculum and Instruction in Mathematics at CU-Boulder.



Karen Germann has spent the last 13 years teaching junior and senior high school science and technology classes in public schools in Nevada and Colorado where she helped basic science students achieve success and guided honors chemistry students. Prior to becoming a teacher, Germann worked as a chemist in environmental analytical laboratories for nearly a decade. She continues to serve a technical consulting firm as a staff scientist and subject matter expert. Currently, she is a Senior Instructor and a Master Teacher with CU Teach.

Germann has a BS degree in Chemistry from Clarkson University and her MEd degree in Curriculum and Instruction from the University of Nevada, Las Vegas.

NEW FACULTY

Please Join Us in Welcoming Our New Faculty



Kris D. Gutiérrez, Professor in the School of Education, is the inaugural recipient of the University of Colorado at Boulder Provost's Chair. Gutiérrez, renowned for her groundbreaking research in language, literacy, and human development, joined the CU faculty this year. Prior to accepting a professorship at the School of Education, Gutiérrez was a Professor of Social Research Methodology in the Graduate School of Education & Information Studies at the University of California, Los Angeles, where she also served as Director of the Education Studies Minor and Director of the Center for the Study of Urban Literacies. Professor Gutiérrez is a national leader in education and urban education in particular, and

recently served on President Obama's Education Policy Transition Team. She earned her PhD in English and Education at CU-Boulder.

Issues of equity and excellence are important and recurrent themes in her work. Professor Gutiérrez's research has been published widely in premier academic journals and she has received numerous awards, including the American Educational Research Association (AERA) Distinguished Scholar Award 2007 and the 2005 AERA Division C Sylvia Scribner Award. She was recently elected President of the National Conference on Research in Language and Literacy and is the AERA President-Elect.



Collinus Hutt, a Denver native, comes to the School of Education after eight years of teaching and leading diversity initiatives at Graland Country Day School, a Denver independent school. Hutt serves as a Senior Instructor and the new Director of Recruitment and Retention for the School of Education. She is a graduate of the school's Master's Plus degree program and has a wealth of knowledge on issues related to equity and justice in education.

Hutt has consulted for other independent schools on issues related to curriculum development and social action. In 2008, she was named co-chair of the National Association of Independent Schools' (NAIS) 2009 People of Color Conference to be held in Denver in December. She has worked with NAIS for the last four years as a facilitator for the Student Diversity Leadership Conference.



Christy M. Moroye is the new Director of School-University Partnerships in the School of Education at CU-Boulder. She directs the Partners in Education (PIE) program, co-coordinates the Teachers of Color and Allies Summit, and participates in the development of other partnership activities between CU and local school districts. In addition to her work as director, Moroye teaches the Professional Seminar in Teaching and Learning, part of the Master's Plus program.

Before coming to the University of Colorado, Moroye was an assistant professor at the University of Iowa College of Education. There she taught a variety of graduate and

undergraduate courses in teacher education and curriculum studies. Moroye also conducted research on ecological and aesthetic perspectives of education, and she continues that work now in local Colorado schools. In 2008, her dissertation, "Greening our Future: The practices of ecologically minded teachers," won the American Educational Research Association Outstanding Dissertation Award for Curriculum Studies. She completed her PhD in Curriculum and Instruction at the University of Denver in 2007 and taught high school English for eight years in the Cherry Creek (Colorado) School District.



Finbarr Sloane received his PhD in Education from the Measurement, Evaluation, and Statistical Analysis Program at the University of Chicago with special emphasis in mathematics education. He has taught at the University of Chicago, the University of Illinois, and Arizona State University. Prior to coming to CU-Boulder, he worked in industry as a research statistician and as a program director at the National Science Foundation (NSF). At the NSF he was affiliated with the Research on Learning in Education program and was program manager for the Interagency Education Research Initiative and the TIMSS 2000 study. He is presently serving as a methodological consultant in support of the World Bank's educational efforts in South Africa. He is the School of Education's

Associate Dean for Research.

Sloane's research focuses on the learning of mathematics, behavioral methodology, and the modeling of student mathematical development in multilevel contexts. Most recently, his research has appeared in the *Educational Researcher*, *Reading Research Quarterly*, and *Theory into Practice*. He is currently the chair of the Hierarchical Linear Modeling SIG of the American Educational Research Association. His research has been funded by the Ball Foundation, the Campus Research Board at the University of Illinois, the government of Ireland, the Joyce Foundation, the U.S. Department of Education's Institute of Education Sciences, and the NSF. ■

EYE ON RESEARCH

Stolen Promise:

The Making and Unmaking of Minority Girls in Engineering

By Margaret Eisenhart

For three years, I and several graduate students have been working closely with 65 high school girls in Denver. The after-school program we run for them, “Female Recruits Explore Engineering” (FREE), is designed to spark interest in engineering and information technology (IT) among Latina and African-American, working-class girls who are strong in math and science but not already interested in one of these fields. The girls represent the “untapped pool” of people who, by high school, are prepared to go into math- and science-related fields but are not planning to do so.

FREE focused on overcoming the nerdy-male image of engineering/IT and triggering interest in these fields. We found it easy to dispense with the nerdy-male image. Rather than having a negative or “not-for-me” image, the girls knew almost nothing about engineering or IT. The fields weren’t unappealing, they were unknown. It was also easy to generate interest in a variety of cutting-edge engineering developments. For two years the girls explored the Web for types of engineering they found appealing, discussed them with us and each other, chose engineering labs and workplaces to visit, met practicing engineers, and designed and built their own small-scale engineering projects.

By fall 2008, some girls had dropped out of FREE for lack of interest and other reasons, but 40 (61%) continued to participate voluntarily in our program, and two-thirds of them said they were considering engineering or IT in college.

As high school seniors, the girls ranked at or near the top of their class. They were class presidents, Honor Society leaders, soccer team captains, and prom organizers. They were popular at school and involved in their communities. They were close to their families and worked after school to help support them. All of them hoped to attend college; some in engineering, IT, or a related field.

But few ended up doing so, at least in the way they had expected. Although they had done everything right as students, and FREE had succeeded in getting them interested in engineering, they faced heartbreaking barriers to moving on to college.

Take Antonia, a bubbly Mexican American from a working-class, immigrant family. She arrived in the U.S. when she was 1 year old. She

“Although they had done everything right as students, and FREE had succeeded in getting them interested in engineering, they faced heartbreaking barriers to moving on to college.”

has strong ties to her family, both in the U.S. and Mexico. She is active in her church and in a local organization that raises money for her natal village in Mexico. Antonia attended a public high school that made a special effort to place all its graduates in college. She was an A student at the school, taking AP courses. She was captain of her school’s varsity soccer team. She and her father frequently debate political issues, although neither can vote in the U.S. He pays taxes on his income and property, although he can receive no benefits.

During her junior year of high school, Antonia decided she would like to be an engineer in a biomedical field.

In her senior year, Antonia’s father lost his job and could not support her college expenses.

Nonetheless, counselors at her school insisted that she apply. In December, she was thrilled to find out that she had been accepted at all the schools she applied to, then devastated when told that without a green card, she was ineligible for any federal or scholarship aid. Eventually she enrolled at a local community college, with no engineering program.

Iliana is another Mexican American who was very serious about school, made good grades, and wanted to be a computer engineer. During her junior year at a large public high school, Iliana worked at Taco Bell; volunteered for Boys and Girls Club, a local food bank, and Planned Parenthood; and took three AP courses (chemistry, calculus, history) and four honors courses. She is a legal resident.

Iliana’s parents insisted that she work after school to contribute to the family income. The best job she could find was the night shift (9 p.m. to 4 a.m.) at Taco Bell, so she arrived home at 4:30 weekday mornings and had to be at school by 7. During her junior year, Iliana’s family moved to Mexico for several months, thereby disrupting her high school career. Nonetheless, when Iliana returned and went back to working as much as ever, she made up the schoolwork she had missed and planned to graduate with her class.

Iliana was determined to go to college in computer engineering: “If my job becomes a problem, or my boyfriend—whatever it takes to go to college, I’ll do.” She had a small group of girlfriends with interests in engineering or science. She hoped they would all get into the same college and go there together. She started applications for two universities but didn’t find time to write the college essay. She learned that she scored poorly on the ACT, so she enrolled in an ACT prep class to raise her score. At the same time, she was promoted at her job (still working the same hours), moved in and then out with her boyfriend, and took over leadership of a SMART Girls program (in which

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EYE ON RESEARCH



FREE participants, at left, work on an adjustable high-heel shoe. Above, FREE students visit CU-Boulder.

high school girls mentor middle school girls to avoid common traps of growing up) that met every afternoon. She learned she had leukemia and was hospitalized for several months.

As of fall 2009, her leukemia is in remission, she is working full time at Taco Bell, and she is not in college.

Antonia and Iliana's stories are two of many. Almost every girl faced one or more obstacle. They experienced offers of money to cover college expenses that were later withdrawn, sometimes by parents who had lost their jobs or individual benefactors who decided for someone else. They got misleading or incomplete information about college entrance requirements and financial assistance at school. The Dream Act—to allow undocumented students attending Colorado high schools to pay in-state tuition for college and introduced several times in the Colorado Legislature while the girls were in high school—never passed. For various large and small reasons, most of these bright, determined, and conscientious girls did not end up in the fields or colleges they had dreamed of.

By fall 2009, only two of 26 girls who had said in March that they wanted to pursue engineering or IT were doing so. All 40 of the girls who continued in FREE were eventually accepted to at least one selective college, but only 11 were going. Of the 40, only 17 could move away from home to attend college, and three were not attending college at all. How could this happen to young women with such stellar accomplishments and goals so consistent with U.S. workforce priorities?

Helen Thorpe, journalist and wife of Denver mayor, John Hickenlooper, recently published a book, *Just Like Us* (Scribner, 2009), which tells similar true stories of four Mexican-American girls growing up in Denver in the first decade of the 21st century. Of the four girls, who are best friends, two are documented and two are not. They, too, were outstanding high school students who struggled, in one way or another, to get to college (though not in engineering/IT). For the undocumented girls, their opportunities were more limited and fraught than those of their documented peers', but all four struggled. Like Antonia and Iliana, their route to college was nothing like what American education promises its very best students. For the girls in Thorpe's book, wealthy or well-connected benefactors could help them, an advantage the FREE girls did not have.

For the girls in FREE, failure to pursue engineering or IT cannot be attributed to a school program that did not work. It cannot be attributed to a nerdy-male image or a lack of interest in engineering. It cannot be attributed to personal characteristics or lack of encouragement. It also is not attributable to discrimination or harassment in engineering. It is due to political, economic, and educational obstacles that block access to top-tier colleges with engineering programs. In an ironic twist, a few of the girls, including Antonia, talked about pursuing engineering at Mexican colleges, not because they wanted to go there, but because they saw no other way to pursue their interests. Perhaps they could sometime return on H-1B visas! ■



Margaret Eisenhart

Distinguished Professor Margaret Eisenhart teaches educational anthropology and qualitative research methods in the School of Education. Her recent research has focused on U.S. women's access to and choices for or against careers in science, technology, engineering, and mathematics fields. She is particularly interested in how career access and choice are perceived by the women themselves and worked out in the context of their everyday lives. The research described here is from her 2006-09 project, "Potential Recruits to Engineering: A Longitudinal Study of Diverse Academically-Able Young Women," supported by the National Science Foundation, the CU Provost's Office, the CU School of Education, Research in Motion, and Verizon Wireless.

STEM Awards Announced

The University of Colorado at Boulder is serious about integrating science, technology, engineering, and math (STEM) education and is preparing to launch a national-scale institute to incubate multi-disciplinary educational research. These efforts, endorsed by Regents, the Chancellor of the CU-Boulder campus, and several state legislators, were highlighted during an Aug. 31 public symposium on the Boulder campus. CU-Boulder is taking a lead role nationwide in institutional, multi-disciplinary collaborations to address the national crisis in STEM education.

The Aug. 31 event featured an address by CU-Boulder's Interim Provost Stein Sture, three university deans, and the introduction of faculty and graduate fellows. More than 30 individual programs were featured in a poster session highlighting STEM education efforts being conducted in Colorado, including the STEM Colorado Learning Assistant program, the CU Teach program, the Science Education Initiative, and the Bioliteracy program.

The following awards were announced at the symposium:

Chancellor's Award for Excellence in STEM Education

Dr. Clayton Lewis, Computer Science
 Dr. Eric Frew, Aerospace Engineering
 Dr. Erin Furtak, School of Education
 Dr. Steven Pollock, Physics

Graduate Student Awards:

Ryan Grover and Louisa Harris, School of Education
Advisor, David Webb
 Lauren Cost and Ben Spike, Physics
Advisors, Steven Pollock and Noah Finkelstein
 Colin Wallace, Astrophysics
Advisor, Doug Duncan
 Sarah Roberts, School of Education
Advisor, Erin Furtak
 David Cheeseman, Computer Science
Advisor, Michael Main

Kim Trenbath, Atmospheric and Oceanic Sciences
Advisor, Linnea Avallone

For more information about the awards, visit
http://www.colorado.edu/education/pdfs/STEM_symposium.pdf.

Institutions of higher education were recently challenged by the National Science Foundation to think strategically about integrating NSF-funded efforts to motivate lasting educational change. NSF's Innovation through Institutional Integration, or I³ program, has funded six institutions of higher education nationally, with CU-Boulder serving as a model.

CU-Boulder's I³ program, Integrating STEM Education, is in the process of assimilating existing efforts and supporting new initiatives in STEM education at CU. It is supported partially through NSF funds, but seeks additional funding through grants and donor gifts. Program goals include building the STEM education research community, preparing future STEM primary, middle, high school and college teachers, and transforming undergraduate STEM education at all levels.

The CU-Boulder project will culminate in an institute that links the School of Education, the College of Engineering and Applied Science, and departments in life sciences, mathematics, and physical sciences. The institute will provide the infrastructure for centralizing key ideas, strategies, and results.

CU Physics Professor Noah Finkelstein said that Integrating STEM Education "capitalizes on local efforts for discipline-based research in biology, astronomy, geology, chemistry, engineering, physics, and math."

CU School of Education Professor Valerie Otero added, "Rising to meet the national challenge in STEM education requires pooled efforts from the many talented researchers in the region. NSF's generous I³ funding allows us to integrate efforts toward large-scale educational change." ■

For more information about STEM Colorado, visit stem.colorado.edu/.

Stephen A. Romine (1912-2009)

Stephen Romine, who, in 1959 became the first dean of the newly named School of Education at CU-Boulder, passed away in Seattle July 28 at age 96. Instrumental in developing the School of Education, Romine was its dean for many years. An influential and widely known expert, he served on numerous national education committees and consulted for the U.S. government in Europe and the Far East.

A former high school teacher, principal, and superintendent of schools in Oklahoma and Colorado, Romine earned his MEd in 1940 and his PhD in education in 1947 at CU-Boulder where he joined the CU faculty. He retired in 1976 after 29 years as a professor and administrator. In recognition of his service, he received the prestigious Robert L. Stearns award.

He authored more than 100 articles and two books, *Building the High School Curriculum* and *Accreditation and the New Accountability in Higher*

Education, and contributed to Calvin Grieder's *American Public Education*.

Dean Romine is well remembered and respected by the many former students with whom he worked. One elementary school teacher recalled that "despite his position as dean, Dr. Romine made us undergrads feel welcome to talk with him about our preparation as future teachers." One of his former doctoral candidates wrote: "He was such an amazing guy! As my advisor for my PhD (1974) he kept me on track and on task. I was very privileged to have him as a mentor and advocate...he was a wonderful role model for all of us in our program."

A perceptive niece added to the accolades: "One could not help but be impressed with his many accomplishments, achieved with great modesty and a spirit of compassion and understanding of human nature. The honors he received during his lifetime

were not sought; they came about as a natural result of the respect and admiration of his colleagues."

CU Education Professor Phil Langer, who overlapped Romine's tenure by one year, said that Romine was a "fitness bug" and that "everybody talked about his commitment to physical well being." At age 93, Steve Romine participated in a family team event, running the final leg of the competition. As his three children recalled, "this effort reflected the commitment, drive for excellence, and the achievement of so many of his endeavors—professional, creative, and athletic—throughout his life." ■



Stephen Romine

Hoopoe Books

Alumna Supports Thinking Skills through Authentic Literature

When Susan Josephs earned her BA in 1971 from CU-Boulder she did not hesitate to follow her lifelong desire to teach. Her first job was with a daycare facility in Boulder where one of her responsibilities was nap duty. The kids were supposed to sleep for an hour, but getting them to do so was a challenge.

Undeterred, Josephs changed the routine. Instead of naptime, she turned the hour into story time. She began with *The Odyssey*, telling them a chapter each day.

"That experience became a very powerful lesson for me in terms of using authentic literature for children and it's something I never forgot. To have these 4-year-old kids ask me about a Cyclops and Odysseus was pretty amazing," Josephs said. "I learned what you could accomplish with children if you didn't limit your expectations." This realization eventually led to helping teachers and parents increase children's achievements by raising expectations.

Fast forward past teaching and consulting for 25 years in various underserved educational venues around the country, to a decade ago when an enticing opportunity came Josephs's way. A nonprofit educational organization, the Institute for the Study of Human Knowledge (ISHK), had acquired a manuscript, collected by Idries Shah, consisting of original, oral tradition teaching stories from Afghanistan, Central Asia, and the Middle East. ISHK's Hoopoe Books, in Bethel, Conn., published the stories as children's picture books. (Learn more about Hoopoe Books at www.hoopoekids.com and the Share Literacy program for disadvantaged students at www.shareliteracy.org.)

Josephs is the education consultant for curricula

development for Hoopoe Books. She developed Pre K-9th grade curricula to aid teachers who use Hoopoe books in their classes. "The supplemental curricula focus on helping teachers develop literacy, higher-level thinking skills, such as analogical thinking, social emotions skills, such as empathy, and strong school-home communication," Josephs said. "The kids, very

gently, get to hear in the story, events, characters, and experiences that enhance their ability to reflect on how their actions affect others."

Funded programs provide participating schools with different levels of support, including books (which the students may keep), lesson plans, and professional development, as well as CDs and literacy newsletters for families.

"In so many instances, these gifts have provided the first books in the homes of many children," said Josephs, who has worked with students in the juvenile courts schools, Head Start preschools, and after-school programs throughout the country.

A relatively new initiative being undertaken involves training University of Redlands student volunteers to use Hoopoe curricula and books to work with juveniles in the San Bernardino Juvenile Court School to help them engage in reading and writing. Josephs and others involved hope to model this program for more institutions so that additional student volunteers are trained to work with incarcerated youth or truancy schools. ■



"I never had a book till now. I never read a book till juvie."

— A student at San Bernardino Juvenile Court School on acquiring a Hoopoe book.



Susan Josephs

"That experience became a very powerful lesson for me in terms of using authentic literature for children and it's something I never forgot."

Updates from the PDK University of Colorado Chapter

Phi Delta Kappa (PDK) is an international organization of committed educators dedicated to advancing service, research, and leadership in the education profession. PDK programs and publications are designed to stimulate professional growth and to deal with current issues in public education. Members include teachers, administrators, education specialists, university faculty, teacher candidates, and graduate students in education.

Are you interested in becoming a member of our local chapter or renewing an old membership? The simple process may be performed online at <http://www.pdkintl.org/join/index.htm>.

The Boulder chapter is also seeking qualified current members to fill several Board vacancies. If you would like more information, please contact mark.sparr@bvsd.org or kent.cruger@bvsd.org.

Our chapter organized and sponsored a panel discussion as part of the fall Teachers of Color and Allies Summit. Local district administrators addressed issues of diversity and inclusion from a leadership perspective. ■



KUDOS

FACULTY

Lorenzo Aragon, director of the BUENO-High School Equivalency Program (HEP), announced that the program received \$474,324 in federal funding to continue helping migrant and seasonal farmworkers in Colorado obtain the equivalent of a high school diploma.

Derek Briggs' study on college entrance exam test preparation received widespread media coverage, including *The New York Times*, *The Wall Street Journal*, *The Chronicle of Higher Education*, *USA Today*, *The Washington Post*, and several broadcast stations. His report, "Preparation for College Admission Exams," found that SAT coaching resulted in about 30 points in score improvement on that test, out of a possible 1600, and less than one point out of a possible 36 on the ACT. The study was commissioned by the National Association of College Admission Counseling.

Erin Furtak has authored two books: *Formative Assessment for Secondary Science Teachers* and *The Dilemma of Guidance: An Exploration of Scientific Inquiry Teaching*. She is also engaged in an ongoing outreach project at a school in Kingston, Jamaica, that included several lectures on formative assessment. She hopes to help teachers deliver better classroom instruction in math and science and improve students' performance.

Kris Gutiérrez was honored as the inaugural Provost's Chair and was named as one of the 2009 Hispanic Business Top 100 Hispanic Influentials.

Susan Jurow was honored with the Provost's Faculty Achievement Award for her article in *The Journal of the Learning Sciences*: "Expanding the Disciplinary Expertise of a Middle School Mathematics Classroom: Re-Contextualizing Student Models in Conversations with Visiting Specialists."

Ben Kirshner was awarded the 2009 Ernest A. Lynton Citation for Distinguished Engaged Scholarship for Early Career Faculty from the New England Resource Center for Higher Education. The award honors those who exemplify how teaching, research, and service overlap and are mutually reinforcing in fulfilling higher education's academic and civic missions.

Valerie Otero won the Provost's Faculty Achievement Award, recognized for an article in *Science*: "Who Is Responsible for Preparing Science Teachers?"—coauthored by Noah Finkelstein, Richard McGray, and Steven Pollock.

Kevin Welner, **Ed Wiley**, and **Carol Burris** co-authored an article in *Teachers College Record* on a successful detracking reform in Rockville Center, N.Y.: "Accountability, Rigor, and Detracking: Achievement Effects of Embracing a Challenging Curriculum as a Universal Good for All Students." Welner also responded to controversy over President Obama's talk to classrooms in an article in *The Denver Post*: "Schools attempt balancing act over Obama talk."

STUDENTS

May Lee, Curriculum & Instruction PhD student, was awarded a National Science Foundation Graduate Research Fellowship to support her dissertation research. Lee is focusing on physics education research and her dissertation will address the use of modeling instruction in high school physics courses.

Angeles Osorio was awarded the Fulbright—Garcia Robles Award to study at CU-Boulder as part of the U.S./Mexico Commission for Education and Cultural Exchange (known as Comexus). The award offers financial support and airfare. Osorio is a student at Benemérita Universidad Autónoma de Puebla and is here for a semester studying in the Educational Equity and Cultural Diversity division learning research methods for studying second language acquisition.

Eduardo Otero was awarded the Fulbright—Garcia Robles Award to study at CU-Boulder as part of the U.S./Mexico Commission for Education and Cultural Exchange (known as Comexus). The award offers financial support and airfare. Otero is a student at Benemérita Universidad Autónoma de Puebla and is here for a semester studying in the Educational Equity and Cultural Diversity division learning research methods for studying second language acquisition.

ALUMNI

Erik Fredell (PhD '86) completed his Superintendent's Licensure and has served 31 years in Colorado public education, currently as principal at the USAFA's Air Academy High School.

Marc Major (MA Plus '94) authored *The Teacher's Survival Guide: Real Classroom Dilemmas and Practical Solutions* and just co-founded Cleargreen Advisors (www.cleargreenadvisors.com).

Mark Mavrogianes (BA '72) retired from teaching at Northglenn High School after 36 years and now teaches part time in the History department at the Boulder campus of Front Range Community College.

Michael Orosco (PhD '07, MA '01) received a \$1.4 million grant from the U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, to support growth in literacy, language, and cognition of Latino English-language learners with his co-principal investigator, Lee Swanson. He is also the recipient of the 2009 Outstanding Dissertation Research Award, Honorable Mention, American Association of Hispanic Higher Education/Educational Testing Service.

Sarah A. Roberts (PhD '09) had her article, "Supporting English Language Learners' Development of Mathematical Literacy" published in *Democracy & Education*, Vol 18, No 3.

Jeanne Sparling (MA '00) won a 2009 Best Should Teach Gold Award—Public School Teachers and was honored at the Best Should Teach event on campus this summer.

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TELL YOUR STORY

Casey Students Express Stories Through Writing and Art Making

During the *Tell Your Story!* Summer Writing and Arts Workshop, 30 student participants explored and expressed the stories of their lives through writing and art making. The techniques used provide students ways to reflect, enliven, and communicate their ideas, questions, and hopes. *Tell Your Story!* encourages storytelling through multiple modes of communication and sharing stories with others of diverse backgrounds.

Two University of Colorado groups, Spoken, founded by School of Education Professor William McGinley, and Artsbridge, a community service learning project within the Department of Art & Art History, held the workshop on the CU-Boulder campus in July. The eight-day workshop, led by faculty, graduate students, teachers, and artists from the School of Education, the Department of Art & Art History, and Boulder's Casey Middle School, was designed for Casey students.

"The workshop was rewarding beyond my expectations and meaningful in its own way for all those teachers and students who participated," McGinley said. "We all got to live the idea that the narrative composition of our lives is an act of creation that engages all of us every day."

Spoken integrates language arts and visual arts, media, and performance arts by working with teachers to create frameworks for incorporating these spoken literacies into the written literacies of school. *Tell Your Story!* is supported by the Boulder Valley School District, CU Outreach Grants, and private gifts. ■



Photos by Casey A. Cass

Under the guidance of CU Professor William McGinley, students from Casey Middle School prepare photographs for composing their digital media stories as part of the *Tell Your Story!* summer workshop.



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