Quality Review Report

2017-2018

Brooklyn Academy Of Science And The Environment

High school 17K547

883 Classon Avenue
Brooklyn
NY 11225

Principal: Gail Lambert

Dates of Review:
March 15, 2018 - March 16, 2018

Lead Reviewer: Janine Kieran
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


School Quality Ratings

<table>
<thead>
<tr>
<th>Instructional Core</th>
<th>Area</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To what extent does the school...</strong></td>
<td></td>
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</tr>
<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>Proficient</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>Developing</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>Additional Finding</td>
<td>Proficient</td>
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</tbody>
</table>
## School Culture

**To what extent does the school...**

<table>
<thead>
<tr>
<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>
</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>Area of Celebration</td>
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</table>

## Systems for Improvement

**To what extent does the school...**

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<thead>
<tr>
<th>Area</th>
<th>Rating</th>
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<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>
</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>
</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>
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<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>
</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>
</tr>
</tbody>
</table>
Area of Celebration

| Quality Indicator: | 3.4 High Expectations | Rating: | Proficient |

Findings

School leaders consistently convey high expectations to staff through ongoing feedback and professional learning aligned to the Danielson *Framework for Teaching*. The school provides ongoing information to families regarding student progress toward college and career readiness.

Impact

There is a system of accountability supported by ongoing communication and teaching and learning focused professional development. The school leaders and staff communicate the learning opportunities for families so that families understand student progress towards meeting standards.

Supporting Evidence

- Through standard practices such as a faculty handbook, weekly email blasts, and a list of administrative and instructional schoolwide expectations that are shared with staff on the first day of school, school leaders communicate high expectations. School leaders attend and support various teacher team meetings on a weekly or monthly basis as an additional means of ensuring accountability. One example of a memorialization of high expectations may be read on an email sent to the staff on January 2, 2018 that outlines interim progress toward schoolwide goals. Specific data is shared, and a request is made for teachers to prepare to discuss their scholarship data and identify next steps to ensure student success. In addition, teachers are reminded to hand in copies of their interim assessments for school leaders’ review. As such school leaders and staff have a clear picture of expectations and student progress.

- School leaders surveyed staff and identified the use of assessment in instruction as a focus for upcoming professional learning. Three professional learning communities (PLCs) were formed to enable staff to select a specific method of improving their practice as it relates to assessment, the school goals, and the Danielson *Framework for Teaching*. The PLCs offered included formative assessments/embedding checks for understanding, improving feedback (teacher to student, student to student and student self-assessment), and using technology for assessment. Teachers engage in four to six months of professional learning in their PLCs and then turnkey their learnings to the larger group. Teachers reported that PLCs present on different topics. One teacher shared, “This was designed to give teachers ownership of professional development. PLCs are a great way to decide on what type of professional development teachers need.” As a result, teachers’ professional learning is targeted toward their individual and schoolwide needs.

- The school leaders and staff consistently communicate information to parents and families through emails, phone calls, letters and face-to-face meetings. An online gradebook is maintained so that parents can get updates as to their children’s progress at any time. Parents also referenced the use of a texting application that keeps them apprised of their children’s progress in specific classes. Parents, students, and staff referenced the expectation that students are required to attain college readiness scores on both the English Language Arts (ELA) and math Regents exams to graduate. Students are provided with a planner in which assignments are listed, and one parent referenced use of this tool as a way of keeping abreast of her child’s progress. Parents revealed that they meet with guidance staff to determine their child’s individual progress toward college and career readiness. Parents also shared that their children are better prepared for careers through the various internships and trips to colleges and industry settings which begin in grade nine. Specifically, a parent reported being provided with additional materials for use at home in order to support her child’s academic progress in math. She said, “I get materials so my son can practice at home.” As a result, parents are aware of their child’s progress toward meeting personal and academic goals.
Area of Focus

<table>
<thead>
<tr>
<th>Quality Indicator:</th>
<th>1.2 Pedagogy</th>
<th>Rating:</th>
<th>Developing</th>
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**Findings**

Teaching strategies have yet to consistently reflect the articulated belief in student collaboration and the use of well-scaffolded tasks across classrooms. Student engagement was inconsistent across classrooms.

**Impact**

Student tasks were inconsistently designed to allow for student collaboration. As such, student engagement and participation was limited and at uneven levels across the majority of classrooms.

**Supporting Evidence**

- While one Global History class demonstrated evidence of a high degree of student collaboration as students were asked to speak to three classmates to get information on the Holocaust, evidence of student collaboration was not consistent across the remaining eight class visits. For example, in all three math classes observed, although students were seated in groups and had the option to collaborate, they did not make this choice. Tasks were not designed to ensure student collaboration. Students were given worksheets with mathematical problems that they worked on independently. In two math classes, students were asked, “Do you work together?” Two students shared that they only work together when they need help with the answer. As a result of the way in which tasks were designed, few students were engaged in collaboration.

- In a general education grade twelve social studies class, the teacher designed a Socratic seminar. The topic of discussion was the benefits and cost of global trade. While students in the outer circle were not expected to speak in the Socratic Seminar, fewer of them were observed taking notes. During the class visit, the teacher tried to encourage more students to get involved; he said, “Let’s try to bring in more people.” Of the 22 students in the class, 13 students participated in the discussion. An English Language Learner (ELL) student shared his thoughts various times during the Socratic seminar, but in contrast another student had his head down on the desk. Students in the outer circle were supposed to take notes on their partners’ comments and questions, but not all students were observed as actively taking notes. As such, evidence of high levels of thinking and cognitive engagement was limited.

- During a grade twelve ELA class, students were asked to peer edit a classmate’s outline from another class. In some cases, students were placed in groups of four and in other cases, they were in pairs. The directions posted on the board included “It’s fine for each group member to complete an individual worksheet for the questions being answered.” Students spoke about what their classmates wrote on the outline sheet, but there was no protocol for evaluating their peer’s work. One student said, “I was thinking that this is a good outline.” Her classmates agreed. In another group, a student had his head down on the desk and was disengaged from the process. As a result, student collaboration and participation were uneven.

- In an integrated co-teaching ELA class that had ELLs, there was evidence of student collaboration as students were asked to share questions they developed after reading an article on corporal punishment. There were three groups of students, and the teacher called on one student from each group. One student shared, “Why did over 100 countries ban corporal punishment?” Another student shared, “Why do six states prohibit corporal punishment?” While students in this class exhibited evidence of engagement through annotated readings and the use various learning supports, the level of student discussion and collaboration was uneven. Students who were not responding and/or were finished with their work, did not have extension activities keep them thinking and participating. As a result, some students were more engaged than others during this class.
Additional Finding

<table>
<thead>
<tr>
<th>Quality Indicator:</th>
<th>1.1 Curriculum</th>
<th>Rating:</th>
<th>Proficient</th>
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Findings

School leaders and faculty ensure the curricula are aligned to the Common Core Learning Standards and integrate writing from sources and mathematical applications as the key instructional shifts while emphasizing rigorous habits in performance tasks across content areas.

Impact

Curricula are coherent and promote college and career readiness. Additionally, rigorous curricula are accessible for all students, including students with disabilities and ELLs.

Supporting Evidence

- The school uses EngageNY for math and adapts Collections for grades nine and ten in ELA to ensure alignment to the Common Core Learning Standards. New Visions curricula are used in other content areas which are also aligned to the Common Core Learning Standards. A lesson plan for a grade ten geometry class identifies the academic skills students will master, including “identify and apply properties of triangles, identify and apply properties of rigid motions to prove properties of parallelograms, and learn vocabulary.” The plan has media resources including mathbits.com and problem-attic.com. The plan reveals that students must be able to compare the properties of parallelograms, rhombi, and rectangles. Students will also be able to complete “if/then” statements that further demonstrate the depth of their understanding of the properties of these shapes and the way in which they are similar and different from one another. As such, curricula reflect various resources that provide access to all learners.

- A mixed grade writing class has students reading and annotating an article from The New York Times Upfront magazine entitled, “The Battle Over the Paddle” on whether corporal punishment is an effective disciplinary tool in school or a form of abuse in schools as they prepare for a Socratic seminar. Students are placed groups and translated materials are available for ELLs in both Spanish and French. Students are provided with a graphic organizer to identify the claim and counter claim, as well as a word bank and key vocabulary. Another ELA plan for a grade 12 integrated co-teaching class has students deepen their understanding of Macbeth through discussion in a Socratic seminar. Students focus on the issue of Fate versus Free Will as the topic of their discussion. Student groupings are specific as they are placed in the inner and outer circles with detailed descriptions of the rationale. For example, the plan cited, “S1, who has an Individualized Educational Program (IEP), has been very strong in his refusal to work in groups. I have discussed the inner circle with him at length, and he seems to be into the idea of this. I will start him in the inner circle and move him if he asks.” The plan has a modern translation of selected passages for struggling learners with the act/scene/line/page numbers that direct students to places where they will find textual evidence to support their claim.

- Unit plan templates provide evidence of Common Core Learning Standards and identify the theme, enduring understanding and essential questions. Plans reflect the way in which students will demonstrate their understanding as well as instructional strategies, resources and assessments. For example, in a unit plan entitled “Foundations of Economics and Globalization”, student learning is demonstrated by writing an argument essay on the impact of global trade of a particular good or service or a particular nation. As a result, students were able to identify the impact of economic decisions made by individual consumers as well as those who were part of a particular socio-economic group.
Additional Finding

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<tr>
<th>Quality Indicator:</th>
<th>2.2 Assessment</th>
<th>Rating:</th>
<th>Proficient</th>
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Findings

Across classrooms, teachers create and use common assessments, rubrics and grading policies aligned with the school’s curricula and utilize data to determine student progress toward goals.

Impact

Teachers and students receive actionable feedback regarding student progress and data informs adjustments to curricula and instruction, thus positively impacting student performance.

Supporting Evidence

- Across grades and content areas teachers create assessments and rubrics that provide students with actionable feedback. Feedback is communicated via Google docs by use of comment codes and on student work, which is evident on hallway and classroom bulletin boards. Teachers use comment codes to identify common mistakes, resulting in consistency across content areas. Feedback is actionable and specific as revealed on student essays in ELA, social studies and science. For example, on a student’s essay on *Things Fall Apart*, the teacher wrote “Explain who Ikemefuna is and why killing him is important.” Feedback also included, “You have great evidence here.” Another example was found on an argument essay on the question, “Should the United States continue buying tar sands oil from Canada?” Feedback included, “Energy is needed for many things, be more specific” and “Good reminder of your claim.” On a student’s math worksheet, a teacher stated “Remember, average value requires division of the approximation by the length of the interval.” As a result, the students have a clear picture of what they are doing well and the adjustments they need to make. One student shared, “They will suggest a conference; have a one on one meeting and use Google classroom with comments. She highlights words to correct grammar and spelling. They give tips on how to improve writing.”

- Rubrics and checklists are used across content areas as well as for the assessment of student notebooks. ELA teachers use a New York State Regents Examination Argument Writing Rubric. Student writing is posted in classrooms and feedback accompanies the point score. When asked, a student shared, “In ELA, there is a rubric, which is on a point system…; it helps me to see what needs to be improved.” Students are also provided with a text-analysis response checklist. The *TIED* paragraph structure (topic sentence, introduce evidence, evidence, discuss evidence) is used to write argument essays across content areas, with the exception of math, theatre, and language other than English classes. A comparison of Regents data from January 2017 to January 2018 demonstrates an increase in the passing rates by 16.5 percent, and in addition, students’ college readiness scores of 75 percent or higher increased to 57 percent as compared to 27 percent in January 2017.

- Teachers create three interim assessments as well as a final exam that are aligned to the Common Core and the New York State Standards. Data is analyzed, and a corrective action plan is designed to address common misconceptions. Teachers adjust curricula in order to ensure student progress. A corrective action plan in science identifies students’ difficulty with questions involving cellular functions. After spiraling back to these questions in the following unit, the second interim assessment resulted in an increase in students’ mean score by 10 percent. Similarly, a corrective action plan in global history identifies that some students did not understand the difference between outside information and information from documents. The teacher planned to have students practice paraphrasing test questions with a guiding prompt. A comparison of two global interim error analysis reports administered in November 2017 and in January 2018 shows an increase in 19 percent of student scores. This is inclusive of students with disabilities and ELLs. As a result, teachers’ plans result in increased student performance.
Additional Finding

4.1 Teacher Support and Supervision | Rating: Proficient

Findings

School leaders support the development of teachers with effective feedback and next steps from frequent cycles of classroom observation. Feedback to teachers accurately captures strengths, challenges, and next steps using the Danielson Framework for Teaching.

Impact

Observations and feedback cycles elevate instructional practices and promote professional growth and reflection. Feedback articulates clear expectations and supports teacher development.

Supporting Evidence

- Frequent cycles of classroom observation provide feedback utilizing the Danielson Framework for Teaching. Each rated item on observation reports includes specific language from the rubric and evidence from the classroom observation that supports the rating. Next steps for teaching improvements are included throughout the class-specific evidence directed to specific categories of the Danielson Framework for Teaching and at the close of each observation report. For example, one observation feedback included, “Moving forward, strategically check in with all your students. If all students have it correct, you do not need to review it. If 70 to 90 percent of the students have it correct, you can form a small group of the students who were incorrect and allow those students who got it correct to move on with practice problems.” Another example of effective feedback includes, “Revise your project rubric to better align with the content and your instructions. Your rubric graded students on their creativity rather than students’ thoughtful analysis of their identified problem and solutions. I [school leader] modeled some changes to your rubric in our post-observation meeting and provided you with a revised rubric. Please review these changes and submit to me a reviewed rubric via email by January 12th.”

- Following an informal observation, a school leader identified an area of growth in Designing Coherent Instruction from the Danielson Framework for Teaching for a teacher. As a means of support the school leader designed a model lesson plan and conducted the corresponding instruction for the teacher to observe. The school leader shared her expectations in an email with the teacher following this support. The school leader conducted a formal observation within one week, and the following feedback was provided, “You’ve shown significant improvement in the past few weeks in terms of Danielson’s 1e: Designing Coherent Instruction.” As a next step, the school leader shared, “Engage in backwards planning to build a coherent sequence of lessons that support students’ reading and writing goals.” At a teacher team meeting, a teacher shared, “When we’re doing the post observations; they give you feedback. They will look at what you do well, and then share their thoughts about next steps.” As a result, teachers and school leaders have an open dialogue about next steps, and teachers feel comfortable trying new pedagogical practices.

- Teachers reported that the support and supervision they have received from school leaders has supported their development as teachers. One teacher reported, “I was hesitant about introducing parallel teaching. I was skeptical about having two different voices in the room. The principal showed me videos from her prior school, and now I am more comfortable with this.” Another teacher reported, “After an observation by the principal, she told me about having a clear picture about whether the students ‘got it’ at the end of the lesson. She encourages me to use exit slips as a way of knowing whether students understand the work.” Another teacher shared, “Danielson is being used to support teacher growth.” As a result of frequent and consistent observations that provide teachers with actionable feedback, their pedagogical development is enhanced.
Findings
The majority of teachers are engaged in structured, inquiry-based professional collaborations that promote achievement of school goals and implementation of the Common Core Learning Standards. Distributed leadership structures are in place.

Impact
Teacher collaborations strengthens instructional capacity. Additionally, teacher voice has driven decisions about school goals as well as the implementation of learning environment improvement efforts.

Supporting Evidence

- Teacher teams engage in professional inquiry that uses data from Regents exams and scholarship results to develop action plans with specific next steps. In September, science teachers identified 25 seniors who did not pass a science Regents exam, but only four of them were scheduled for a science class. After scheduling students for academic intervention classes, nine students passed the Regents exam in January 2018, and the remaining students are all scheduled for classes either during the school day or in the school's afternoon program. Similarly, math teachers identified 28 seniors who did not pass a math Regents exam. Students were also scheduled for academic intervention, and 15 students passed the Algebra Regents exam in January 2018. Teacher teams also recommended that students are given a mock exam as an additional measure of preparation for the June administration. As a result, student progress toward graduation is increased.

- In a teacher meeting, the math team continued to monitor the progress of students’ skill deficits related to solving inequalities. They focused on students who, after analyzing the results of the most recent interim assessment, were identified as high, medium, and low-level learners. One teacher shared that the high-level student was able to solve the inequality and use two inverse operations at the same time but did not explain the solutions. Another teacher shared that the medium-level student can also solve and graph the solution for the inequality and he can distribute the negative number, but he did not explain the solutions or consider the premise of the statement when showing the integers that satisfied the inequality. A third teacher shared that the low-level student can distribute a negative number and add signed numbers, but he did not solve an inequality. Teachers identified the instructional modifications required for each of these students. For example, for the high-level student, the teacher will re-teach interval notation and spiral this learning graphing linear inequalities. For the medium-level student, the teacher will spiral conditional statements in upcoming problems, and for the low-level student, the teacher will re-teach how to solve an inequality and interval notation. Teacher discussion resulted in the identification of instructional strategies that will support struggling learners and increase student progress toward meeting the school goal of increased credit accumulation in math.

- A school committee that is comprised of school leaders and teacher leaders meets twice per month to assess the school’s progress toward meeting schoolwide goals, improving teachers’ instructional practices and to serve as an advisory board. This committee developed the school’s grading policy, instructional focus and schedule for Super-Wednesday, a weekly afternoon program that has both academic as well as social and emotional development programs. Teacher leaders are identified in content areas and professional learning communities. Teacher leaders are supported by school leaders in their work, and clear expectations for their work in these roles has been developed. As a result, teachers reported that they feel as if their voices are heard and considered when making decisions in the school.