CEO Updates is a biweekly newsletter for science educators from the Coalition for Education and Outreach (CEO), a community of STEM educators based at UC Berkeley. Subscription is free and open to all. Click here to subscribe/unsubscribe. Email the editor.

Coming up at CEO

11/10/15 CEO monthly meeting, 12:00 to 1:30 pm. Meaningful and measurable making—Featured speaker: Rena Dorph, Director of the Research Group at the Lawrence Hall of Science. Many individuals, programs, and organizations have embraced the idea that “making” can spark and foster STEM engagement and learning. Making has been characterized by interest-driven engagement in creative production at the crossroads and fringes of disciplines such as science, technology, engineering, art, and math. Many advocates and researchers argue that making has emerged as an engaging entry point and activity for STEM education. Given the variability of making experiences, how do we know that making is making a difference? This talk will explore these issues and share insights about how research and evaluation in making can inform practice, leading to deeper participant engagement and better learning outcomes. Location: 303 Doe Library.

View the complete CEO event and meeting schedule.

Events

11/4/15 Get global ready: Thriving in an intercultural workplace, 1:30–4:00 pm As UC Berkeley becomes more global, understanding different cultural styles is imperative, as is making constructive efforts to bridge gaps in these various styles. Participants will gain complimentary access to an online assessment called GlobeSmart (normally $20), receive a personalized profile of your preferred intercultural work style, be able to compare your profile to the average profile from another country and/or other individuals at UCB. Location: International House Home Room. Registration is free, but limited to UCB personnel. Register for the workshop through the UC Learning Center on blu.

Funding

NSF Innovative Technology Experiences for Students and Teachers (ITEST).
Deadline: 11/13/15. ITEST promotes PreK-12 student interests and capacities to participate in
the science, technology, engineering, and mathematics (STEM) and information and communications technology (ICT) workforce of the future. To achieve this objective, ITEST supports the development, implementation, and selective spread of innovative strategies for engaging students in experiences that: (1) increase student awareness of STEM and ICT careers; (2) motivate students to pursue the education necessary to participate in those careers; and/or (3) provide students with technology-rich experiences that develop their knowledge of related content and skills (including critical thinking skills) needed for entering the STEM workforce.

Opportunities

**Allen Distinguished Educators (ADE) Award** honors K-12 teachers who create innovative, student-directed programs focused on computer science, engineering and/or entrepreneurship skills. **Application deadline: 11/1/15.**

**Albert Einstein Distinguished Educator Fellowship (AEF)** provides a unique opportunity for accomplished K-12 science, technology, engineering and mathematics (STEM) educators to serve 11 months in a Federal agency or U.S. Congressional office. Einstein Fellows bring their extensive classroom knowledge and experience to their host offices to inform Federal STEM education efforts. **Application deadline: 11/19/15.**

**Cooke Undergraduate Transfer Scholarship program** is now accepting applications. The program is open to community college students who wish to continue their studies at a four-year institution in fall 2016. This scholarship for top community college students seeking to complete their bachelor’s degrees is the largest private scholarship for community college transfer students in the country. Cooke Scholars receive up to $40,000 for each year – plus college planning support, ongoing advising, and the opportunities for study abroad and internship stipends. They also become eligible for a $50,000 per year Cooke Graduate Scholarship. **Application deadline: 12/15/15.**

New & noteworthy

**The STEM Education Act of 2015** With a unanimous consent motion in the Senate and near unanimous support in the House, Congress sent The STEM Education Act of 2015 to President Obama’s desk for his signature on October 1. The new law has three parts: 1) it amends the NSF Robert Noyce Master Teaching Fellowship to expand eligibility to math and science teachers who currently possess a bachelor’s degree in their field. The Master Teaching Fellowships provide teachers support toward a master’s degree and leadership training in order to prepare them to become master teachers; 2) it authorizes NSF to continue its focus on informal and out-of-school STEM learning activities and settings; and 3) it explicitly incorporates computer science into the definition of STEM education for federal purposes.

**US Dept. of Education Resource Guide: Supporting Undocumented Youth** This newly-released US Department of Education guide is designed to help educators support undocumented students in high school and college. It includes information on the rights of undocumented students; tips for how educators can support undocumented youth; information on non-citizen access to federal financial aid; a list of private scholarships for which undocumented youth might be eligible; information on federally-funded adult education programs at the local level; guidance for migrant students in accessing their education records for Deferred Action for Childhood Arrivals (DACA).
NIH addresses the science of diversity  NIH Chief Officer for Scientific Workforce Diversity, Hannah Valantine, M.D., and NIH Director Francis S. Collins, M.D., Ph.D., offer a fresh take on scientific workforce diversity – approaching it as a scientific opportunity rather than as an intractable problem. Beyond ensuring fairness in scientific workforce representation, recruiting and retaining a diverse set of minds and approaches is vital to harnessing the complete intellectual capital of the nation. It is abundantly clear from research – much of it in the business, social sciences, and educational literature – that diversity improves team performance and has many other positive benefits. What is less clear – and where we need more research – is how diversity plays out in scientific settings. H. Valantine, F.S. Collins, PNAS Early Edition (2015). www.pnas.org/cgi/doi/10.1073/pnas.1515612112

UC Berkeley's new African American Initiative — a comprehensive effort to address the underrepresentation and campus climate for African American students, faculty and staff — includes plans for a $20 million endowed scholarship fund, as well as a number of steps aimed at boosting recruitment and yield for black undergrads, and at improving the campus's social, personal, and academic support to current and future African American students. Read more: "Ambitious new African American Initiative aims to improve climate"-Berkeley News, 9/3/15.

‘Blind analysis’ could reduce bias in social science research A course on critical thinking at UC Berkeley, co-taught for the past three years by a public policy expert and a Nobel Prize-winning physicist, has generated a new proposal to remove sources of bias in research and improve confidence in published studies. Social science research got a black eye recently when the authors of several studies were shown to have manipulated data. But the more prevalent issue in the social sciences today is not actual fraud, but subtle and usually inadvertent bias that skews the conclusions of studies and often makes them unrepeatable. In a commentary in the 10/8/15 issue of Nature, Robert MacCoun, a former UC Berkeley professor of law and public policy who is now at Stanford University, and Saul Perlmutter, a Berkeley professor of physics who won the 2011 Nobel Prize in Physics for the discovery of dark energy, propose that empirical scientists in the fields of biology, psychology and the social sciences adopt some of the blind analysis techniques now common in some fields of physics. B. Sanders, The Berkeleyan, 10/8/15.

New report on afterschool programs Full STEM Ahead: Afterschool Programs Step Up as Key Partners in STEM Education, produced by the AfterSchool Alliance, offers a comprehensive look at parental perceptions of STEM programming offered by afterschool providers and examines demand, access and satisfaction both nationally and by state. AfterSchool Alliance, 2015.

A nuanced look at some 2-year students—New research shows that recent high school graduates who started at four-year institutions were almost 50 percentage points likelier than those who started at two-year colleges to have earned a bachelor's degree within six years. Credit transfer policies and relocating are just some of the reasons talented students who start their degrees at community college aren't able to complete a bachelor's degree. D. Lederman, Inside Higher Education, 10/6/15.

Why California's community colleges will soon offer some four-year degrees California will need about one million more people with bachelor's degrees by 2025, according to the Public Policy Institute of California, a Sacramento-based nonprofit, nonpartisan think tank.
A number of educators and policymakers, including California Gov. Jerry Brown, doubted the state’s ability to meet that goal without including community colleges, which serve a little over two million students a year — more than triple the combined enrollment of California State University (CSU) and the University of California (UC). Last year, after two failed efforts, the CA state Legislature gave the go-ahead for some community colleges to offer bachelor’s degrees on a limited basis. California, normally a bellwether in public higher education, was behind the curve this time: 21 states, from West Virginia and Vermont to Florida and Texas, gave community colleges this opportunity years ago. California’s law created pilot programs at 15 of the state’s 113 community colleges in specific high-needs technical fields.

Hechinger Report, 10/21/15.

**Teachers vs. prisons**—As Secretary of Education Arne Duncan prepares to leave his position, *The Atlantic* delves into his recent remarks on race and inequality in America’s education system. A. Arnett, *The Atlantic*, 10/6/15.

**High School Benchmarks Report** A new report from the National Student Clearinghouse shows the gaps in college enrollment and completion that are correlated with a high school’s minority level and income level. Regardless of location or minority level, the data show that students from low income schools are 10 to 20 percentage points less likely to enroll in college immediately after graduating from high school. National Student Clearinghouse, 10/14/15.

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**About CEO**

The **Coalition for Education & Outreach** (CEO) is a volunteer-led community of science educators, program administrators, faculty, and students who work in science, technology, engineering, and math (STEM) education and outreach. Our mission is to further professional development, facilitate the dissemination of best practices, and encourage information exchange among STEM educators. CEO co-chairs Kate Spohr and Dan Zevin welcome your questions, comments, and ideas.