



EducationFirst

The University of Iowa College of Education Newsletter

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Remarkable Outreach

Hand, Therrien Work to Improve Science Literacy

More Iowa students will improve their science literacy thanks to a four-year \$4.8 million U.S. Department of Education Institute of Education Sciences (IES) grant received by Science Education Professor **Brian Hand**, Special Education Assistant Professor **William Therrien**, and Mack Shelley, a statistics professor at Iowa State University.



Therrien's (L) and Hand's research advances science learning across Iowa.

The grant, "Efficacy of the Science Writing Heuristic Approach," is the first science goal-level-three grant funded for work with elementary students since IES' inception seven years ago.

"The goal is to help children better understand how they come to know something," said Hand, the grant's primary investigator. "It's through argument and language strategies that better help them learn science."

Therrien said this approach to teaching science literacy has shown positive results for students who have traditionally struggled with science.

"Many students with special needs are excluded from meaningful participation in science class because of their

difficulties in reading and writing," Therrien said. "The Science Writing Heuristic approach provides an avenue for these students to be engaged in authentic science activities which results in dramatically improved performance."

"This research clearly impacts students and schools in Iowa," Dean **Sandra Bowman Damico** said.

The grant will field test the approach with 7,000 fourth-through sixth-grade students in 48 Iowa elementary schools, including both rural and urban schools. The Loess Hills and Keystone Area Education Agencies and the Iowa Department of Education will work with the research team to help identify schools, schedule activities, and provide access to pertinent data regarding student performance.

Each participating school will receive an estimated \$10,000 for its science budgets as well as training for teachers and professional development, "which is especially important during these tough economic times," Therrien said.

The research program will embed science arguments within typical inquiry lessons to improve students' understandings of science, directly addressing the critical national need for science literacy and improved science education.

"Fourth through sixth grade is a time to catch them before they start to lose interest in science," Therrien said. "As we all know, now more than ever, there really is a need for the country to have additional scientists."

Hand said that the business community and general public are also especially looking for employees with the skills this approach helps cultivate in students.



Remarkable Firsts

First to Offer Graduate Certificate in College Teaching

When School Psychology doctoral candidate **Yi Ding** began her job search for a faculty position, she was pleased to see that the training she received from the Office of Graduate Teaching Excellence provided her with an edge over her competition.



"While most doctoral students were not well prepared for teaching, I had excellent professional college-level teacher training," said Ding (EdS '06/PhD '08), now an assistant professor at the University of Toledo.

The Office of Graduate Teaching Excellence (OGTE), which opened in 2008 as a collaborative effort between the College of Education and the UI Graduate College, prepares doctoral students to be successful teachers of adult learners. The office is open to all University doctoral students, although some opportunities are specially tailored for College of Education students.

Many doctoral students express anxiety about being responsible for teaching university-level students.

Professor **Dennis R. Maki**, director of OGTE, said the program fills a gap that many are surprised exists.

"Now they are prepared for the full spectrum of their career," Maki said. "Through curriculum theory and research, supervised practice, and reflective ePortfolios, doctoral students learn to be effective educators as well as skilled researchers in their academic areas."

Like peers at other Research 1 universities, University of Iowa doctoral students are well prepared in their academic disciplines and in research methodologies. But how the Graduate Certificate in College Teaching distinguishes University of Iowa doctoral students is that their transcripts are among the first to show they have received training, experience, and certification to be competent teachers in a college-level classroom.

Educational Psychology Clinical Associate Professor **Mitch Kelly**, coordinator of the OGTE, said it's gratifying to hear from students like Ding who appreciate the training they received.

"It's good to know the program has helped her career," Kelly said, "and I'm sure her students are grateful for and value her teaching abilities as well."

Visit the Office of Graduate Teaching Excellence online at www.education.uiowa.edu/gte/.

Future Teachers Mentor Students

For an hour each week, UI student Samantha Brottman gets together with Sergio Paz, a seventh grader at Iowa City's South East Junior High School. The pair is one of 10 matches made between UI students who wish to pursue careers in education and a sixth- through ninth-grade student through the yearlong UI Leadership and Public Service Seminar offered in collaboration with the Iowa City Community School District (ICCS).

"During the time I've been meeting with Sergio, his grades have improved dramatically," said Brottman.

"We emphasize developing our students as leaders as well as the importance of public service through mentoring," said Associate Professor **Sherry Watt**, who directs the seminar.

The seminar grew out of an initiative supported by UI provosts **Tom Rocklin** and Marcella David to see how the UI could more effectively collaborate with the ICCSD.

"The seminar helps our students develop as citizens prepared to serve and lead," Rocklin said. "At the same time, we help the ICCSD students succeed. We would like to see some of those students as University of Iowa students in a few years."

Coreen Frank, who co-teaches the seminar with Watt says the program's benefits are two-fold. "It's allowed us to offer social, emotional, and academic support to students, while the UI students explore their own dramatic growth as leaders. I've

been able to see the college students grow and district students grow."

Watt said the other theme of the class is diversity.

"We try to make sure that

our UI students are getting training in cultural competence and personal awareness so we can help them develop diversity skills and learning to work with people who are different from themselves.

"This includes teaching UI students how to talk to students about everything from race and ethnicity to sexual orientation, politics and socioeconomic status. We teach them how to talk to kids about some of these issues without offending or guiding them in a certain way that might complicate things with their families."



Mentor Brottman helps Paz review his homework.

Remarkable Outreach

Ethiopian Partnership Blooms

Ethiopia is experiencing a shortage of helping professionals and the qualified instructors to train them.

To fill that gap, The University of Iowa

College of Education and Addis Ababa University have established a partnership to link faculty, students, resources, and ideas between the two universities in the coming years.

AAU is the oldest university in Ethiopia and its College of Education is one of the largest with 15 academic departments and approximately 11,000 students.

Tirussew Teferra, dean of the AAU College of Education, and five AAU department heads visited campus to meet their new collaborative partners. Teferra said he was amazed with the UI faculty he met during his visit.

"We are highly impressed with the academic background, research activities, and publications," he said. "This collaboration will help promote cultural exchange among professors and students who will have exposure to different environments. This will benefit both of us."

The AAU department heads said they would take home ideas about distance learning and assistive technology.

Abdulaziz Mamie, head of the Department of Curriculum Design and Development, said he hopes to incorporate distance education technology in Ethiopian classrooms. "With innovative technology, we can save resources and reach many."

Alemayehu Teklemariam, head of the Department of Special Needs Education at AAU, said he was impressed with the way all children, especially those with special needs, are integrated into the system. "The visit energized us," he said.



Dean Sandra Damico supports collaboration and partnership with Addis Ababa University in Ethiopia.

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