2016 Innovation Fund Annual Report

December 2016

By Rebecca Ellis & Jaclyn Colona

Georgia's Innovation Fund
invest. inform. inspire.

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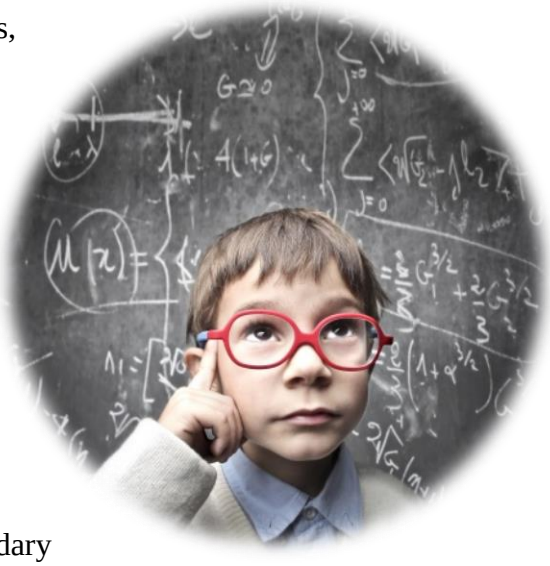
About the Innovation Fund

The Innovation Fund strives to dramatically advance student achievement in Georgia. To accomplish this goal, we invest in school districts, charter schools, and traditional public schools committed to planning, implementing and scaling programs that take a radical approach to education.



The Innovation Fund, operated by the Governor's Office of Student Achievement (GOSA), began in 2011 as a $19.4 million competitive grant program created under Georgia's Race to the Top (RT3) plan. When RT3 ended, Governor Nathan Deal appropriated state funding to continue Georgia's investment in revolutionizing education. Since its inception, the Innovation Fund has provided over $31 million of state and federal funding through 78 grants to 50 school districts, traditional public schools, charter schools, postsecondary institutions, and nonprofit organizations. These grants vary in focus from providing students with STEAM (science, technology, engineering, arts and mathematics) applied learning and blended learning experiences to developing comprehensive birth to age eight language and literacy programs to elevating the quality of Georgia's teachers and leaders. While all of these grants differ in their approach to transforming education, one thing unites them: a single-minded focus on preparing Georgia's students to graduate from high school with the skills they need to succeed in the 21st century.

The Innovation Fund, however, does not stop at the school and district level. To help seed new ideas in Georgia's classrooms, the Innovation Fund also operates the Innovation in Teaching Competition – a recognition and reward opportunity for Georgia's most innovative educators. Since 2013, the Innovation in Teaching Competition has selected 33 winning teachers, provided over $237,500 in grant funding directly to those teachers and their schools, and made videos of each teacher, along with their unit plans and supplementary materials, available online for other educators.

As the Innovation Fund grows, it, too, continues to innovate on the model. In Fiscal Year 2016 (FY16), the Innovation Fund received tax-exempt status from the IRS. This status will allow the Innovation Fund Foundation, Inc. to seek donations from businesses and foundations as an additional source of capital for promising innovations. The Innovation Fund also launched the Innovation Fund Accelerator – a series of workshops designed to help schools and districts on the edge of a breakthrough idea refine and, potentially, pilot their proposals before taking them to scale – as well as the Georgia Rural Advanced Placement (AP) STEM Initiative.

On the pages that follow, you will have the opportunity to learn more about the Innovation Fund's FY17 funding cycle, read about the impact of some of our current grantees, meet our 2016 Innovation in Teaching Competition winners, and see what lies ahead in 2017.

The Year in Review

Fiscal Year 2017 Funding Cycle

The Innovation Fund kicked off the FY17 funding cycle with the most-attended Technical Assistance (TA) Day on record. The TA Day provides potential applicants with information about the Innovation Fund's grant application process and priority areas. On June 2nd and 3rd, over 210 representatives from school districts, schools, and partner organizations convened at the Loudermilk Center in Atlanta to learn about the Innovation Fund's grant opportunities.

On June 2nd, participants attended Shark Tank: The Innovation Fund Challenge, inspired by the television show, Shark Tank. During this competition, teachers and district representatives pitched ideas for innovative teacher and leader development programs to a panel of education sharks. Four presenters each left the session with $10,000 in grant funding to pilot their ideas (see the Appendix for a description of the Shark Tank grant projects). Audience members left the session with a better understanding of the types of programs the Innovation Fund seeks to invest in and the types of questions reviewers might ask when scoring grant applications.[1]

On June 3rd, attendees learned more about the available grants, application process, and priority areas through breakout sessions led by national experts, including the Clayton Christensen Institute, Mastery Design Collaborative, and Insight Education Group, as well as current and former grantees, including Drew Charter School and the STEM-certified Rockdale STEM Academy for Environmental Studies at Memorial Middle School.

Innovation Fund Priority Areas

Applied Learning with a Focus on STEAM Education

Birth to Age Eight Language and Literacy Development

Development and Replication of Blended Learning School Models

Teacher and Leader Development for High-Need Schools

Overall, the TA day boosted potential applicants' confidence and capacity to submit a competitive grant proposal. Ninety-seven percent (97%) of surveyed attendees agreed or strongly agreed that the TA Day would help them prepare a stronger grant application than if they had not attended.[2]

[1] Based on the GOSA Innovation Fund Technical Assistance Day Survey (administered June 2016), 84% of surveyed attendees agreed or strongly agreed that Shark Tank: The Innovation Fund Challenge helped them better understand the quality of applications GOSA looks for. 93% of surveyed attendees agreed or strongly agreed that Shark Tank: The Innovation Fund Challenge helped them better understand the types of questions reviewers might ask as they review grant applications.

[2] Innovation Fund Technical Assistance Day Survey administered by GOSA on June 3, 2016.

Immediately following the TA day, GOSA opened the FY17 online application process. In total, the Innovation Fund received 80 applications for a total funding request of $28,735,694 (Tables 1 and 2). On October 11, 2016, Governor Deal awarded 18 grants (12 planning, 2 implementation, and 4 scaling) and $3,650,223 in grant funds (Tables 3 and 4). Descriptions of the FY17 grant award winners are available in the Appendix.

Table 1. FY17 Applications Recieved by Type of Grant

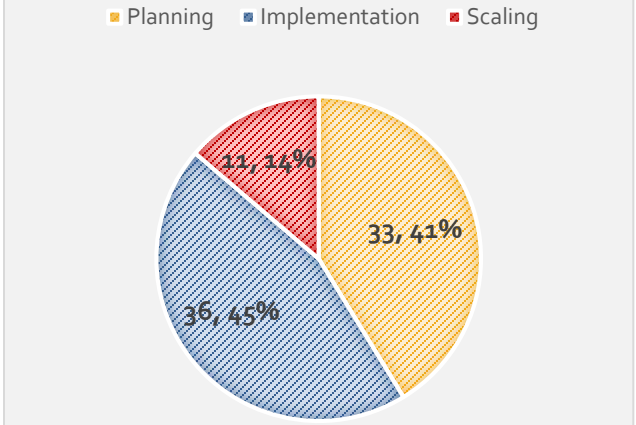


Table 2. FY17 Applications Received by Priority Area

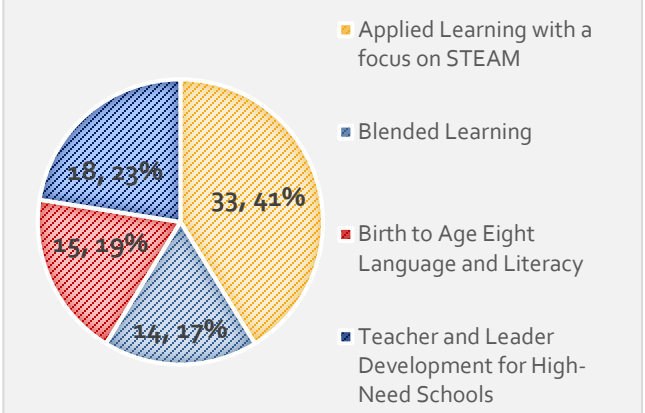


Table 3. FY17 Awarded Grants by Priority Area

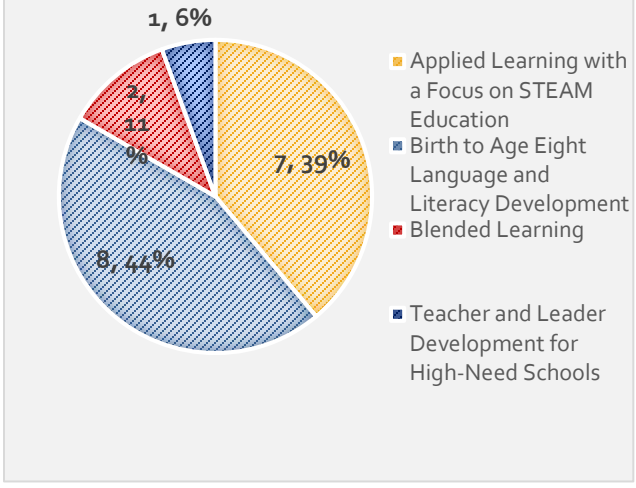
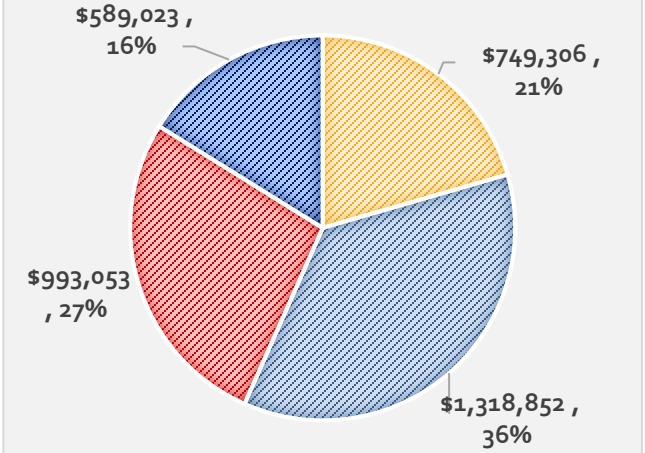


Table 4. FY17 Investments by Priority Area



Tiny Grants

In November 2016, the Innovation Fund also released a new grant opportunity – Innovation Fund Tiny Grants – to support schools and districts in implementing projects that deeply engage students. These grants, ranging from $1,000 to $10,000, will help teachers, administrators, and districts pilot small-scale innovative ideas in STEAM applied learning, blended learning, and birth to age eight language and literacy. Unlike the traditional funding cycle which occurs once per year, the Innovation Fund Tiny grant application will be open year-round, and GOSA will review and award grants four times per year.

On November 18, 2016, Governor Deal awarded the first tiny grant to Gwinnett County Public School's Coleman Middle School for a project in which students will use drones to explore the trash inventory of the Chattahoochee River.

Georgia Rural Advanced Placement (AP) STEM Initiative

In 2016, GOSA and the College Board partnered to establish the Georgia Rural AP STEM Initiative to increase success in AP STEM courses in high-need, rural districts in Georgia. The program aims to strengthen the teaching of three AP STEM courses – AP Computer Science A, AP Computer Science Principles, and AP Statistics – in order to (a) build enrollment and (b) increase the number of students taking and earning qualifying (3 or higher) scores on these AP exams. This grant opportunity will support pre-AP and AP teacher professional learning for the three identified courses. Specifically, College Board will provide ongoing, personalized, professional learning support for grant teachers and administrators as well as facilitate a mentorship program between grant participants and Georgia AP teachers who have demonstrated successful teaching practices in the identified courses.

In fall 2016, GOSA held TA days for interested applicants at four Regional Education Service Agencies (RESAs) across the state. The application opened for eligible districts on November 16, 2016, and districts had until December 20, 2016 to apply. GOSA plans to announce the first round of awardees in January 2017.

Innovation Fund Grantee Spotlights

Fulton County Teach to One: Math

Blended Learning

"I think TTO kind of creates a growth mindset for some kids. They don't give up on math as much as they normally would in a traditional classroom . . . I've seen kids have a positive reaction to the small successes. Whether that be their exit slip or maybe they tried a couple times on this particular skill and they passed it with a perfect or a great. **You can see it – they don't shut down from math."**

- *Bear Creek Middle School Teacher*

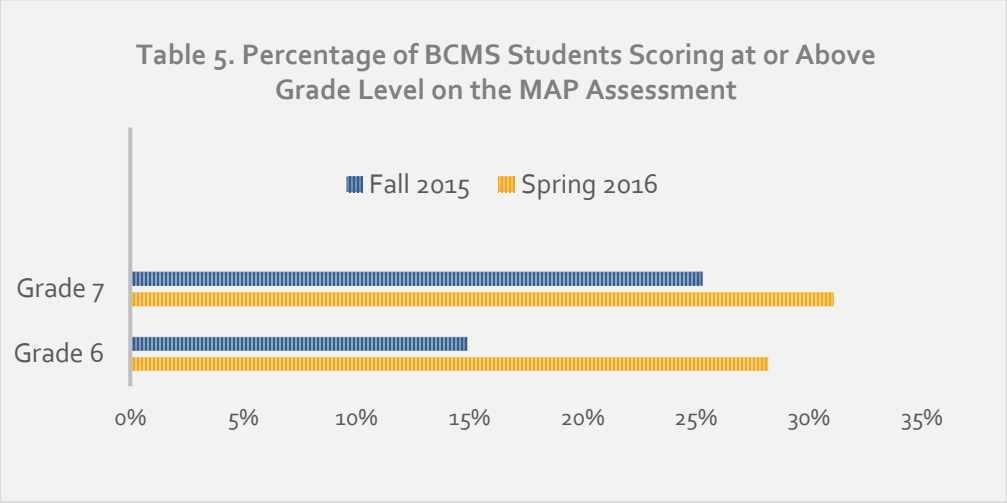
At Bear Creek Middle School (BCMS) in South Fulton County three classes have merged into one. On one side of a classroom that spans half the length of a football field, a row of students works independently on computers - headphones and focus turned on. Nearby, four students collaborate to solve a mathematical dilemma. The key to their success? They must apply the math skills and concepts they learned yesterday through virtual instruction. Across the room, students listen attentively to one of their many teachers as they take scrupulous notes on how to calculate the slope a line. They know they will need these notes later on when they delve deeper into slopes and lines on their own or with their peers. In this learning lab, there are no walls – only endless possibilities for students to master concepts when and how they learn best.

These students are part of BCMS's $1,247,475 Innovation Fund grant, awarded in December 2015, to implement Teach to One (TTO) in 6th through 8th grade math classrooms. TTO is a personalized learning program where students rotate through a variety of learning modalities – including live investigation, small group collaboration, virtual instruction and independent practice – based on a

daily schedule customized for each student's learning needs and strengths.

Since receiving the grant, BCMS has seen improvements in sixth and seventh grade math achievement (Table 5). During the 2015-2016 school year, the first full year of TTO implementation, the percentage of sixth grade students scoring at or above grade level on the Northwest Evaluation Association Measures of Academic Progress (MAP) assessment rose 13.3 percentage points – from 14.9% in the fall to 28.2% in the spring.[3] Similarly, the percentage of 7th grade students scoring at or above grade level on the MAP assessment rose 5.8 percentage points – from 25.3% in the fall to 31.1% in the spring.[4]

While the program has impacted math achievement, it is also strengthening teachers' instructional practices in the areas of technology integration and differentiation. The Technology Integration Matrix Observation Tool (TIM-O) assesses the extent to which teachers effectively integrate technology into the classroom based on five levels of technology integration (entry, adoption, adaptation, infusion, and transformation) and five characteristics of meaningful learning environments (active, collaborative, constructive, authentic, and goal directed).[5] At the beginning of the 2015-2016 school year, almost all BCMS mathematics teachers scored at the entry level in all five of the TIM-O characteristics of meaningful learning environments. By April 2016, the majority of teachers scored at the adoption or adaptation levels in three out of the five characteristics (active, constructive, and goal directed).[6] Similarly, 100% of BCMS mathematics teachers scored at Level III or IV on the differentiation standard of the Teacher Keys Effectiveness System (TKES), Georgia's statewide teacher evaluation, as compared with 79% of other BCMS teachers.[7]

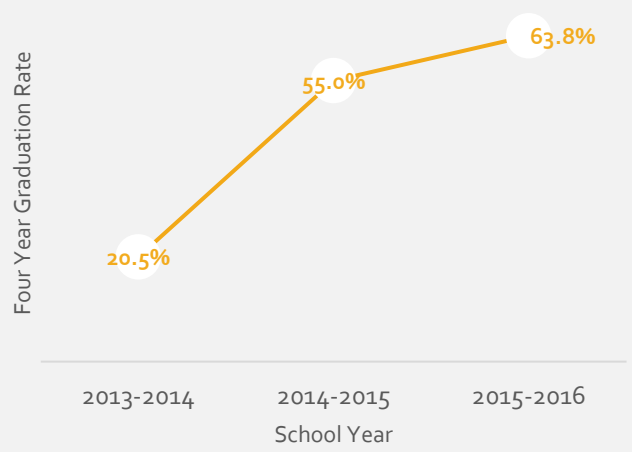


[3] American Institutes for Research, Progress Report of TTO: Math at Bear Creek Middle School (August 2016)
[4] Ibid.
[5] Florida Center for Instructional Technology, The Technology Integration Matrix (http://fcit.usf.edu/matrix/matrix.php)
[6] American Institutes for Research, Progress Report of TTO: Math at Bear Creek Middle School (August 2016)
[7] Ibid.

Thomas County School System
Bishop Hall Blended Learning Model for At Risk Students
Blended Learning

In May 2016, 42 of Bishop Hall Charter School's (BHCS) robe-clad seniors turn their tassels, diplomas in hand. Younger students in the crowd watch this celebration and feel – many for the first time in their lives – that they are glancing into their future. These students have been a part of BHCS's transformation to a blended learning model. In this new school model, supported by a FY15 $958,489 implementation grant, students take online courses through Desire to Learn, as well as traditional in-person courses. In both scenarios, students have support, when and how they need it, from a certified teacher. This flexibility has allowed BHCS students – many of whom face challenges like homelessness, teen pregnancy, and physical and mental illness – to accelerate and remediate their learning on their own schedule. "The learning environment [at BHCS] doesn't rush you. You can take your time. You can think and do it. I get caught up sometimes but the Bishop Hall learning environment is great" said one BHCS student. Her classmates support this notion. At the end of the 2015-2016 school year, 80% of students agreed or strongly agreed that the flexible learning environment at Bishop Hall allows them to be a better student.[8]

Table 6. Bishop Hall Charter School Graduation Rates 2014 - 2016

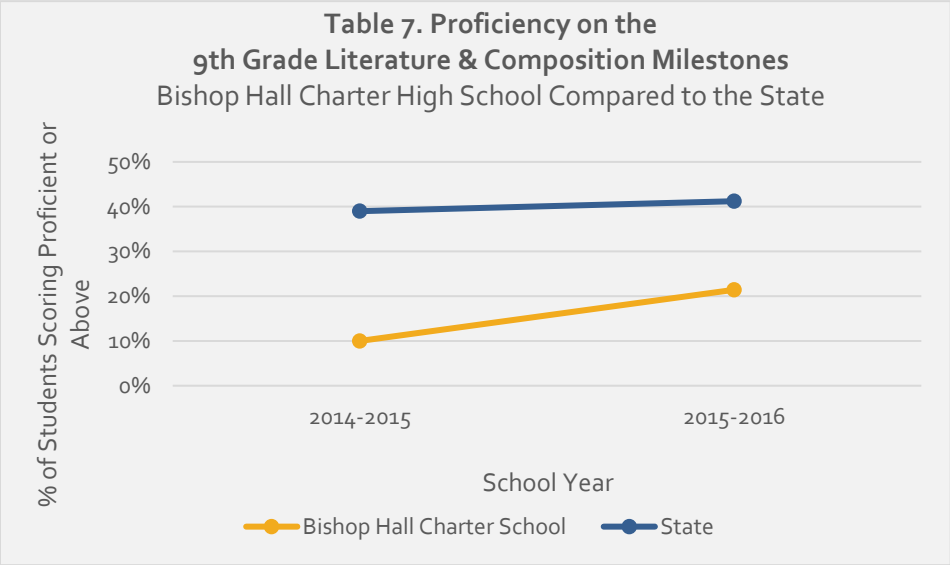


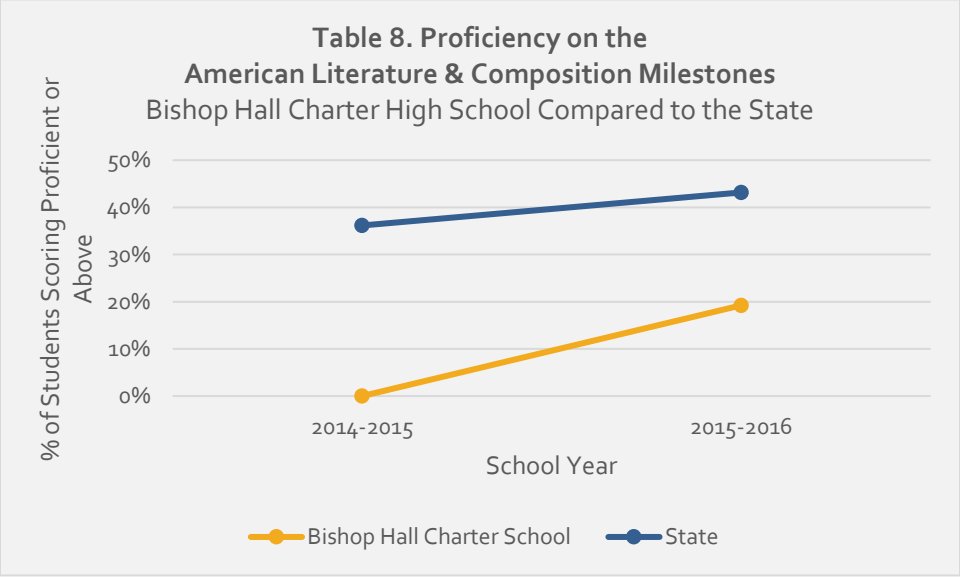
> The grant has . . . enabled us to really individualize education for each student. It set us up like a springboard to be able to meet our students' needs where they are. **The grant provided much more than money; it provided an opportunity.**
>
> *-Marcus Parsley, Math Instructor and Virtual Learning Coordinator, Bishop Hall Charter High School*

Improvements in BHCS's graduation rate and English Language Arts state assessment data back up these students' sentiments. Over the course of the grant, BHCS' four-year graduation rate has risen drastically from 20.5% in 2014 to 55% in 2015 to 63.8% in 2016 (Table 6).[9] In addition, from the 2014-2015 school year to the 2015-2016 school year, the percentage of BHCS students

[8] Bishop Hall Charter High School 2016 End of Year Report, Student Survey Data
[9] Bishop Hall Charter High School 2016 End of Year Report

scoring proficient or above on the 9th Grade Literature & Composition and the American Literature & Composition Milestones examinations increased by 11.4 and 19.2 percentage points, respectively.[10] These increases exceeded the state. From school year 2014-2015 to school year 2015-2016, the percentage of students statewide that scored proficient or above on the 9th Grade Literature & Composition and the American Literature & Composition Milestones increased by 2.2 and 7.0 percentage points, respectively (Tables 7 and 8).[11]



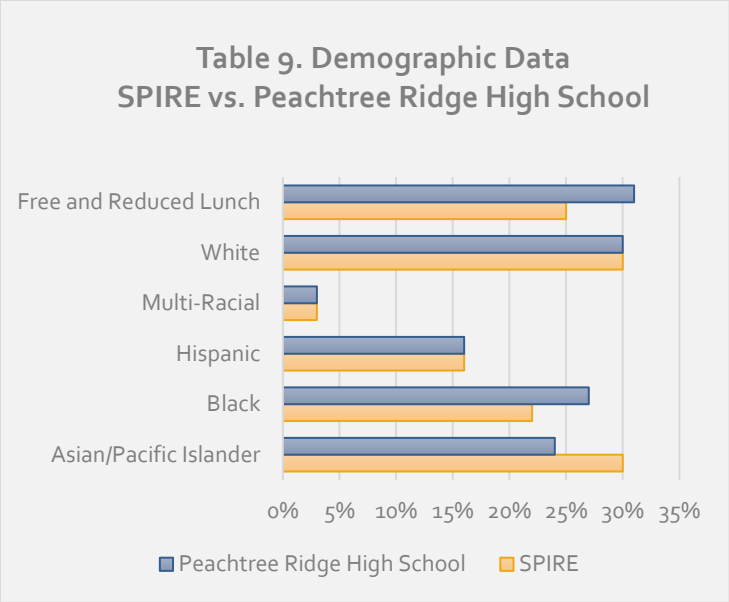


[10] Georgia Department of Education, 2015 and 2016 Milestones Scores
[11] Ibid

Gwinnett County Public School's
Transforming STEM Education through Teacher and Leader Development
Applied Learning with a Focus on STEAM Education

In a Peachtree Ridge High School classroom, chemistry and English Language Arts collide as students attempt to remove led from Flint River water samples *and* develop an economic plan to solve the city's current crisis. These students, part of Peachtree Ridge High School's SPIRE Program (STEM Program for Innovation, Rigor, and Excellence), are engaged in a project-based learning (PBL) unit. Far from a worksheet or standard chemistry lab, PBL tasks students to apply knowledge from various disciplines to solve authentic and challenging problems – like the Flint, Michigan water crisis.

Peachtree Ridge High School is only one of the 48 schools that participated in Gwinnett County Public School's (GCPS) Transforming STEM Education through Teacher and Leader Development project, funded by a $1,226,107 FY15 implementation grant. Over the past two years, the district has trained, with the help of the Buck Institute for Education, two cohorts of elementary, middle and high school teachers and leaders. These trainings built the capacity of both teachers to implement PBL units that truly integrate science, technology, engineering and math and leaders to support teachers in PBL implementation. To aid schools in their quest to implement PBL with fidelity, GCPS also set up three professional development lab schools at Mulberry Elementary School, Duluth Middle School, and Peachtree Ridge High School. Now, educators from across the district and state have an opportunity to observe high-quality PBL in action with real teachers and students.



"A lot of my students told me things like: 'You pushed us and you challenged us. We never got to do as much hands-on stuff before. **Science is now my favorite subject."**

Teacher participant, GCPS Transforming STEM Education through Teacher and Leader Development

While the fidelity of implementation has varied by school, several schools – like Peachtree Ridge High School – have seen PBL's positive impact on student achievement. During the 2015-2016 school year, 290 Peachtree Ridge High School students – representing a variety of demographic groups and levels of learners – participated in the SPIRE program (Table 9).[12] At the end of the school year, SPIRE students outperformed their peers on the Biology and English Language Arts Milestones.[13] Specifically, 98.5% of SPIRE students scored proficient or above on the Biology Milestones examination as compared with 57.7% of non-SPIRE students.[14] Similarly, 88.9% of SPIRE students scored proficient or above on the 9th Grade English Language Arts Milestones compared with 53.6% of non-SPIRE students.[15] As the SPIRE program grows, Peachtree Ridge High School anticipates that the PBL instructional methods used by SPIRE teachers will infiltrate instruction throughout the building and continue to impact student achievement.

"My test scores are great . . . I think the kids were more motivated and more interested in what we were doing. So, if I just said whatever I needed to say and then they were actually working on it, they learned more. I mean, I met my goal this year for the first time ever. I **definitely didn't see an impact on doing PBL and a drop in scores."**

– *Teacher participant, GCPS Transforming STEM Education through Teacher and Leader Development*

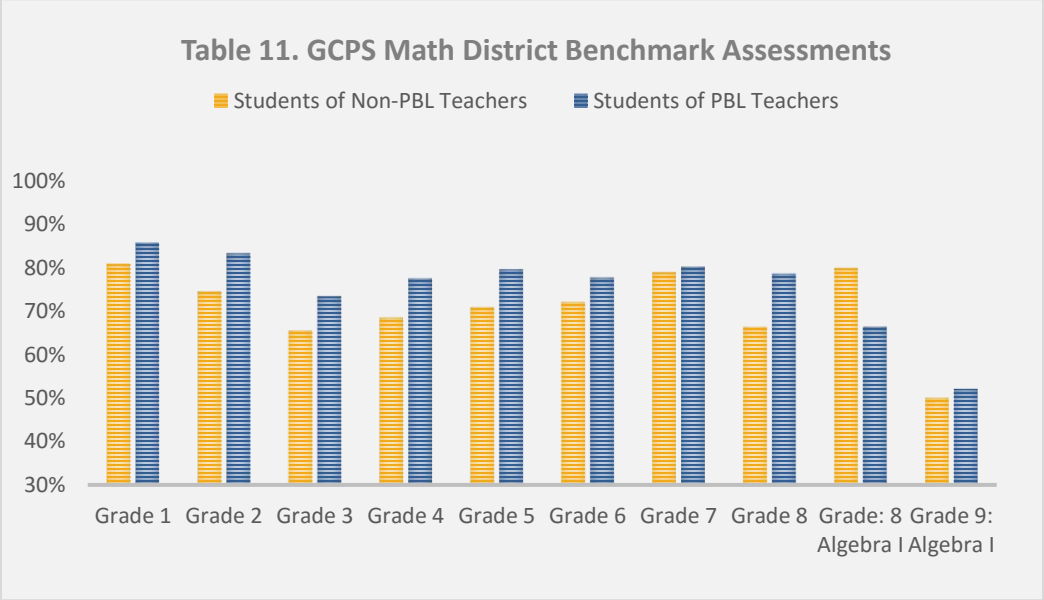
[12]Table 9 reflects the 2015-2016 SPIRE enrollment data compared with Peachtree Ridge High School's most recent enrollment data from the 2014-2015 school year (Georgia School Reports)

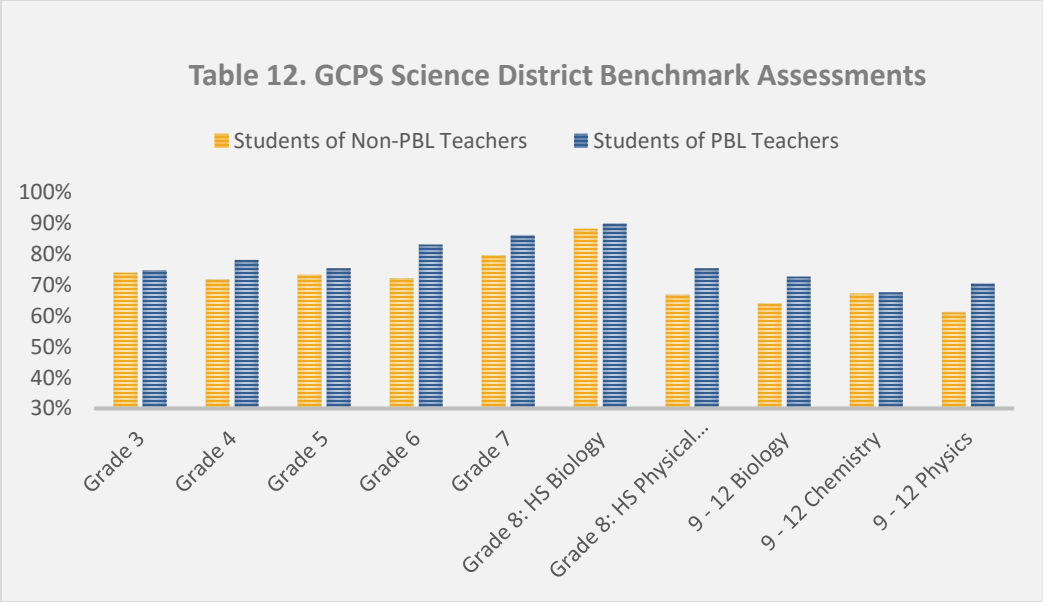
[13] All Peachtree Ridge High School students with an interest in STEM were eligible to apply for the SPIRE program. There were no academic requirements to apply or be accepted into the program. For the 2015-2016 school year, all students that applied were accepted into the program.

[14] 2015-2016 SPIRE Program Data, Peachtree Ridge High School

[15] Ibid

Across all schools participating in the grant, students of teachers that participated in the PBL training outperformed students of teachers that did not participate in the PBL training.[16] Based on the 2015-2016 end-of-year district math benchmark assessments, 1st through 12th grade students of participating teachers scored higher than their counterparts on all assessments, with the exception of eighth grade Algebra I (Table 11). Similarly, 3rd through 12th grade students of participating teachers scored higher than their counterparts on all assessments, with the exception of Chemistry (Table 12).





[16] Data reported is from the Gwinnett County Public Schools 2016 Innovation Fund End of Year Report. The percentages included in Tables 10 and 11 are the average benchmark scores of all students in participating teachers' courses compared with the average benchmark scores of students of teachers that did not participate in PBL training at those same schools.

Community Guild's STEAM Truck

Applied Learning with a Focus on STEAM Education

At the Kindezi School in Atlanta's Old Fourth Ward, fifth grade students jot down the names of board games on pink sticky notes and the parts of a cell on blue sticky notes. They only have two minutes to get their ideas out of their brains and onto paper, but the pink-and-blue-sticky note pile expands rapidly – *Hungry Hungry Hippo, Endoplasmic Reticulum, Nucleus, Operation, Monopoly, Mitochondria, Candy Land.* Next, students pair the pink and blue sticky notes – imagining ideas for cell biology board games. What, for example, would Mitochondria Monopoly look like? Perhaps Endoplasmic Reticulum Candy Land? Nucleus Battleship?

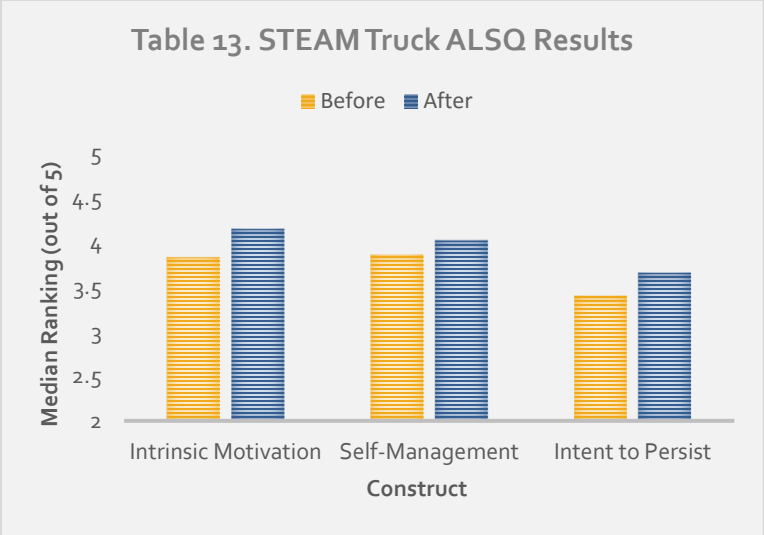
Over the next five days, students not only imagine ideas for cell biology board games, they design, build, prototype, test, and refine them. In the process students build more than just a board game, they build problem-solving skills, creativity, grit, and knowledge of cell anatomy – a fifth grade science standard.

These students are part of Community Guild's STE(A)M Truck – a mobile makerspace on wheels designed to close

"If I were to describe the STEAM Truck to a younger kid, I would probably tell them that . . .well, I think they are going to have lots of fun, they're going to just learn to be with other kids, and it won't be boring. **You'll learn in a way you've never learned before."**

-5th Grade STEAM Truck Student

opportunity gaps too often predicted by zip code. Established in 2013, the STEAM Truck brings community experts, artists, tools and equipment directly to students who need them most. Through a variety of hands-on opportunities – like cell science board games – the STE(A)M truck provides students an opportunity to design and build. Through these opportunities, students strengthen their 21st century skills, like grit and collaboration, and their mastery of STE(A)M content. In December 2014, the STEAM Truck received a $200,000 FY15 scaling grant to serve students at six Metro Atlanta schools, like Kindezi, serving a high percentage of children from low-income families.



Over the course of the grant, the STE(A)M Truck served over 230 third through eighth graders, 83% of whom are considered economically disadvantaged.[17] Based on the Applied Learning Student Questionnaire (ALSQ), a retrospective survey that measures changes in students' attitudes towards STEM, the STE(A)M Truck produced statistically-significant increases in students' intrinsic motivation, intent to persist in STEM, and problem solving skills (Table 13).[18] Specifically:

- Before the participating in the STE(A)M Truck, only 43.2% of students intended to get a college degree in STEM. After the STE(A)M truck, 55.4% of students intended to get a college STEM degree.
- Before the program, only 46.5% of students agreed or strongly agreed that they prefer challenging coursework. After the program, 63.2% of students indicated they prefer challenging coursework.
- Before the program, 61.1% of students enjoyed STEM. After the program, 77.2% of students enjoyed STEM.[19]

As the STE(A)M Truck serves more and more students, it is also building teacher capacity through tools like the STE(A)M Truck Maker Playbook and strategies like intensely involving teachers in STE(A)M Truck programming. Now, when the STEAM Truck drives away, it will leave not only students' creations, but teachers with the capacity to support authentic, rigorous, and student-centered learning.

[17] STEAM Truck End of Year Evaluation Report, May 2016
[18] The ALSQ was administered in November 2015 to 84 students at KIPP and Kindezi and in May 2016 to 50 students at Ivy Preparatory Academy. This report includes combined results from both ALSQ administrations.
[19] Ibid.

Whitfield County Schools
Beyond the Classroom
Birth to Age Eight Language and Literacy Development

At a home in Whitfield County, a parent opens the pages of a book and reads to her child in Spanish. The knowledge that by reading to her child in her native language, rather than English, could help prepare her child to succeed in school is new and exciting. She gained this knowledge during one of Whitfield County School's (WCS) Learning Academies – workshops that teach and model evidence-based pre-literacy activities, such as reading aloud, to preschoolers' families.

These academies, however, are only one of the strategies for boosting language and literacy that emerged from WCS' $10,000 FY16 planning grant. During the planning process, WCS also piloted power lunches, which target summer reading loss for children in impoverished communities. Over summer 2016, Dalton State College teacher candidates met students outside of their local library and taught literacy lessons designed to help prepare children for school. These power lunches also coincided, intentionally, with Whitfield County's existing summer feeding programs, so children got nutrition for both their bodies and brains.

To serve even more children in the community, WCS received a FY17 $611,000 implementation grant. This grant will target six schools serving children from high-need communities. The district selected these schools by triangulating data from multiple sources, including the Annie E. Casey Foundation's Community of Hope data regarding the prevalence of child abuse and neglect, district reading scores, poverty data, and other student demographic data. Using this information, WCS identified "hot spots" within their county where children are in the most urgent need of intervention. Over the next two years, WCS will provide intensive language and literacy support to the communities they identified through power lunches, learning academies, summer libraries, teacher professional development, and other initiatives.

Innovation in Teaching Competition Winners

During the 2015-2016 school year, the Innovation in Teaching Competition selected and filmed seven educators across Georgia. Their winning unit plans focused on STEAM Applied Learning, Blended Learning, and Innovative Practices to Close the Achievement Gap. To provide exemplars of a true integration of the arts into STEM, the Innovation in Teaching Competition also partnered with Georgia Council for the Arts to film two videos focused on teaching and teaching artist partnerships.

Here are our 2016 Innovation in Teaching Competition Winners.

FARHAT AHMAD
MCCLARIN SUCCESS ACADEMY, FULTON COUNTY SCHOOLS
9TH AND 10TH GRADE ENGLISH LANGUAGE ARTS
Blended Learning

Farhat has dedicated his life to public service. After serving as a police officer, he found a new way to help young people in need by bringing his public service into the classroom. "I wanted to do something that was worthwhile," Farhat notes.

Now, Farhat is a trailblazer at McClarin, which can largely be attributed to his teaching philosophy: "Do your own thing and don't be afraid to reinvent the wheel." His favorite part and biggest challenge of teaching is helping students develop confidence. His blended learning approach demonstrates both his innovative instructional practices and his commitment to building his students' beliefs in their own abilities.

Farhat holds a bachelor's in English and Sociology from the University of Wisconsin and a master's in Secondary Education from Georgia Southern University. In 2014, Farhat received the South Fulton Retired Teachers Association Scholarship. He currently serves as a Google Classroom administrator and individualized learning coach at McClarin Success Academy. In addition, Farhat began an after school jiu-jitsu program with American Top Team gym coaches as a way to engage students in the school community.

In Farhat's blended learning unit, students utilize technology with teacher support to work at their own pace as they master 10th grade literature standards, including citing textual evidence, analyzing complex characters, and determining and analyzing a text's central theme. Students begin the unit by taking a diagnostic assessment. Based on those data, students move through a variety of tasks, including a writing boot camp for remediation, if needed, a rhetorical analysis, and an analytical essay.

"It's about what's best for the kids to me, not what is easiest for me, and sometimes [teaching] is a trial and error process that can take months or even years to figure out." -Farhat Ahmad

COURTNEY BRYANT & JEFF MATHER
CHARLES R. DREW CHARTER SCHOOL
SECOND GRADE ENGINEERING & DESIGN
Teacher & Teaching Artist Partnership

Courtney began teaching because she wanted to share her passion for STEAM with students. Courtney acknowledges that a teacher's role is more than just teaching content, though, and she is not afraid to step up to the plate: "The biggest challenge is realizing that you, 'the teacher,' can be many things for the student: mentor, meal provider, social worker, and, at times, friend…but sometimes the best thing you can do is be there for the students to help them pick up the pieces." One story that highlights Courtney's approach to teaching is when she inspired a struggling student to compete in the 2011 American Institute of Architect's High School Design Competition. The student won, in part because of Courtney's dedication to helping her students reach their fullest potential.

Courtney is currently the STEAM Project Manager at Charles R. Drew Charter School where she constantly reinvents her craft to keep up with the changing educational landscape. Her dedication has earned her multiple teaching awards, including the Allen Distinguished Educators Award (2016), Atlanta Public Schools Career and Technical Teacher of the Year (2011), South Atlanta School of Computer Animation and Design Teacher of the Year (2008), New Teacher of the Year (2002), and Ohio Art Education Association Student Art Educator of the Year (2000).

***

Jeff is an environmental sculptor and site artist. Jeff had several teaching residencies early in his career that solidified his passion to combine art and education. Jeff attributes student success to the strong collaboration between schools, teachers, and the community. For any artist thinking about bringing their talents into the classroom like he did, Jeff insists, "You have to love kids! Really and truly. Because a teaching artist residency…is about meaningful engagement of students and teachers and the larger community."

Jeff currently serves as the STEAM Artist-in-Residence at Drew Charter School for 45 days out of each semester. He is also the lead teaching artist for the Beverly Taylor Sorenson Arts Access Program in Logan, Utah, where he oversees residencies at schools in the Cache Valley twice a year. Starting in January 2017, he will be the STEAM Artist-in-Residence at Atlanta Public School's Morningside Elementary.

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In Courtney and Jeff's project-based learning unit, students learn about the engineering and design process by designing and building a garden bench/potting station for Drew Charter School's Tinker Yard. Students begin the unit by researching garden benches and interviewing a master gardener. Then, students learn perspective drawing from Jeff and apply their knowledge to sketch ideas for the garden bench. Students also explore geometry as they ensure the garden bench sculpturally matches the existing Tinker Yard structures. Finally, students work together, with teacher and artist support, to build the garden bench.

DONNA DAVIS & THE STEAM TRUCK TEAM
KINDEZI
FIFTH GRADE

Teacher & Teaching Artist Partnership

Donna approaches her classroom as a facilitator – providing support while her students discover solutions to problems. This approach has taught her students how to persevere. "If they are presented with a problem now, instead of always looking to me for an answer, they will try themselves to figure it out… [but] I am always here to support them in their learning," she says. Donna, however, supports her students with more than just academics. She believes that a strong bond with each student allows them to meet their academic potential. "When students feel as though their teacher is interested in other areas of their life outside of school, they see [their teacher] in a different light and tend to perform at higher levels academically."

During the 2015-2016 school year, Kindezi partnered with the STEAM Truck, a mobile makerspace on wheels designed to close opportunity gaps too often predicted by zip code. Established in 2013 by Jason Martin, the STEAM Truck brings Maker Mentors – like Sarah Lashinsky, Artists in Residence – like Mike Stansy – and tools and equipment directly to students who need them most. Through a variety of hands-on opportunities, the STE(A)M Truck provides students like Donna's an opportunity to design and build, strengthening their 21st century skills and knowledge of STE(A)M content. The STE(A)M Truck also provides hands-on training for teachers, so that when it drives away teachers can continue to facilitate learning and build their students' 21st century skills.

In this unit, students participate in a variety of learning opportunities, such as deconstructing a printer, engineering Rube Goldberg machines, and designing and building cell science board games.

"As an Atlanta native, I have a mission of educating students and using my story as an inspiration for them to persevere through their challenges to ultimately achieve their goals in life." – Donna Davis

"What we want to do is bring back the possibility for kids to use their hands and to make things and in the process change how teachers are teaching and students are learning." -Jason Martin, STE(A)M Truck Founder

Danielle LeePow
KIPP South Fulton Academy
Fifth Grade Science
Blended Learning

Danielle began teaching as a Teach for America Corps Member and KIPP Teacher Fellow. Through this training, Danielle has honed her practice so that all of her students – or as KIPP calls them, scholars – can succeed. She builds a classroom culture where scholars are respected, disciplined, and held to only the highest standard. She also integrates strategies, like the flipped classroom approach, that allow her scholars "to receive the information [she] provides in their own way and in their own time." Danielle says she tries "facilitate [each scholar's] learning where they need to be met, rather than forcing them to meet me where [she] thinks they should be."

Danielle holds a bachelor's in Sociology from Howard University and a master's in Public Health from Emory University. She has served as the grade level coordinator over character building, field lessons, the fire station, and century club, and as a chapter sponsor for the Beta Club.

Danielle's unit plan uses a flipped classroom approach to help students master science standards. Over a three-week period, students investigate how constructive and destructive forces constantly change the Earth's surface, and how scientists attempt to control these forces' effects through tools and human intervention. For homework, students watch lectures and take notes on the unit's concepts – leaving time for hands-on application of those concepts during the school day.

Amy Mock
M.H. Mason Elementary School
First Grade
Applied Learning with a Focus on STEAM Education

As a child, Amy would "play school" pretending that her stuffed animals were students. Today, her stuffed animals are real students, and she gets to live her childhood dream every day. "I have always wanted to be a teacher," Amy says. Her teaching philosophy is simple: teaching doesn't need to be magical. Students need to feel loved, respected, and safe in their classroom and the academics will follow. She looks forward to the "aha" moments, when her students finally understand a concept. Although she knows it is a daunting challenge, she also enjoys preparing her students for jobs that haven't yet been created.

Amy's approach has earned her recognition. She was named 2008-2009 M.H. Mason Elementary School Teacher of the Year. In 2015, she was the recipient of a $15,000 grant to build a hydro/aquaponics lab, which is the first of its kind in Gwinnett County.

Amy's unit plan is several years in the making. Two years ago, a student brought in a newspaper article about the diminishing number of Monarch butterflies. The class began to brainstorm ways they could help the Monarchs. Using weekly computer time, students researched plants that attract butterflies, caterpillars, hummingbirds, bees, and bats. Students then wrote proposals to the science teachers, as well as the PTA Environmental Committee, requesting funds and materials that would attract these animals to the Outdoor Classroom. Now, the Outdoor Classroom is a Certified Pollinator Habitat by Monarchs Across Georgia and students continue to use it to strengthen their math and science knowledge.

Stuart Ogburn
Norton Park Elementary School
Fourth Grade
Applied Learning with a Focus on STEAM Education

Stuart Ogburn "has heart. He is the person that will go the extra mile, that will do whatever it takes, and will . . . pour himself into his daily [teaching]," says his principal, Jeffery Mosely. In Stuart's class, students do more than listen to lectures and complete worksheets. They build things, they ask questions, they collaborate, and they are held to high standards. "When students walk into the classroom asking you: 'when are we going to work on our projects?' That's when I know a project has been successful. They are engaged. They are motivated to learn," says Stuart. "He really feels strongly that every kid in his class, if given the right opportunities, can be successful," says Donna Durkee, Norton Park Elementary Assistant Administrator.

Stuart holds a bachelor's in Early Childhood Education and a graduate degree in Instructional Technology, both from Kennesaw State University. He currently serves on the school's Leadership and Positive Behavior Intervention and Support (PBIS) teams and coaches the school's chess and logic club.

In Stuart's project-based learning unit, students investigate how meteorologists measure and forecast the weather by engineering weather instruments with limited supplies, collecting and analyzing weather data, and utilizing technology to create and act out a weather forecast. Throughout the unit, students master science and social studies standards, while also incorporating engineering, mathematics, performing arts, and technology.

Tom White
Rockdale County College and Career Academy
9th – 12th Grade Audio, Visual Technology & Film
Innovative Practices to Close the Achievement Gap

Five years ago, Tom White was a marketing director for a major media company when a friend encouraged him to interview for a teaching position. To Tom's surprise, he got the job and decided to take a chance on teaching. Five years later, Tom's favorite part of his job is the teacher-student relationship and "the ultimate responsibility to teach the students to become positive, contributing citizens in society, while imparting academic knowledge to them." His advice to new teachers is to strike the balance between pushing and encouraging the students and adapt quickly when things do not go as planned.

In his five years as a teacher, Tom has utilized his knowledge of the media industry to help students and teachers. He has presented across the district regarding best practices for using technology in the classroom, and has served as a new teacher mentor for Audio, Video, Technology, and Film teachers throughout the state. In 2016, Tom's Sports Broadcast Institute was selected as a finalist for the Best Overall School Broadcast Program award from the National High School Sports Network. He was also named Rockdale Career Academy's 2016-2017 Teacher of the Year.

In Tom's winning unit, students participate in the Sports Broadcast Institute where they work through all elements of the video production process – conceptualizing, script development, lighting, camera work, and post production – to produce video products that will be used during Georgia State University and Rockdale County Live sports broadcasts. Students also engage in a variety of real-world experiences, including staff meetings and live broadcasts.

Looking Ahead

In 2017, the Innovation Fund will continue to invest in and support approaches and programs that revolutionize education. To meet this objective, the Innovation Fund will:

- Continue to monitor, support, and evaluate the current Innovation Fund grantees;
- Host the 4th Annual Innovation Summit – a convening of current and former grantees and Innovation in Teaching Competition winners;
- Present about the Innovation Fund's model at local and national conferences;
- Pilot the Innovation Fund Accelerator, a series of workshops designed to help grantees redefine innovation, develop and refine their ideas for innovative programs, and potentially pilot and evaluate their programs;
- Award additional Innovation Fund tiny grants and open additional grant application rounds for the Georgia Rural AP STEM Initiative;
- Award the first round of Georgia Rural AP STEM Initiative grants and monitor and support these new grantees in their progress;
- Expand and prepare the Innovation Fund Foundation, Inc. Board by identifying and training new and current board members; and
- Select and film the 2017 Innovation in Teaching Competition winners and make their videos and materials available online for other educators.

Appendix

Shark Tank Award Winners

Organization	**Floyd County College and Career Academy**
Teacher	**Dr. Brian Swanagan**
Project Name	**Engaging Students through Arduinos in the Classroom**
Amount Funded	$10,000
Description of Project	Through teacher training and collaboration, Floyd County College and Career Academy math, science, and robotics teachers will develop hands-on unit plans using Arduinos. Through these unit plans, students will strengthen their math, science, and coding skills.

Organization	**Paulding Virtual Academy**
Project Name	**TECHtastic Teacher Training (T3)**
Amount Funded	$10,000
Description of Project	T3 aims to elevate the quality of instruction at Paulding Virtual Academy (PVA). Through T3, ten PVA teachers will earn an online teaching endorsement – focused on understanding the characteristics of online learners and creating online learning materials – through the Northwest Georgia Regional Education Service Agency (RESA). These teachers will also participate in a Professional Learning Community (PLC) to share best practices related to online learning.

Organization	**Rockdale County Public Schools**
Project Name	**Starting STRONG: Supporting Teacher Retention through Ongoing Growth**
Amount Funded	$10,000
Description of Project	Starting STRONG will use the TeachLivE Simulator – a virtual classroom – to support new teachers in strengthening their instructional and classroom management skills. Through this professional development, the project aims to increase teacher retention and effectiveness.

Organization	**West Jackson Middle School**
Teacher	**Angie Konarski**
Project Name	**Sticking to Productive Writing Feedback**
Amount Funded	$10,000
Description of Project	Sticking to Productive Writing Feedback will train teachers on how to provide specific, effective, and consistent feedback on students' writing. Through the project, West Jackson Middle School will also create a bank of written feedback and videos of model teacher/student feedback sessions.

Fiscal Year 2017
Innovation Fund Grant Award Winners

Planning Grants

Organization	**Baldwin County School District**
Project Name	**Read Baldwin County**
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Baldwin County
Amount Funded	$ 5,000.00
Description of Project	Baldwin County School District will plan and refine their vision for Read Baldwin County – a program that will unite educators, families, and community agencies in supporting young readers.

Organization	**Clarke County School District**
Project Name	Coaching for Innovation in P-3 Language & Literacy
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Clarke County
Amount Funded	$10,000.00
Description of Project	Clarke County School District will plan a program that provides birth-to-third grade providers with professional learning and targeted instructional practices and students and families with support services.

Organization	**Charles R. Drew Charter School**
Project Name	**21CLM: Promoting School Innovation and Success throughout Georgia**
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Atlanta/Statewide
Amount Funded	$ 9,996.00
Description of Project	Charles R. Drew Charter School – in partnership with Georgia Institute of Technology's Center for Education Integrating Science, Mathematics and Computing (Georgia Tech CEISMC); honorCode and others – will develop a strategic plan to scale the 21CLM program to Drew Charter School's Senior Academy (grades 9 through 12) and throughout the state. Developed with an FY16 Innovation Fund implementation grant, the 21CLM program addresses summer reading loss and supports teachers in implementing more rigorous, creative, project-based learning, instructional approaches. The program accomplishes these objectives through a Literacy in the Making full-day summer program for targeted rising 1st through 3rd graders and STEM makerspace initiatives.

Organization	**Elm Street Elementary**
Project Name	STEAM in 3D - Dream, Design, Do!
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Rome, GA
Amount Funded	$5,000.00
Description of Project	Rome City Schools' Elm Street Elementary School will refine STEAM in 3D Dream, Design Do!, a program that uses new instructional methods and cutting-edge technology to advance student learning.

Organization	**Greenwood Learning Center/Rome Transitional Academy**
Project Name	**Building STEAM**
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Rome
Amount Funded	$9,500.00
Description of Project	The Building STEAM program will serve the high-needs populations at two alternative-education programs (housed in the same building) and a high-needs elementary school. This program seeks to motivate traditionally undeserved and under-performing students through problem-based, applied-learning projects, some with an entrepreneurship focus. The goals of the planning grant are to: (a) determine teachers' professional development needs, (b) provide teachers with professional development based on these needs, and (c) and implement a pilot program with the future possibility of scaling to schools with similar populations.

Organization	**Houston County Schools**
Project Name	**Read to Lead**
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Houston County
Amount Funded	$10,000.00
Description of Project	Houston County will pilot a leveled literacy intervention program for struggling kindergarten through second graders at C.B. Watson Primary School in Warner Robbins, GA. Through parent literacy nights, Read to Lead will also provide families with strategies, books, and resources to help boost their children's social-emotional development, school engagement, and reading achievement.

Organization	**Liberty Tech Charter School**
Project Name	**Every Student, Every Day: Applied Service Learning**
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Fayette County
Amount Funded	$9,912.52
Description of Project	Liberty Tech will use its planning grant to develop and enhance a service-learning model that will allow students to use classroom content to solve real-world problems in a hands-on, project-based format. Specifically, Liberty Tech will explore the Maker movement, provide teacher professional development, and establish a professional learning community around project-based learning, applied learning and creative space. Through this planning process, Liberty Tech hopes to transform its school into a service-oriented maker environment for the 2017-2018 school year.

Organization	**North Heights Elementary School**
Project Name	Growing Up Green
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Rome, GA
Amount Funded	$5,000.00
Description of Project	Rome City Schools' North Heights Elementary School will refine Growing Up Green, a program where students apply STEAM classroom content to address the community obstacle of living in a food desert.

Organization	**Telfair County Schools**
Project Name	**Tiny Trojans Early Literacy Program**
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Telfair County
Amount Funded	$10,000.00
Description of Project	Telfair County Schools will use its planning grant to conduct a community needs assessment, provide teacher professional development, and, finally, create an implementation plan for the Tiny Trojans Early Literacy Program. This program will serve three-year old children as part of a high school elective class in the Early Childhood Education career pathway – providing both language and literacy instruction for three-year olds and classroom experience for aspiring teachers.

Organization	**Screven County Elementary School**
Project Name	**School and Family Ties**
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Screven County
Amount Funded	$10,000.00
Description of Project	Screven County Elementary School will explore language and literacy development best practices, assess its community needs, and develop resources to expand literacy services throughout the community.

Organization	**West End Elementary**
Project Name	**SusTEAMability: Sustaining Pollinators**
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Rome, GA
Amount Funded	$9,900.00
Description of Project	West End Elementary will address the community and world need of the decline of pollinators and the impact this decline has on the world's food supply. Through STEAM and project-based learning professional development and a school-developed systematic, standards-aligned curriculum, West End Elementary aims to increase students' financial literacy, problem solving skills, and entrepreneurship skills.

Implementation Grants

Organization	**Cobb County School District**
Project Name	**KickStART Cobb: Using the Power of Arts Integration to Fuel Early Language and Literacy Development**
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Cobb County
Amount Funded	$ 652,491.67
Description of Project	The KickStART Cobb program will serve kindergarten through third grade students by integrating the arts into language and literacy instruction. Through robust professional development for teachers, collaboration with community partners such as artists in residence, and resource development for parents, KickStART Cobb hopes to fuel early learning. KickStART Cobb will begin in four targeted elementary schools –LaBelle Elementary, Powder Springs Elementary, Clarkdale Elementary, and Kennesaw Elementary – and will serve close to 2,000 students and their families and 140 teachers.

Organization	**Whitfield County Schools**
Project Name	**Beyond the Classroom**
Priority Area	Birth to Age Eight Language and Literacy Development
Areas Served	Whitfield County
Amount Funded	$ 589,022.85
Description of Project	Through Beyond the Classroom, Whitfield County Schools (WCS) and its community partners will enhance literacy development for children, ages birth to eight, and their families. The implementation grant will expand Power Lunches and Learning Academies—piloted during WCS' Innovation Fund planning grant – to six school communities, three in year one and an additional three in year two. Through these programs, Beyond the Classroom will bring literacy into the most at-risk communities by providing children and families access to resources that promote language and literacy development as well as address health, family, and social-emotional needs.

Scaling Grants

Organization	**Atlanta Neighborhood Charter School**
Project Name	**CREATE (Collaboration and Reflection to Enhance Atlanta Teacher Effectiveness)**
Priority Area	Teacher and Leader Development for High-Need Schools
Areas Served	Atlanta
Amount Funded	$ 589,022.85
Description of Project	CREATE (Collaboration and Reflection to Enhance Atlanta Teacher Effectiveness) works to recruit, boost the capacity of, and retain effective educators in southeast Atlanta high-need schools through professional development focused on collaboration and reflection. An expansion of Atlanta Neighborhood Charter School's Race to the Top Innovation Fund project, the New Teacher Residency Program, CREATE is a unique collaborative of both traditional and public charter schools, as well as universities and a school district, that utilizes Critical Friendship, Cognitively-Based Compassion Training, and mentoring. With this grant, ANCS will provide support and mentoring to additional teachers at current CREATE schools as well as expand the program to three new schools – Kindezi, Dunbar Elementary, and Thomasville Heights Elementary.

Organization	**Carroll County Schools**
Project Name	**Full STEAM Ahead**
Priority Area	Applied Learning with a Focus on STEAM Education
Areas Served	Carroll County
Amount Funded	$ 699,997.00
Description of Project	Full STEAM Ahead will scale Carroll County's Step into STEM program – developed with an Innovation Fund implementation grant – to serve 15-year old students who are at the highest-risk of dropping out from all five of Carroll County's high schools. The program will provide students with an integrated STEAM curriculum, academic and soft skills support, and real-world experiences through partnerships with the county's leading employers. Through Full STEAM Ahead, Carroll County aims to ensure that its students stay in school, graduate, and successfully enter postsecondary educational programs or the workplace with the real-world skills and knowledge they need to succeed.

Organization	**Gwinnett County Public Schools**
Project Name	**Gear Up for Graduation!**
Priority Area	Development and Replication of Blended Learning School Models
Areas Served	Gwinnett County
Amount Funded	$ 293,741.40
Description of Project	Gear Up for Graduation (formerly the STEP Academy) utilizes a blended learning model to provide at-risk, over-aged 8th grade students with the opportunity to complete their 8th and 9th grade coursework in one year and rejoin their peers in 10th grade. Gear Up for Graduation began serving students at Moore and Sweetwater Middle Schools through a Race to the Top Innovation Fund grant, and Lilburn Middle School through a state-funded Innovation Fund grant. Through this scaling grant, Gwinnett County Public Schools will expand Gear Up for Graduation to serve an additional 100 students at Summerour Middle School.

Organization	**Thomas County School System**
Project Name	**Scaling of Blended Learning to Thomas County Central High School**
Priority Area	Development and Replication of Blended Learning School Models
Areas Served	Thomas County
Amount Funded	$699,312.00
Description of Project	Thomas County School System (TCSS) will scale the Bishop Hall Charter School blended learning program, developed with an Innovation Fund implementation grant, to 1,496 Thomas County Central High School students with the goal of increasing math achievement. During the scaling process, TCSS will support its teachers with professional development, improved technology, and strong local partnerships – enabling them to increase student ownership of learning and college/career readiness.

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