

ITQ State Grant Awards

FY 2015 Awards (Phase 13)

Bowie State University

Project Title: Strengthening Disciplinary Writing in Math and Science through Culturally Responsive Practices

Project Director: Dr. Jacquelyn Sweeney

Award: \$112,316.28

Project Abstract: Teachers of four *High Need LEA* schools in Prince Georges County will be provided with sustained professional development (PD) focusing on strengthening writing skills in mathematics and science. Because of the culturally, linguistically, and socioeconomically diverse student populations, PGCPS teachers identified a need for Culturally Responsive Teaching (CRT). The PD is developed so that teachers may explore math and science in an in-depth manner, over a 16-month period of time, which includes capacity building, direct instruction, collaborative lesson planning, use of technology to facilitate information sharing and CRT.

The project will first offer modules of science and math content early in the project followed by CRT Writing instruction. With the support of the project team, teachers will infuse CRT Writing into creating intensive lesson plans that demonstrate writing instruction within science and math. The project culminates with participants sharing video cases and lesson plans developed during the PD.

Community College of Baltimore County and Notre Dame of Maryland University

Project Title: Middle School Mathematics Summer Institute 2015 (MSMSI-XV)

Project Director: Dr. Linda Gronberg-Quinn

Award: \$135,980

Project Abstract: Faculty members at the Community College of Baltimore Country and Notre Dame of Maryland University will work collaboratively with the Baltimore County Public Schools Office of Mathematics PreK-12, to improve the ability of teachers to teach mathematics to students in grades 6-8, concentrating on the College and Career-Ready domains of Ratios and Proportional Reasoning, Number System, and Expressions and Equations.

In early 2015, the project team will design a curriculum and recruit 24 teachers from schools identified by Baltimore County as needing mathematics professional development support. Participants will attend a 12-day summer institute with follow-up collaboration during the school year and an additional 8 contact hours of support/assistance from the project team during the 2015-16 school year.

During the summer institute, morning sessions will concentrate on deepening teachers content knowledge and afternoon sessions on pedagogic techniques and creating lesson plans that conform to the new College and Career-Ready curriculum expectations of developing students' conceptual understanding, procedural skills and fluency, and application/modeling. Afternoon sessions will also incorporate sessions on Culturally Responsive Teaching (CRT) and blending teaching and learning.

BCPS's "Blueprint 2.0" has set the goal to graduate globally competitive graduates and to transition to an all-digital environment in five years. This project will incorporate the goals of *Blueprint 2.0* and highlight the *Teaching and Learning Framework*.

Morgan State University

Project Title: Next Generation Science and Common Core Mathematics & Language Arts Standards Linked to Trans-disciplinary Teaching and Learning for Middle School Teachers

Project Director: Dr. Kevin Peters

Award: \$121,164

Project Abstract: The proposed project will provide professional development for twenty (20) middle school teachers from five low-performing targeted middle schools. Participation in this professional development activity will enhance the ability of teachers to utilize the common core and next generation standards by embedding trans-disciplinary teaching and learning strategies. The proposed project will increase the content knowledge and pedagogy skills of teachers through the integration of mathematics, science, and the language arts. Trans-disciplinary learning is the exploration of a relevant issue or problem that integrates the perspectives of multiple disciplines in order to connect new knowledge and deeper understanding to real life experiences.

The overall goal of this proposal is to increase teacher effectiveness and student achievement in the content areas of mathematics, science, and the language arts at the targeted schools. The program will be collaboratively planned and coordinated in partnership with the Baltimore City Public Schools Office of Teaching and Learning, Morgan State University, and administration and staff from the five targeted schools.

The program will involve three phases: 1) A Summer Institute focusing on the three content areas of mathematics, science, and language arts; 2) A three-credit graduate course that focuses on a trans-disciplinary approach to teaching the targeted content areas; and 3) Follow-up site visits by Morgan State University faculty and staff from the office of teacher education. Each phase will be collaboratively coordinated in partnership with the Baltimore City Public Schools Office of Teaching and Learning, Morgan State University, and administration and staff from the five targeted schools.

Project goals are: 1) Increase the content and pedagogy for middle school teachers in mathematics, science, and language arts through trans-disciplinary learning; and 2) increase the academic performance of students in mathematics, science, and the language arts.

Salisbury University

Project Title: Re-negotiating Educational Systemic Power through Early-childhood Collaborative Teaming (RESPECT)

Project Director: Dr. Claudia Burgess and Dr. Chin-Hsiu Chen

Award: \$138,900

Project Abstract: The RESPECT project will provide an opportunity for Salisbury University's faculty in the Seidel School of Education and Professional Studies and the Fulton School of Liberal Art to partner with three of Maryland's high-need Local Education Agencies in Caroline, Dorchester, and Wicomico counties.

In the proposed project, kindergarten teachers and the paraprofessionals that work in their classrooms will take part in a 16 month experience designed to help teams work collaboratively in order to gain the knowledge and skills needed for implementation of new state and national standards (Common Core Math & ELA, Science, Social Studies, and Fine Arts), pedagogical strategies, and assessments.

In order to insure a high quality professional development that maintains a focus on areas of greatest need, the proposed program has been aligned with five research grounded categories adapted from Shulman's *Subject Matter Knowledge* and *Pedagogical Knowledge* classifications as well as the professional development standards set forth by InTASC.

With a growing need for professional development, this project will provide opportunities for teams to gain complex understandings that are specifically related to: assessment, standards based content knowledge, pedagogical strategies, knowledge of Early Childhood Education, social and emotional learning, and lesson design.

At the conclusion of the project, teams will be observed teaching demonstration lessons in their schools and developing and delivering professional development workshops in their respective counties.

University of Maryland, Baltimore County

Project Title: The 2015-16 Teacher Quality in Chemistry (TQC) Program at UMBC

Project Directors: Dr. William LaCourse

Award: \$120,004

Project Abstract: The 2015-2016 Teacher Quality in Chemistry (TQC) Program at UMBC proposes to increase the number of secondary educators in Maryland who have the content knowledge in chemistry to function as highly qualified chemistry teachers by providing innovative, inquiry-based methods of delivering chemistry content. This comprehensive professional development program targets instructors teaching out-of-field or deemed not highly qualified, especially those from high-need LEAs, and will create a community of teachers who support one another in their pursuit of improved chemistry instruction. The curriculum will be guided by both the Maryland Core Learning Goals and the Next Generation Science Standards, ensuring that participants will benefit from their experience for years to come.

Participants will earn graduate credit or attendance-based stipends as they complete the program, which is comprised of six spring preparatory content sessions, a ten-day summer intensive practicum consisting of laboratory experience and practice teaching, and multiple follow-up activities during the 2015-2016 school year.

The TQC Program culminates with a capstone Share Our Success Poster and Seminar Day during which teachers will present posters of lesson plans to each other and invited guests. Based on the experience of seven prior TQC programs, participants will be encouraged to commit to the extended program with opportunities to receive either graduate credits or attendance based stipends, as well as books and resource materials. Distance learning accommodations will be made in the spring sessions for participants living far from UMBC; summer housing will be available for a limited number of participants as well.

An external evaluation will determine program effectiveness through pre- and post-tests, surveys and a focus group. Summer practice teachings sessions with high school and college students, classroom observations, and in-person and online consultations will ensure that participants successfully translate the chemistry content and inquiry-based instruction from the program to their classrooms so that Maryland high school students are the ultimate beneficiaries of the program.

Towson State University

Project Title: Leading from the Classroom: Teachers Integrating the Next Generation Science Standards Science and Engineering Practices, Universal Design for Learning, and ELA Common Core Standards to Promote Learning for All Middle and High School Students

Project Director: Dr. Laila Richman

Award: \$145,900

Project Abstract: The proposed project brings together Towson University faculty (special education and science), Baltimore County Public Schools (BCPS), and Baltimore City Schools to provide sustained and intensive professional development for teachers. All project activities have been designed to support the State's efforts to effectively transition to the Next Generation Science Standards (NGSS), the BCPS Priority Areas and Master Plan, the City Schools' Priorities and the school improvement plans of the participating schools.

The project emphasizes developing a deep understanding of the NGSS, with a specific focus on the Science and Engineering Practices and Cross Cutting Concepts. Professional development and site-based support will prepare teachers to: 1) effectively implement the NGSS to increase students' knowledge and application of scientific concepts and practices; 2) promote disciplinary literacy through application of the ELA Common Core Standards in science; 3) serve as teacher leaders related to implementing the NGSS in their schools and their districts; and, 4) apply Universal Design for Learning principles when teaching the NGSS to improve student learning. Science and special education teachers from identified high-needs middle and high schools will participate in the project. Participants will engage in 91 hours of professional development including focused workshops, on-site visits, and follow-up activities.

University of Maryland, College Park

Project Title: The Standards for Mathematical Practice Project (STaMPP): Resources for Prince George's County Schools Implementation of the Common Core in Middle Grades Mathematics

Project Directors: Dr. Rodrigo Gutierrez and Dr. Beatriz Quintos

Award: \$138,900.00

Project Abstract: The program will be a joint project of the Prince George's County Public Schools (PGCPS) Mathematics Department and the Center for Mathematics Education at University of Maryland to support teachers' efforts to understand and implement the Common Core's Standards for Mathematical Practice. This initiative will structure learning experiences for elementary (grades 2-6) teachers to further develop their professional knowledge and skills to respond to these instructional challenges.

PGCPS elementary classroom and ESOL teachers will take courses at UMD focused on improving the mathematics instruction for ELLs. The courses will focus on research-based practices on the teaching and learning of elementary mathematics, as well as the further development of teachers' mathematical content knowledge. The content area of focus is Number and Operation for Elementary School Teachers, a priority of the CCSS for Mathematics (CCSSM). The course sequence is integrated by the topics of mathematics inquiry, differentiation strategies, using research-based practices in diverse settings, and supporting ELLs to develop proficiency in the Common Core Standards for Mathematical Practice. To ensure teachers translation of the focus of study into practice, we integrate activities that support collaborative planning, investigation, and reflection on teaching practice. This is an experience that responds to the professional development priorities identified the school district's Bridge to Excellence Master Plan, the plans of the PGCPS Department of Curriculum and Instruction Mathematics Office, and the State of Maryland's current initiatives.

University of Maryland, College Park

Project Title: Supporting the Common Core through Arts Integrated Teaching and Learning

Project Directors: Dr. Margaret A. Walker, Dr. Susan Denvir, and Dr. Karen Bradley

Award: \$130,900

Project Abstract: The Arts Integration Program of Study at the University of Maryland will meet the needs of Prince Georges County Public Schools (PGCPS) teachers and students with professional development through a graduate course of study for a cohort of Prince George's County teachers who would like to learn the latest research in creativity and active learning into their core curricular classroom teaching to improve their effectiveness.

The primary purpose of this program is to prepare teachers to integrate the fine arts as defined by the Maryland State Curriculum (visual arts, dance, drama, and music) primarily into their math and language arts core curriculum instruction, with an ancillary focus on science and social studies as well. In addition to the fine arts, the professional development will incorporate knowledge and experience in media literacy and technology, which will be taught in concert with the arts to support a context for diverse teaching and assessment. Through experiential engagement in these art forms, practice in designing and implementing lessons/curriculum in clinical settings, and study of arts integration theory, history, and policy, participants will gain the knowledge of how to provide integrative arts experiences for their students. Using this knowledge, participants will be able to facilitate the development of critical and creative thinking skills in core curricular areas for all students. The participants will be creating arts integration core curricular resources that will be a shared resource for teachers throughout the county.