Quality Review Report

2017-2018

Science Skills Center High School For Science, Technology And The Creative Arts

High school 13K419

49 Flatbush Avenue Extension
Brooklyn
NY 11201

Principal: Dahlia Mcgregor

Dates of Review:
April 11, 2018 - April 12, 2018

Lead Reviewer: AJ Hepworth
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 Skills Center High School For Science, Technology And The Creative Arts serves students in grade 9 through grade 12. 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>Area</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent does the school...</td>
<td></td>
<td></td>
</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>
</tr>
</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>
</tr>
</thead>
<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>Proficient</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>Proficient</td>
</tr>
</tbody>
</table>

#### Systems for Improvement

<table>
<thead>
<tr>
<th>To what extent does the school...</th>
<th>Area</th>
<th>Rating</th>
</tr>
</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>Proficient</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>Area of Celebration</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>Proficient</td>
</tr>
</tbody>
</table>
Area of Celebration

<table>
<thead>
<tr>
<th>Quality Indicator:</th>
<th>4.1 Teacher Support and Supervision</th>
<th>Rating:</th>
<th>Well Developed</th>
</tr>
</thead>
</table>

Findings

Effective teacher-led intervisitations, strategic use of cycles of observation by school leaders coupled with actionable feedback accurately captures teachers’ strengths, challenges, and next steps aligned to the Danielson Framework for Teaching and professional goals.

Impact

School-wide instructional practices and strategies that promote professional growth and reflection are elevated. Additionally, problems of practice observations and intervisitations articulate clear expectations leading to improved teacher practices that align with professional goals.

Supporting Evidence

- Teachers overwhelmingly agree the school leaders' feedback from problems of practice observations, helps them improve their teaching and contributes to their professional growth. Several teachers shared the feedback is fair and accurate, while supporting their growth with the provision of additional resources. For example, one teacher was provided with strategies to further engage students in classroom discussion to support their reading and writing across all content areas. Following training and conversations with school leaders, the teacher was commended for engaging students in turn and talks to discuss the text they read and compare solutions from the problems they solved. Similarly, another teacher was encouraged to choose a student to lead the discussion and serve in the role of a facilitator. Although the school leader who observed the subsequent observation noted the level of fidelity to which facilitation took place did not reflect high quality, further suggestions were provided in addition to commendations for the adoption of writing and anchor texts to challenge student thinking. Overall, the feedback and professional support teachers receive is effective and aligned to the teachers’ professional goals.

- Intervisitations between teachers are organized and conducted independently of school leadership. Teachers visit each other’s classes to view instruction with the lens of the problem of practice in a non-evaluative manner. Teachers reflect on their peers’ professional discourse using an adopted template while memorializing low-inference observations. Following the visit, participants discuss noticings and suggest departmental curricular modifications or instructional adjustments in the classroom. For example, the social studies department improved their implementation of Socratic seminars and the inclusion of agendas through their collective learning. Intervisitations conducted by the science department have resulted in the implementation of more group discussions to limit an individual student’s domination of class discussions.

- Feedback from observations guides teacher development through a connection to their goals for professional growth. Teachers refer to their goals in conversation with school leaders when debriefing during post-conferences. This provides opportunities for shared professional dialogue, tied to specific approaches in order to meet the teacher’s professional goals. For example, a math teacher encouraged his students to discuss their results after independently solving their problems in an effort to meet his goal of improving student discussions. A social studies teacher attended professional development and collaborated with department members to develop the skills necessary to facilitate instruction of a student-centered learning environment. All self-reflection post-observation conference forms highlight how teachers will incorporate actionable feedback and next steps right away to continuously meet their professional goals.
Across classrooms, teaching strategies inconsistently provide multiple entry points into the curricula to support students' access when completing work assignments.

Impact

Students were unevenly engaged in appropriately challenging tasks and higher-order thinking skills as evidenced in their work and classroom discussions, thus limiting high-levels of student thinking and participation. Limited multiple entry points were noted in classrooms, excluding two classes where students facilitated the learning with discussions and a gallery walk.

Supporting Evidence

- English Language Learners in an English as a New Language class interpreted the meaning of a poem to determine how poets express themes of self and identity. The teacher presented an individual copy of the poem to each student, posted it on the interactive white board, and read it aloud so all could hear it once. Then students in strategic groupings analyzed and answered questions using several graphic organizers and tools to highlight, while justifying their answers. One group of students with emerging English proficiency, were further provided one-to-one support including Cornell note-takers and the poem reread to promote understanding. All students in this particular class demonstrated high-level analysis via responses and interpretation in their groups. One student inferred the theme of the poem to reflect, "The boy is facing a hard time with his father based on the fact that he is the speaker and it is making him sick." Another student furthered the interpretation noting, "By his actions we can see his mother is upset because she cannot do anything." Other than one similarly engaging chemistry class where students created the questions and scaffolds for every students' ability to understand the rigorous concepts, observation of students' engaged in appropriately challenging tasks and higher-order thinking was not evident across the majority of classes.

- Students in a science class attempted to explain how body systems maintain homeostasis by designing a controlled experiment to support their claim with evidence and reasoning; however, the checklist, resources, and instructional pacing supported only a few students' in their ability to effectively make a design plan. Several times during instruction, the teacher asked if students "respectfully agree or disagree with your peers’ thinking." Few students responded and engaged in discussion or design of the experiment, although most were compliant and recorded low-level procedural connections with the lab. Similar observations made during a visit to an English Language Arts (ELA) Socratic seminar, demonstrated students made few connections citing evidence despite having three varied sources to extrapolate from; text, chart, and pictures.

- Students stated they “mostly all do the same work” in their classes, when asked how scaffolds engage them in appropriate challenges, although several students noted in math they are given additional challenging questions after they complete their whole group assignment. Students discussed the role and motivation behind several characters’ actions in Shakespeare’s Macbeth by asking their classmates thought-provoking questions such as, “Is Lady Macbeth responsible for Macbeth’s actions?” In few classes, students engaged in asking questions to one another.
Additional Finding

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

Findings

School leaders and faculty make purposeful decisions that align curricula to the Common Core Learning Standards, instructional shifts, and content standards. Additionally, curricula and academic tasks are planned and refined using student work and data.

Impact

I can statements and a universally adopted lesson plan template support cognitively engaging tasks which coherently promote access to college and career readiness for all students.

Supporting Evidence

- A review of curricular documents, including lesson and unit plans, highlight access to college and career skills. A chemistry lesson plan includes learning objectives for students to take Cornell style notes, formulate questions, and challenge peers thinking all while engaged in cognitively challenging concepts linked to chemical bonding and reactions. Strategic planning provides students with access to demonstrating knowledge of the discipline with an emphasis on academic vocabulary. Furthermore, students are involved in the development of instructional resources including presentations, questions, and review of content. Similar access to understanding social studies content is evidenced by a thoroughly developed curricular resource for students to engage in describing the impact of capitalism on the British economy. The guided instructional activity sheet includes questions for student response with reference to informational text with text-based answers, while writing from those sources. Most lesson planning documents refer to skills essential for engaging in rigorous and coherent curricula, although not effectively implemented as designed.

- The vast majority of teachers have adopted the schoolwide lesson plan template. The template primarily consists of identification of relevant Common Core Learning Standards, the learning objective, essential question, misconceptions, do now, activities, summary, and differentiated approaches to meet the needs of students to promote coherence of content across grades and disciplines.

- Teachers make curricular alignments, adjustments, and refinements in teams on curricular documents using student work and data. Colleagues review several lesson component areas including the quality of student choice on completed assignments, clarity of lesson, assessment techniques, and rigor. Review of several department curriculum feedback forms highlight revisions that improve pacing, develop the essential question, meet learning objectives, and further rigor and student engagement. Some examples include, the use of technology more strategically in algebra, providing opportunities for debate of current events in US History and Government, and the creation of hands-on activities in Living Environment. Curricular revisions are also applied to unit plans for more coherent implementation based on do now and entry ticket assignments.
Findings

Across classes teachers use or create assessments that are aligned with the school’s curricula and use monthly progress monitoring assessments to determine student achievement of grade level and content area standards.

Impact

Students consistently receive actionable feedback through a variety of formative assessments leading to improved understanding and benchmark assessment results guide curricular and instructional adjustments.

Supporting Evidence

- Feedback is provided in the form of written notes, glows and grows, and rubrics marked to indicate performance level for improvement. A review of student work samples highlights that these forms of feedback provide students with opportunities to improve their work. For example, a science graphic organizer includes a glow stating "clear and accurate claim," while a next step suggested, "write a reflection of your learning." Similarly, a US History essay shared by a student included a glow regarding the quality of detailed information, while the grow suggested that the essay is confusing because the bullet points were combined. Students stated they mostly receive feedback to fix their work either in class or online. Students further stated they could act on the feedback and understand the criteria for success embedded in rubric criteria. Additionally, rubrics used across classes inform students of their work quality by level of performance, and progress towards mastery. One student noted his next steps in math are to “justify my explanations and write the graph points," as indicated by the rubric criteria.

- Teachers plan strategies to address possible student misconceptions using results from monthly benchmark assessments across core content classes. Students' most common incorrect response on a recent algebra assessment was placing the variable in the wrong place of the equation. Teachers concluded some students confused linear function with exponential functions, and failed to convert percent to decimal. A strategy to address this misconception moving forward includes reteaching linear functions change at a constant rate while exponential functions involve growth or decay. Additionally, teachers will consistently remind students to use the calculator to check their thinking with conversions.

- Teachers and students use Socratic seminar trackers to track information related to engagement in the activity, including, participation, response frequency, eye contact, and use of text to support answers. Students hold themselves accountable for using the form to challenge their participation and thinking, although the consistency and timely response to using the form across classes varies. For example, in a social studies class students monitored their assigned partner using the tracker, while in an ELA class, students completed the form after the task, thus limiting its accuracy and intended purpose of offering students a clear portrait of mastery while still challenging participation and thinking.

- The schoolwide assessment plan clearly communicates how all common assessment results are utilized to adjust curriculum and instruction. For example, monthly progress monitoring exam data is used to determine what areas of the curriculum need to be retaught and designed for individualized differentiated instruction aligned to student needs. Similarly, analysis of reading inventories guide student groupings, strengths, and next steps for each student.
### Findings

School leaders consistently communicate high expectations to the entire staff and provide professional learning sessions to meet those expectations. Additionally, a culture of high expectations is communicated to students through an advisory course.

### Impact

Staff establish expectations connected to college and career readiness skills and the path for students to successfully meet them in core content classes, electives, and after-school programs.

### Supporting Evidence

- The principal provides all staff with a handbook at the beginning of the year and conducts regular staff meetings regarding instructional and professional expectations. In addition, at the beginning of the year, teachers set both professional and personal goals. Most teacher-generated goals focus on the non-negotiable instruction, practice, and assessment expectations. These expectations are posted in classrooms and align to the Danielson Framework for Teaching. Additionally, the teacher expectations identify several non-negotiables for students to be successful. Teacher expectations are supported with training and guidance from school leadership and colleagues. Several instructional non-negotiables include; integration of the instructional shifts, daily use of Cornell note-taking strategy, and provision of multiple opportunities for students to self- and peer-assess their work.

- Collaborative staff conversations have led to the establishment of schoolwide curricular planning expectations. The lesson plan template includes components that support alignment and vertical coherence so teachers can meet curricular expectations. School leadership collect and review unit and lesson plans for content knowledge, student engagement, and to ensure that gaps in learning are addressed based on assessment results. Furthermore, staff is trained using the clinical model to work together and co-plan a lesson plan, especially in Integrated Co-Teaching classes. The principal stated, “we are very intentional about [teachers] getting to the process we want.” Additionally, a teacher expressed that the school leaders “have done a great job to get us to focus our pedagogical lens therefore aide students to metacognitively think critically.”

- Strategies taught to students focus on writing, inquiry, collaboration, organization, and reading in preparation for college and career readiness. The strategies are embedded across most classes and tutoring services, while elective courses are offered to further develop those strategies. Students also receive preparation for the Scholastic Aptitude Test, online academic support, college guidance, and opportunities to visit college and universities. However, several students stated they desired more comprehensive guidance with their college application and identification process.

- An advisory class meets weekly to support students understanding of their progress toward graduation. Students review progress reports, report cards, transcripts, and graduation requirements to ensure they have a clear understanding of criteria for graduation and post-graduate life. A pathway to college and career readiness also identifies expectations for every student to be college bound via Advancement Via Individual Determination (AVID) strategies, Advanced Placement classes, and college application guidance and advisement.
Additional Finding

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

Findings

Grade level inquiry teams consistently analyze student work products from diverse learners. Additionally, teachers contribute to school-based decisions to improve student learning opportunities.

Impact

Structured professional collaborations result in improved instructional approaches and contribute to progress towards goals for groups of students. Teachers offer insightful suggestions to improve experiences for all school community members.

Supporting Evidence

- Teams of teachers consistently analyze student work samples and identify areas in which they can further improve their instruction for groups of students based on identification of misconceptions and levels of proficiency. Observation of a science inquiry meeting led to staff discussing generic practices to improve student achievement although the data supporting their inquiry discussion contained minor errors on the item analysis report. However, review of agendas and minutes from additional inquiry meetings offered a clear understanding of how department members collaborate to review student work samples and identify improved teaching practices for groups of students at a variety of proficiency levels. For example, ELA teachers reviewed a variety of student Cornell note-taking and writing samples to ensure they can cite strong evidence using text resources. Teachers noted they reinforced how to use Cornell note-taking strategies and cite textual evidence during summaries in class leading to improved student understanding of content.

- Review of Global Studies essays by teachers demonstrated a need to improve students’ ability to develop a deeper understanding of historical context, rather than copy the stated one. As such, teachers retaught how to properly develop a thesis statement, including the use of a graphic organizer for select students. Other teachers suggested providing a checklist for students to support their claim while referring to textual evidence. Teachers acknowledge that improved annotation has led to higher-order thinking by targeted students and allowed for deeper conversations amongst peers.

- Teachers create initiatives and attend professional learning they have researched and identified will support student learning. Staff then turnkey their new learning with colleagues, which builds instructional and leadership capacity. Students are motivated to adopt leadership and service based skills knowing the recognition they receive through the National Honor Society, a teacher initiated club. Staff independently manage and ensure classroom intervisitations which leads to improved student learning experiences and shared instructional best practices. Department teachers are required to lead a professional development session with their peers. Several topics for sessions have included, the three reads, real math, and AVID strategies. Furthermore, staff have created opportunities for students to engage in their learning outside of school with a trip to France and real-world phenomena in Earth Science by adopting a new curricular resource.