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The latest news from the Wisconsin Center for Education Research UW–Madison School of Education SUMMER 2016

PRE-K THROUGH HIGHER EDUCATION

Motion Meets Emotion

Dance Program Empowers Underserved Girls

On a Saturday afternoon in May, 75 excited schoolgirls took to the stage at the University of Wisconsin–Madison to dance their hearts out. "I'm famous!" shouted a 10-year-old after performing.

This annual showcase is the punctuation mark on a one-of-a-kind, 30-week dance education program, Performing Ourselves, taught by undergraduate dance students, funded by grants, and envisioned by university educators and accomplished dancers Kate Corby and Mariah LeFeber.

"Our goal is to empower and build the confidence of girls, ages 5 to 14, from low-income families, who don't have access to an afterschool dance program," says Corby, an award-winning choreographer and associate professor of dance in the UW–Madison School of Education's Dance Department, founded in 1926 as the first university dance program in the U.S.

In 2011, Corby and LeFeber, a then-adjunct professor in the dance department and board-certified dance/movement therapist, started a pilot program with a \$1,000 grant that combined dance education and dance/movement therapy—which interconnects motion and emotion. It exploded from there.

Now in its fourth year, Performing Ourselves is funded by private donations and grants, including \$6,000 from the Wisconsin Center for Education Research. They work with seven community partners, serving nearly 100 students, in first through 12th grade.

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Performing Ourselves empowers and builds the confidence of underserved girls through dance.

Rethinking the Skills Gap

Teaching 21st-Century Skills to Meet Workforce Demand

In 2013, researchers Matthew T. Hora, Ross Benbow and Amanda Oleson from the Wisconsin Center for Education Research at the University of Wisconsin–Madison launched a \$600,000 NSF-funded study on the controversial notion that a gap between workforce needs and worker skills is slowing job growth in Wisconsin due to an out-of-touch higher education sector.

"So the story goes, there's a lack of skilled job applicants and sluggish job growth because colleges and universities are teaching theoretical classes that don't lead to high-demand careers," explains Hora, assistant professor of adult teaching and learning, who says the real problem is more complicated. "Yes, higher education must change. But employers, the broader community and policymakers are part of the problem and solution, as well."

Through interviews with 70 Wisconsin educators in twoand four-year colleges and universities, and 75 employers in biotechnology and manufacturing, researchers discovered employers greatly value abilities to work within a team, communicate, think critically and continue learning. The National Research Council calls these "21st-century competencies," which Hora says higher education must teach to better prepare students for today's demanding world.

Hora also advocates for integrating more hands-on learning and problem-solving into instruction, and suggests stronger career advising and counseling in four-year institutions. He recommends that two- and four-year schools work with businesses to create internships. "However, these initiatives are challenging when budget cuts lead to fewer counselors, larger classes and a demoralized teacher workforce."

Another key finding is that many employers don't provide ongoing training and development for employees. "That part of the skills-gap debate is largely ignored," Hora points out.

So is the hiring process. The researchers discovered that many employers make hiring decisions based on a "cultural fit." "Applicants could look great on paper, but if they don't fit the company culture, or share interests of employees, they may not get the job," Hora says, adding that some businesses may be too picky—the endless search for what the hiring firm ManpowerGroup calls the "purple squirrel" that doesn't exist.



New study finds employers are too picky when filling job vacancies and seek nonexistent "purple squirrels."

The Wisconsin study is examined in "Beyond the Skills Gap," a book by Hora, Benbow and Oleson, scheduled for release this fall by Harvard Education Press.

Recently, Hora and Benbow kicked off a national \$2.2 million NSF-funded project in collaboration with the Rochester Institute of Technology to study how key competencies from the Wisconsin study—teamwork, communication, critical thinking and lifelong learning—are cultivated in postsecondary classrooms and in four high-STEM job regions: Houston, Denver, Raleigh and Seattle. They are concentrating on the photonics, information technology, energy and advanced manufacturing industries.

Hora wants to expand the study globally by investigating the relationship between classroom teaching and workforce development in East Asia. In May, he visited Qingdao Technical College in China to study these issues and share his research on faculty development and education-industry partnerships.

A surprising find during this visit was the keen interest in active learning by faculty and administrators. "I had thought Chinese teaching was a lecture-heavy exercise in rote memorization," but Hora says that's changing. While most U.S. states are cutting education budgets, China is investing significantly in education—focusing on reforming teaching to maintain economic growth and develop innovative thinkers.

Hora also plans to expand his research to include Japan and South Korea.

MSAN Gives Voice to Minority Students

Guery Ulunque has come a long way since he first landed in the United States from Bolivia in 2008. The 18-year-old senior at Yorktown High School in Arlington, Va., recalls his struggles. "The hardest thing was adjusting to the language," says Ulunque, who was teased by classmates because he didn't speak English. It took three years, but the determined immigrant eventually became bilingual. "I learned to speak English by watching 'SpongeBob' and 'Dora the Explorer,' and listening to American music."

Back then, Ulunque could not have imagined taking the stage and confidently speaking—in English—to hundreds of educators and students. Yet last year, his social studies teacher, Anne Stewart, selected Ulunque and two Latino classmates to speak at the Minority Student

Achievement Network (MSAN) conference about the school's first-of-its-kind program for minority boys, created by Stewart and teaching partner Tracy Maguire.

"We concentrated on boys because we have so few minority boys, and we were concerned about losing them in the system," says Stewart. Monthly MSAN meetings are held during school hours to ensure high attendance, usually 100 to 170 students, and mostly blacks and Latinos.

Each meeting features a guest speaker—a high-achieving minority male from the community—or a team-building activity, such as making meals for the homeless. A Pentagon officer once spoke about his perseverance over setbacks in his life. Both black and Latino, this guest speaker resonated with Ulunque. "When he came to the U.S., he didn't know English either and taught himself, just like me."

MSAN is a national coalition of suburban-urban school districts that work together to narrow racial opportunity and achievement gaps. Launched in 1999, it is a project of the Wisconsin Center for Education Research within UW–Madison's School of Education. One of MSAN's core principles is to seek out students' voices, like Ulunque's, to inform the organization's direction, says Madeline Hafner, MSAN's executive director. She believes these two-day conferences make a profound impact in schools over time. "You walk away with personal contacts and real strategies for implementing change."



MSAN taps into students, principals, teachers and district leaders to learn best practices for closing opportunity gaps.

According to John Diamond, change is desperately needed in our nation's K-12 schools. The Hoefs-Bascom Professor of Education in Educational Leadership & Policy Analysis at UW–Madison says much work needs to be done on racial inequality and educational access. "In an integrated school, blacks and Latinos oftentimes get access to the least rigorous classrooms and least experienced teachers."

Diamond says until schools address these issues, they won't see big gains in reducing inequality. However, he believes MSAN has done an admirable job in advancing the cause. "MSAN serves as a great model of bringing people together to reflect on what has been learned, see possibilities and build relationships toward positive student outcomes."

The MSAN program has changed Ulunque's life. He met his core group of friends there and it has pushed him to excel academically. "If I want to be an MSAN student leader, I need a 3.0 GPA or higher, so I've worked really hard to get my grades up," he says.

Ulunque graduated in June with that hard-fought 3.0 GPA. Unfortunately, it was a little late for the graduating senior to parlay it into an MSAN leadership role. "That's OK," he admits. "MSAN helped me get through high school and to where I am right now." A soccer, wrestling and track athlete, Ulunque has set a new goal for himself: He plans to become a sports physical therapist and attend college in Washington, D.C., in the fall.

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The bedrock of this program is the teachers—dance students trained by Corby and LeFeber. It offers a rare opportunity for undergraduates to teach dance outside their degree program, and has paid off nicely. "Every one of our teachers has gone on to dance in nontraditional dance-studio settings," says LeFeber proudly.

Flora Kim earned her degree in 2014 and taught two years for Performing Ourselves. "This program helped me discover my passion for teaching," says the 25-year-old instructor at Boston Ballet School. "Performing Ourselves gave me the experience to land my current job. It has changed my life."

At Madison's Kennedy Heights Community Center, girls ages 9 to 15 participate in the free afterschool program once a week and appreciate that their dance mentor is a college student. LeFeber says the student teachers connect the girls to the university, a connection that can be life-changing, as college becomes something accessible to them.

With plans to secure an office, publish a dance textbook and raise teacher wages, the founders say securing grant money and donor funds are key. Says Corby: "Our dream would be that a donor says, 'We love your work and want to start an endowment."

Recent Findings



Teaching Prep in Grad School Benefits STEM Education

A seven-year study by Mark Connolly, a WCER principal investigator, found participation in teaching-development programs—from brief workshops to semester-long courses and hands-on teaching assignments—during doctoral studies can have a long-term impact on STEM teaching practices.

Early Exposure to Research Increases Undergrad STEM Persistence

Christine Pribbenow, director of WCER's LEAD Center, co-authored a study on the effects of revising a hands-on research course designed for undergraduate students to take in tandem with introductory biology, as a way to expose more students earlier to research. Pribbenow concludes that students in the one-semester class show similar gains in knowledge, math and experimental design, compared to students in the original two-semester course.



Gender and Belonging in Undergraduate Computer Science

Research shows undergraduate computer science has the highest attrition rates proportionally for women within postsecondary STEM disciplines. This comparative study by WCER researchers Ross Benbow and Erika Vivyan seeks to better understand how student experiences in local higher educational settings can influence persistence decisions, particularly for women.

Biology Scholars Program: An Evidence-Based Model for Faculty Development

What are the long-term impacts of participating in the Biology Scholars Program, one of the longest-standing faculty development programs in life sciences? In a joint study with the American Society for Microbiology, WCER researcher Christine Pribbenow discovered that BSP has been essential to its participants' professional development as faculty.

For more findings, news and events, visit: wcer.wisc.edu/news/newsletter.

