Research Projects in the Buffalo Public Schools

Teacher Education Institute (TEI) Field Experience
Fenice Boyd (Associate Professor and TEI Associate Dean for Teacher Education)
Students have successfully completed field experience and student teaching placements in 40 Buffalo Public Schools. The cohort/liaison mode that TEI follows allows students to become an integral part of the liaison school. The participants provide assistance and support to unique programs and practices specific to the liaison school. The student teachers become acquainted with the curriculum, student achievement, and building priorities. This familiarity creates a smooth transition to student teaching, which promotes optimum learning experiences for students, cooperating teachers, and other school staff at the liaison site.

Building Blocks Curriculum
Douglas Clements (SUNY Distinguished Professor)
Julie Sarama (Professor)
The Buffalo Public Schools has adopted the Building Blocks preschool mathematics curriculum. Written with a grant from the National Science Foundation, the Building Blocks program is a research-based early childhood mathematics curriculum with a proven record of success, from early pilot work in BPS to randomized controlled trials. The adoption of the Building Blocks curriculum will be phased into all BPS preschools.

Scale-Up: The TRIAD I Project (COMPLETED)
Douglas Clements (SUNY Distinguished Professor)
Julie Sarama (Professor)
The Technology-enhanced, Research-based Instruction, Assessment, and professional Development (TRIAD) project scaled-up the implementation of an integrated research-based Pre-K mathematics curriculum with an emphasis on teaching for understanding following developmental guidelines, or learning trajectories, and using technology at multiple levels.

Scale-Up: The TRIAD II Project
Douglas Clements (SUNY Distinguished Professor)
Julie Sarama (Professor)
Jaekyung Lee (Professor and Interim Dean)
This is a follow-up to the initial TRIAD project which will truly scale-up the implementation of an integrated research-based Pre-K mathematics curriculum in over 100 classrooms in two states.

Longitudinal Study of the Effects of Pre-Kindergarten Mathematics Curriculum on Low-Income Children’s Mathematical Knowledge
Douglas Clements (SUNY Distinguished Professor)
Julie Sarama (Professor)
Grant awarded by the U.S. Department of Education under the Preschool Curriculum Evaluation Research Grants Program to conduct research on the effectiveness of preschool curricula. The goal of this research is to implement rigorous evaluations of preschool curricula that will provide information to support informed choices of classroom curricula for early childhood programs in the Buffalo Public Schools.
College Success Center  
Nathan Daun-Barnett (Assistant Professor)  
A grant of $163,481 was awarded from the Buffalo Promise Neighborhood Grant (U.S. Department of Education) from July 2012 to June 2014 at Bennett High School. This project is in early stages of implementation and there is a possibility of a two-year extension at the conclusion. The research is assessing whether students are more informed about the college choice process and more likely to complete the steps to go to college (e.g., apply, complete FAFSA).

FAFSA Completion Project at South Park High School  
Nathan Daun-Barnett (Assistant Professor)  
Partnering with the United Way of Buffalo and Erie County, and located at South Park High School, this was a pilot to test the integration of FAFSA completion support with Free Tax Preparation. There was initial success with 35 students served by just 4 service learning students. The project will expand this initiative later this year.

Office of University Preparatory Programs (OUPP)  
Nathan Daun-Barnett (Assistant Professor)  
OUPP is designed to improve the ability of students to succeed in high school, and increase access to post-secondary education. OUPP is actively engaged with the Buffalo Public Schools in helping students meet new academic standards, such as those for the NYS Regents Examinations. OUPP increases access to post-secondary education for many students who may have never considered college as an option.

Career Thoughts and Attitude as Predictors of Vocational Identity for Young Adults with Attention Deficit Hyperactivity Disorder  
Abiola Dipeolu (Research Assistant Professor)  
This project runs from 2010–2012 and involves 118 participants from East High School, Hutchinson Central Technical School, Southside Park High School, and the occupational training center. Results indicated that career thoughts were significantly predicted by vocational identity and career maturity. This would allow for matching career decision making interventions to the characteristics of developing young adults with ADHD.

Charter Schools and Choice  
Jill Koyama (Assistant Professor)  
A course called Charter Schools and Choice was developed and is being taught annually at Tapestry High School. Integral to the course is an exchange of knowledge and experiences between the UB students enrolled in the class and the students, faculty, and staff at Tapestry. Students create and implement a service learning project with Tapestry during the course. Sharing of ideas is formalized in two separate discussions. In one, the UB students present their service learning project to the Tapestry community; in the second, Tapestry students, faculty, and administrators host a fieldwork experience for the UB students.

LIFTS  
Jill Koyama (Assistant Professor)  
Collaborative project with P.S. 45 and the current students in UB’s Leadership Initiative For Tomorrow’s Schools (LIFTS), an educational administration certificate training program. Since the summer of 2012, and throughout the next year, students in the LIFTS cohort 19 will be working with the administrators, staff, and faculty of P.S. 45 to develop and share a comprehensive report on the school and its surrounding community.
University at Buffalo/Buffalo Public Schools Interdisciplinary Science and Engineering Partnership
Xiufeng Liu (Professor)
UB in collaboration with the Buffalo Public Schools, Buffalo State College, and the Buffalo Museum of Science has formed a targeted math and science partnership: “The University at Buffalo/Buffalo Public Schools Interdisciplinary Science and Engineering Partnership.” The project, funded through 2016 by the National Science Foundation for $9.8 million is conducting research on the processes and conditions in which teachers develop interdisciplinary science inquiry knowledge; how this information may be translated into pedagogical content knowledge that ultimately improves students’ science learning; and how professional learning communities may support the development of this pedagogical content knowledge.

City Voices, City Visions (CVCV)
Suzanne Miller (Associate Professor)
CVCV is a digital technology project partnership that prepares teachers in curriculum-based uses of digital technologies with 6th to 12th grade urban students. Through professional development institutes, teachers learn how to engage students in authoring digital video and written documentation of school-based and community experiences to help them learn in a student-centered, inquiry-based, project-oriented curriculum.

Implementation of a Model for Teaching Information Literacy
Valerie Nesset (Assistant Professor)
This research with third graders at Frederick Law Olmsted (#64) sought to test the efficacy of a three-stage model (in two iterations) for information literacy instruction (specifically, the research process) that combines research into both information-seeking behavior and information literacy. The project goal is for the model to facilitate information literacy instruction and learning within BPS.

Learning In and Through Music
Maria Runfola (Associate Professor)
Elisabeth Etopio (Clinical Assistant Professor)
This program assists the Buffalo Community Action Organization Head Start program with ongoing implementation of research based music guidance. Currently, the program collaborates with teachers in 27 early childhood classrooms, and with the help of UB Ed.M. music education students, instructs the children in these 27 classrooms (N > 300). Of particular interest is the effect of developmentally appropriate musical experiences on children’s overall school readiness.

iLearning3: Technology Enhanced Early Science and Literacy for Diverse Learners
X. Christine Wang (Associate Professor)
Sharon Raimondi (Adjunct Associate Professor)
Aiming to address the early emergent and persistent achievement gaps between students from privileged backgrounds and those of low socio-economic status, minority groups and special needs, this research project, partnered with the Buffalo Public Schools, will develop an effective instructional model that uses the iPad as a technology platform, and integrates science and literacy in an inclusive kindergarten classroom.

Urban High School Opportunity Structures, Figured Worlds of STEM, and Choice of Major and College Destination
Lois Weis (SUNY Distinguished Professor)
The primary purpose of this research is to investigate the mechanisms through which high school opportunity structures and students’ figured worlds of STEM are linked on the ground of actual school practice to student choice of STEM major and college destination. Based upon existing research, the high school opportunity structure is conceived as the configuration of institutional arrangements—including math and science course availability, content, sequences and requirements; guidance and counseling services; technology use, and extracurricular offerings—available to pursue STEM and the mobility systems through which students actually experience STEM. At each school, the project will explore these factors and develop models of the opportunity structures.