

ABSTRACT
**Collaboration and Reflection to Enhance Atlanta Teacher Effectiveness
in Mathematics and Science (CREATE-MS)**

Recent research on student performance in language arts and math has demonstrated positive correlation between student achievement and the creation of a school culture of collaboration and collegiality (Palmisano, 2013). Similarly, the development of teachers' "social capital"—the level and type of interaction and collaboration among teachers—has been cited as a significant predictor of student achievement gains above and beyond teacher experience or ability in the classroom (Leana, 2011). Adding to this, two recent national surveys found a majority of teachers reporting that collaboration has a positive impact on student achievement (MetLife, 2012). With this in mind, *Collaboration and Reflection to Enhance Atlanta Teacher Effectiveness in Math and Science (CREATE-MS)* merges an innovative teacher residency model with increased opportunities for teacher collaboration and reflection. The proposed initiative will address *Absolute Priority 1: Improving the effectiveness of teachers and leaders Subpart B: Increasing equitable access to effective teachers for low-income and high-need students.*

Using a quasi-experimental, mixed method approach, CREATE will examine the following hypothesis: Early career teachers who participate in a 3-year residency model--a model that includes engagement in critical friends group and mindfulness training; interactions with multiple mentors; participation in math and science summer internships; and a gradual increase of teaching responsibilities and decreases in supports across *3 years*--will have lower rates of attrition, will be more effective teachers, and will positively impact the achievement of their K-8 students in mathematics and science. Additional outcomes include increased equitable access to highly effective and committed math and science teachers for high needs students, and a resultant increase of traditionally underserved youth studying math and science. Overall, CREATE will enhance the induction experience for **46 new math and science teachers**; support collaboration and deepen reflection of an additional **230 teachers**; and improve the learning of **2330 K-8 students in high needs school.**

CREATE project partners include 1) Atlanta Neighborhood Charter School, a K-8 charter school and lead partner on the grant; 2) Georgia State University's College of Education (GSU COE), a college focused on preparing teachers for urban settings; 3) the Center for Education Integrating Science, Mathematics, and Computing (CEISMC), a partnership uniting the Georgia Institute of Technology with educational groups, schools, corporations, and opinion leaders throughout the state of Georgia; 4) the School Reform Initiative (SRI), a non-profit organization committed to educational excellence and equity through supporting teachers in reflective collaboration and engagement in Critical Friends Groups (CFGs); 5) the Emory-Tibet Partnership at Emory University (ETP) a center focused on mindfulness to increase resilience in the face of workplace stress; and 6) several charter and traditional high-needs public schools within the Maynard Jackson High School "cluster" within the the Atlanta Public Schools district. All CREATE schools are part of the Atlanta Public Schools (APS), a high-needs school district located in Atlanta, GA that serves 84% students of color and 75% students eligible for free or reduced-price lunch.