Quality Review Report

2016-2017

Science and Technology Academy: A Mott Hall School

Junior High-Intermediate-Middle 09X454

250 East 164th St.
Bronx
NY 10456

Principal: Dr. Patrick Awosogba

Dates of Review:
March 7, 2017 - March 8, 2017

Lead Reviewer: Tracie Benjamin-Van Lierop
The Quality Review Report

The Quality Review is a two-day school visit by an experienced educator. During the review, the reviewer visits classrooms, talks with parents, students, teachers, and school leaders and uses a rubric to evaluate how well the school is organized to support student achievement.

The Quality Review Report provides a rating for all ten indicators of the Quality Review Rubric in three categories: Instructional Core, School Culture, and Systems for Improvement. One indicator is identified as the **Area of Celebration** to highlight an area in which the school does well to support student learning and achievement. One indicator is identified as the **Area of Focus** to highlight an area the school should work on to support student learning and achievement. The remaining indicators are identified as **Additional Finding**. This report presents written findings, impact, and site-specific supporting evidence for six indicators.

Information about the School

Science and Technology Academy: A Mott Hall School serves students in grade 6 through grade 8. You will find information about this school, including enrollment, attendance, student demographics, and data regarding academic performance, at http://schools.nyc.gov/Accountability/tools/report/default.htm.

School Quality Ratings

<table>
<thead>
<tr>
<th>Instructional Core</th>
<th>To what extent does the school...</th>
<th>Area</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Ensure engaging, rigorous, and coherent curricula in all subjects, accessible for a variety of learners and aligned to Common Core Learning Standards and/or content standards</td>
<td>Additional Finding</td>
<td>Well Developed</td>
<td></td>
</tr>
<tr>
<td>1.2 Develop teacher pedagogy from a coherent set of beliefs about how students learn best that is informed by the instructional shifts and Danielson Framework for Teaching, aligned to the curricula, engaging, and meets the needs of all learners so that all students produce meaningful work products</td>
<td>Area of Focus</td>
<td>Proficient</td>
<td></td>
</tr>
<tr>
<td>2.2 Align assessments to curricula, use on-going assessment and grading practices, and analyze information on student learning outcomes to adjust instructional decisions at the team and classroom levels</td>
<td>Area of Celebration</td>
<td>Well Developed</td>
<td></td>
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</tbody>
</table>
### School Quality Ratings continued

#### School Culture

<table>
<thead>
<tr>
<th>To what extent does the school...</th>
<th>Area</th>
<th>Rating</th>
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<tbody>
<tr>
<td>1.4 Maintain a culture of mutual trust and positive attitudes that supports the academic and personal growth of students and adults</td>
<td>Additional Finding</td>
<td>Well Developed</td>
</tr>
<tr>
<td>3.4 Establish a culture for learning that communicates high expectations to staff, students and families, and provide supports to achieve those expectations</td>
<td>Additional Finding</td>
<td>Well Developed</td>
</tr>
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#### Systems for Improvement

<table>
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<tr>
<th>To what extent does the school...</th>
<th>Area</th>
<th>Rating</th>
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</thead>
<tbody>
<tr>
<td>1.3 Make strategic organizational decisions to support the school's instructional goals and meet student learning needs, as evidenced by meaningful student work products</td>
<td>Additional Finding</td>
<td>Well Developed</td>
</tr>
<tr>
<td>3.1 Establish a coherent vision of school improvement that is reflected in a short list of focused, data-based goals that are tracked for progress and are understood and supported by the entire school community</td>
<td>Additional Finding</td>
<td>Proficient</td>
</tr>
<tr>
<td>4.1 Observe teachers using the Danielson Framework for Teaching along with the analysis of learning outcomes to elevate school-wide instructional practices and implement strategies that promote professional growth and reflection</td>
<td>Additional Finding</td>
<td>Well Developed</td>
</tr>
<tr>
<td>4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning</td>
<td>Additional Finding</td>
<td>Proficient</td>
</tr>
<tr>
<td>5.1 Evaluate the quality of school-level decisions, making adjustments as needed to increase the coherence of policies and practices across the school, with particular attention to the CCLS</td>
<td>Additional Finding</td>
<td>Well Developed</td>
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</tbody>
</table>
Area of Celebration

<table>
<thead>
<tr>
<th>Quality Indicator:</th>
<th>2.2 Assessment</th>
<th>Rating:</th>
<th>Well Developed</th>
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Findings

Across the vast majority of classrooms, teachers use or create assessments, rubrics, and grading policies that are aligned with the school’s curricula and offer a clear portrait of student mastery. The school uses common performance assessments to create a clear picture of student progress toward goals across grades and subjects, track progress, and adjust curricular and instructional decisions.

Impact

Actionable and meaningful feedback is provided to students and teachers regarding student achievement. All students, including English Language Learners (ELLs) and students with disabilities, demonstrate increased mastery.

Supporting Evidence

- Students articulated specific examples of how they know they are performing on their school projects and whether it is a formative or summative assessment based on feedback they receive from teachers. Feedback is also provided through the school’s assessment growth tracker, which students stated clearly provides them with the specific information on their topics of strength, areas of weakness, and growth. For example, an eighth grade student conferred with her teacher, and based on her formative assessment essays and periodic assessment scores, she knew she needed to improve in developing theme, citing strong evidence, and using figurative language. With this feedback and areas of focus, the student and teacher worked together to improve in these areas. As a result, the student realized she needed to re-read the texts when necessary, which helped her to provide stronger textual evidence in her written responses. This assessment of student work provided the teacher with implications for her class and for other teachers on the grade. Teachers more explicitly instruct on how to accurately annotate text and provide direct instruction on how to make connections and understand the development of and relationships between characters or information that is not always explicitly stated in a text.

- The school’s periodic assessment data support student growth and movement within levels, ultimately leading to proficiency. For example, English Language Arts (ELA) assessment data for sixth graders indicated 13.2 percent proficient for cycle one and 27.5 percent in cycle two. The school’s goal is for 42.8 percent of the grade to be proficient by the end of the 2016-2017 school year. In math, 33 percent of students are proficient compared with their district, where 14 percent of students are proficient, and the City, where 32 percent of students are proficient. The school received an excellent rating in helping ELLs, students with disabilities, and the lowest performing students improve on their State ELA and math assessments as per the New York City Department of Education’s 2015-2016 School Quality Snapshot.

- Teachers’ and school leadership’s data analysis and tracking of student progress led to revision of curricula to include focusing on academic vocabulary, locating information in a text, and analyzing how individual sentences in a text develop a central idea. In math, additional real-world application connections were added. For example, a math lesson on equivalence included a reference to pesos from the Dominican Republic, where some of the students originate, to American dollars. The curricular adjustment also connects to the rubric for applying math in real-life contexts.

- Many of the students enter the school performing at level one in ELA and math. The adjustments to instructional practices and curricular modifications at the school have led to over 60 percent of them scoring a level two, three, or four in both ELA and math by the time they complete the eighth grade.
Findings
Across classrooms, teaching strategies including questioning and scaffolds in English and Spanish consistently provide multiple entry points into the curricula that are informed by the Danielson Framework for Teaching.

Impact
Students, including ELLs and students with disabilities, demonstrate high levels of thinking in work products as outlined in the Danielson Framework for Teaching. All students are engaged in appropriately challenging tasks and demonstrate higher-order thinking skills in student work products, however, opportunities for strategic high quality supports, ownership of student learning, and extensions into the curricula are limited.

Supporting Evidence

- In a math class, students applied multiple transformations to a figure and observed the final results. As the teacher circulated around the room to monitor heterogeneous groups, several students facilitated the lesson as well. A student challenged peers to demonstrate their thinking and extend their group’s responses. Another student presented her responses using an interactive whiteboard while also underlining key academic terms that she and peers identified. Students across groups asked, “Are you sure this is the right answer?” and “Can you explain your answer further?” The teacher interjected minimally to remind students to confirm, extend, or challenge their responses to their peers. The teacher also highlighted student statements that were key to the lesson, such as scale factors. Students also engaged in an extension activity, creating a different sequence of transformations for the same image. In another math class, students focused on reading and writing ratios, determined unit rates, and converted units across systems and cultures. Students participated in station work, where they solved different problems in pairs or in groups. The class consisted of ELLs at various levels who were mostly engaged at each station and able to articulate the task they were working on in both English and Spanish. However, two high performing students finished their work and sat while waiting for a teacher to come to their station. Additionally, a word wall included vocabulary in English but not in Spanish from the lesson such as variable, constant, and ratio table.

- An individuals and societies class focused on cultural expressions in Ghana and what these expressions reveal about the community. The lesson’s various topics at different stations included griots, who are storytellers who maintain a tradition of oral history, kente cloth, West African proverbs for student interpretation, talking drums, and folktales. Students were given the choice to first go to stations that interested them the most, but they would visit each station by the end of the unit. The teacher played music to indicate it was time for students to transition to the next station. A student remained at the same station after the music stopped, and stated they were given the opportunity to stay at a station for two transitions if they needed more time. As students moved to each station, they tracked their understanding of the big concepts and skills by answering questions that were factual, conceptual, and debatable.

- In a Language and Literature class, students were grouped by mixed levels and responded to their reading of A Smart Cookie, by Sandra Cisneros. Students asked each other questions, such as “How can we connect to the situation the mother is going through to our lives?” The teacher annotated and highlighted text and displayed it on the interactive whiteboard, which the students referenced in addition to their workbooks that provided them with different options to engage with the text.
Findings

School leaders and faculty ensure that curricula are aligned to content and International Baccalaureate standards and strategically integrate the instructional shifts. Rigorous habits and higher-order skills are emphasized in curricula and academic tasks and are embedded in a coherent way across grades and subjects.

Impact

Coherence across grades and subjects promotes interdisciplinary units and college and career readiness for all students. All students, including ELLs and students with disabilities, must demonstrate their thinking.

Supporting Evidence

- As an International Baccalaureate approved school with a commitment to ensuring students are consistently engaged in curriculum that will put them on a path to a college and career ready future, lessons and units must include approaches to learning skill categories that include communication, social, self-management, research, and thinking components. Questions included in the planning of units and lessons were “What is my ultimate goal with the activity I am going to do?”, “Is it for my students to learn how to collaborate?”, and “How can I verbally make my students aware of the approach to learning they will be using?” A language and literature course unit entitled “The Secrets Behind What You Eat” incorporated factual, conceptual, and debatable questions. Conceptual questions included, “How do we make decisions about what we eat?” and “How is each food chain responsible and irresponsible?” Debatable questions tasked students with justifying the most responsible choice for food consumption and production in the United States. These questions included, “Which of Michael Pollan’s food supply chains would be the most responsible choice for the United States?” and “Has the author or speaker used sufficient relevant evidence and sound reasoning to support his claim?” The goal of the summative assessment of the unit charged students with persuading readers of *The New York Times* to make responsible choices about their daily food consumption through an op-ed page to be submitted to the food section of the newspaper.

- Unit and lesson plans are co-created with teachers on the same grade and in different content areas to promote interdisciplinary learning. A science and design unit on evolution focused on the statement, “The process of change is driven by adaptations and interactions with the environment over time.” Inquiry questions included, “How does life evolve?”, “What role does the environment play in shaping evolution?”, and “Does evolution mean progress?” Students would create a two-voice poem that would analyze why an organism would become extinct from an evolutionary perspective. The summative assessment criteria included specifics on role, audience, and situation. Included in the unit were approaches to learning highlights stating, “In order for students to construct a logical plan which outlines the efficient use of time and resources, students must plan short and long-term assignments to meet their deadlines.”

- Curricula included materials translated for ELLs, and the use of a variety of techniques, notes, simplified directions, and multiple visuals for students with disabilities. Units included checkpoints to assist students with organizing and meeting assignment deadlines.
Findings

School leadership consistently communicates high expectations and provides training. The staff establishes a culture for learning that systematically communicates a unified set of expectations for all students and provides clear, focused, and effective feedback and guidance supports to students.

Impact

There is a culture of mutual accountability amongst the faculty. Students own their educational experience and are prepared for the next level.

Supporting Evidence

- The school community values a strong culture of teaching and learning that sets the tone for how teachers interact with one another and with students. The areas of focus from the Danielson Framework for Teaching are using questioning and discussion techniques, engaging students in learning, and using assessment in instruction. Professional learning opportunities include intervisitations with a focus on creating model lab sites within the school that teachers can use to grow in their practice. Teachers hold themselves and their colleagues accountable for student learning. For example, an Integrated Co-Teaching (ICT) team needed support with communicating with some of their Spanish speaking students. Two teachers who were native speakers volunteered support to the class, increasing student engagement and facilitating questioning and discussion techniques.

- Eighty-four percent of the school's former eighth graders have earned enough high school credit in ninth grade to be on track for graduation, which is higher than the district and comparison group averages. A student commented, “I didn't care about my behavior and grades in the past. I realized I had to do better because there were too many people rooting for me here.” Another student stated, “I’ve seen an improvement in my behavior as well. My teachers and counselor kept stressing the importance of my grades in the seventh grade for high school and based on their feedback, I’ve improved my critical thinking. There’s no time for me to slack off.”

- Teachers volunteered their time after school and on Saturdays during the high school application process to take students on trips to Bard High School Early College, Bronx Center for Science and Math, and University Heights High School. The school also provides students with support in the specialized high school application process. A student noted, “I applied to Bronx Science because of this school and whether or not I am accepted, I know I tried hard to get in the school.” Other students commented on getting scholarships to private schools in and out of the State because of the support of the staff.

- Students and teachers both agree that Engrade, an online grade reporting platform, has held them accountable to each other. Students are able to communicate with teachers when they notice a grade has not been entered or if there is a discrepancy. Teachers highlight their ability to provide feedback to students, keeping them focused and how they use it as a form of communication that prepares students for college.

- Mind Travelers is a remediation reading program for the school’s struggling readers. Students meet in small groups with a facilitator who engages them in decoding and guided reading. Students average reading levels in this program have improved based on data from September to January.
Findings

School leaders support the development of teachers, including those new to the profession. Feedback to teachers accurately captures strengths, challenges and next steps using the Danielson Framework for Teaching.

Impact

The feedback to teachers articulates clear expectations for teacher practice, supports teacher development, and aligns with professional goals of teachers.

Supporting Evidence

- The principal, assistant principal, and peer collaborative teacher all provide teachers with feedback. Feedback is given using different methods, including formal classroom observations with post-observation conferences, informal conversations, email correspondence and the use of an annual professional review evaluation that is rooted in the Danielson Framework for Teaching. Reviewed observation reports included teacher strengths, challenges, and next steps. For example, evaluator notes to a teacher included, “I enjoyed my visit to your classroom and I thank you for the opportunity to share in the learning experience. Your lesson was engaging for students. They asked conceptual questions from the pictures reviewed and you did a good job prompting debatable questions from student questions. Your Think & Answer activity was robust. I expect you to create an opportunity for students to apply your well defined statement of inquiry when this lesson is revised.”

- New teachers receive additional support from a peer collaborative teacher. Their feedback is memorialized on a document that captures the targeted Danielson component, reflections, and next steps. A mentoring log from a new teacher focused on using questioning and discussion techniques. The teacher reflected, “The students struggle with the idea of challenging each other or disagreeing respectfully, but I want them to be able to challenge one another.” The suggested next steps included, “Use at least two open-ended questions per lesson and use the phrase confirm, extend, or challenge to focus on developing student responses to each other.”

- Mid-year reflections from teachers in January highlighted their goals connected to a Danielson domain, competency area, strengths, and challenges, which concluded with a summary. A teacher summary included, “As I reflected on my goals from September and created new goals based on my evaluations this year, I was excited to see my growth, specifically in the area of questioning in language acquisition. Allowing for students to think critically has always been something I struggled with over my four years of teaching. I am finally seeing progress in this area. I love hearing students come up with their own questions. I am able to see students’ level of engagement and critical thinking increased compared to last year.”

- The frequency of observations is guided by data from periodic assessments, review of student folders, and requests from teachers in an effort to proactively improve their practice. The principal stated, “There isn’t a gotcha mentality here. There is an expectation that the leadership team will visit at minimum, ten classes every day with feedback provided shortly thereafter.”
**Additional Finding**

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<tr>
<th>Quality Indicator:</th>
<th>4.2 Teacher Teams and Leadership Development</th>
<th>Rating:</th>
<th>Proficient</th>
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**Findings**

The majority of teachers are engaged in structured, inquiry-based professional collaborations that promote the achievement of school goals. Teacher teams consistently analyze assessment data and student work for students they share or on whom they are focused.

**Impact**

The instructional capacity of teachers is strengthening, which is typically resulting in improved teacher practice and progress toward goals for groups of students.

**Supporting Evidence**

- Teams meet in grade and content areas to review student work, lesson plans, texts, and to discuss findings from instructional rounds. This collaboration has supported teachers’ instructional growth and confidence in their practice as well as student’s academic growth. The school’s multi-year data shows that students have increased in their ELA average proficiency levels between 2013 and 2016. In math, student performance increased during the same period. Teachers attribute this growth to their focus on curricula and being very purposeful about choosing content that students can relate to. They apply real-world context that is aligned to the Common Core and International Baccalaureate standards. During a science teacher team meeting, members noticed that although some of the students collected data correctly, the level of analysis was deficient. The team also noticed that because they were teaching a new skill, the last lesson in the unit preceding the lab assignment should have had a stronger connection, especially for their ELLs and students in self-contained classes. The team agreed that the lesson had to be re-taught and curricula revised, which is also in accordance with the school’s expectations.

- Teachers commented that their practice has also improved in the analysis of data to drive their lessons. An eighth grade teacher shared, “We are constantly reviewing our data and pushing ourselves so we can push our students to be deep thinkers and critical thinkers. We also learned we have to give them time to think deeply.” A comparison of student periodic assessment data from December to January showed increases from one to six percent in overall scores.

- International Baccalaureate teacher team minutes included topic, notes, action items, and next steps. Notes during an end-of-year meeting included, “A connection between learner profile and international mindfulness is not apparent across the school. A possible solution, at least once per week, have students connect lesson to global context in a reflection summary.” The next steps included incorporating a global context into the Writer’s Odyssey program. As a result, some students have selected a writing assignment that centers on environmental justice and the Environmental Protection Agency. Another topic reviewed during a meeting highlighted challenges for some teachers with scaffolding student action plans for success. The next step included having the peer collaborative teacher attend grade team meetings to support teachers.