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Carnegie grant supports local STEM collaboration

UIndy, charter school will use video analysis, industry input to improve math instruction

A grant from the Carnegie Corporation of New York will help the University of Indianapolis and nearby Christel House Academy charter school collaborate with local professionals from Dow AgroSciences to improve the preparation of math teachers and the academic performance of elementary students.

UIndy is one of just five organizations nationwide that received grants from Carnegie late last year through a competition hosted for partners in 100Kin10, a national initiative to increase the ranks of highly skilled teachers in the STEM disciplines of science, technology, engineering and mathematics. The competition identified 100Kin10 partners such as UIndy that are working to prepare excellent STEM teachers, with a focus on national standards and a priority toward collaboration with school districts and other 100Kin10 partners.

The Indianapolis project involves creating “communities of practice” among UIndy education faculty, Christel House Academy teachers and UIndy students majoring in elementary education. The relationship will allow undergraduate teacher candidates to practice and refine their skills in a real-life setting with a diverse population of high-need urban students. In preparation, UIndy’s Elementary Teacher Education program has augmented its curriculum with additional courses in math content and methods to address the national Standards for Mathematical Practice.

“We believe this project offers a new vision of collaboration and professional development,” said UIndy Professor John Somers, principal investigator on the \$50,000 grant. “It’s a vision that builds on the apprenticeship model, but puts the professionals and the teaching candidates in the dual roles of learner and teacher.”

Video analysis is a key tool in the project, which began in January and will continue through October, though participants hope the relationships will continue into the future. As student teachers and working teachers collaborate in developing new math lesson plans, portable systems using tablet computers and robotic tracking will record the UIndy candidates presenting lessons in the classroom. The resulting videos will be uploaded to Edthena, a virtual communication platform where Christel House teachers will coach the teacher candidates on improving their instruction, and project participants can identify content for professional development seminars.

In June, several STEM professionals from Indianapolis-based Dow AgroSciences will join the participating educators in attending the annual Project-Based Learning Institute, sponsored by UIndy, its Center of Excellence in Leadership of Learning, the Indiana University School of Education at IUPUI and the Metropolitan School District of Wayne Township. There, the partners will develop project-based lessons that will be implemented and evaluated this fall at

Christel House Academy. Project-based learning is a standards-based, inquiry-driven instructional approach in which students develop solutions to real-world problems through group investigation and collaboration.

As part of its comprehensive STEM education initiative, Dow AgroSciences provides ongoing support for UIndy and its Woodrow Wilson Indiana Teaching Fellowship, as well as support for other teacher preparedness and professional development programming.

UIndy is one of only three Indiana organizations partnering in the 100Kin10 initiative, along with the Indiana Department of Education and the I-STEM Resource Network. Launched in 2011 by the Carnegie Corporation of New York and the Institute for Advanced Study, 100Kin10 is a national network of nearly 200 partners – including major corporations, universities, school districts, charitable foundations, government agencies and other organizations – responding to the national call to prepare and retain 100,000 excellent STEM teachers by the year 2021. As of 2014, 100Kin10 is now an independent organization incubated at the National Center for Civic Innovation. More information is available at www.100kin10.org.

About elementary education at UIndy

Graduates of UIndy's highly respected Elementary Teacher Education program enjoy a 93 percent employment rate and a 93 percent satisfaction rating from the principals who hire them. Students receive a strong foundation of liberal arts education along with a standards-driven education curriculum and immersion in field experiences at diverse, high-need schools. Beginning in the freshmen year and capped by two semesters of student teaching, UIndy education students have many opportunities to observe and acquire hands-on experience in settings ranging from preschool to high school. The UIndy School of Education received the 2013 Model of Excellence Award in the Partnerships category from the National Association of Independent Liberal Arts Colleges for Teacher Education. More information is available at www.uindy.edu/education.

About Christel House Academy

Established as a public charter school in 2002, Christel House Academy (CHA) currently transforms the lives of more than 600 at-risk students. The school has a 93 percent economically disadvantaged population and a nearly equal representation of Hispanic, Black and White students; 30 percent of the students are English language learners; and 16 percent receive special education services. Recently, CHA became Indiana's first charter school to receive the National Forum to Accelerate Middle-Grades Reform's "School to Watch" designation for its commitment to student achievement, and was recognized as one of 10 MetLife Foundation–NAASP Breakthrough Schools. For more information, please visit www.cha.christelhouse.org.

About Dow AgroSciences

Dow AgroSciences, based in Indianapolis, Indiana, USA, is committed to discovering, developing and bringing to market crop protection and plant biotechnology solutions for the growing world. Dow AgroSciences is a wholly owned subsidiary of The Dow Chemical Company and had annual global sales of \$7.1 billion in 2013. Learn more at www.dowagro.com. Follow Dow AgroSciences on [Facebook](#), [Twitter](#) and [YouTube](#) or subscribe to our [News Release RSS Feed](#).