



**Department of
Education**
Carmen Fariña, Chancellor

**Office of School Quality
Division of Teaching and Learning**

Quality Review Report

2015-2016

Manhattan Center for Science and Mathematics

High School M435

**260 Pleasant Avenue
Manhattan
NY 10029**

Principal: Jose Jimenez

**Date of review: April 7, 2016
Lead Reviewer: Clarence Williams Jr.**

The School Context

Manhattan Center for Science and Mathematics is a high school with 1,616 students from grade 9 through grade 12. In 2015-2016, the school population comprises 18% Asian, 21% Black, 54% Hispanic, and 5% White students. The student body includes 3% English Language Learners and 9% students with disabilities. Boys account for 50% of the students enrolled and girls account for 50%. The average attendance rate for the school year 2014-2015 was 93.4%.

School Quality Criteria

Instructional Core		
<i>To what extent does the school?</i>	Area of:	Rating:
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	Additional Findings	Well Developed
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 <i>Framework for Teaching</i> , aligned to the curricula, engaging, and meets the needs of all learners so that all students produce meaningful work products	Additional Findings	Well Developed
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	Additional Findings	Well Developed
School Culture		
<i>To what extent does the school...</i>	Area of:	Rating:
3.4 Establish a culture for learning that communicates high expectations to staff, students, and families, and provide supports to achieve those expectations	Celebration	Well Developed
Systems for Improvement		
<i>To what extent does the school...</i>	Area of:	Rating:
4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning	Focus	Proficient

Area of Celebration

Quality Indicator:	3.4 High Expectations	Rating:	Well Developed
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Findings

School leaders communicate high expectations on a consistent basis using the elements of the Danielson *Framework for Teaching*, incorporating mutual accountability for expectations and provide teacher training.

Impact

There is a culture of mutual accountability for meeting expectations. The school community successfully partners with families to support student progress and achievement of students' goals.

Supporting Evidence

- The school leadership has designed an action plan for accountability and expectations for staff. The open cabinet meetings serve as a platform to discuss the school community's high-expectations for college and career readiness. The school learning environment committee reinforces the faculty's commitment to a strong school culture. Teacher-led initiatives have increased the use of PupilPath, an on-line grading information program, by students and parents to monitor progress. The schools' professional development program is teacher driven and created after data analysis and intervisitations within the school. Teachers believe that the implementation of PupilPath has helped increase parent outreach. The Principal Advisory Committee meets regularly and involves students taking ownership for promoting a positive learning environment. Students have stated that this committee gives them an opportunity to be actively involved with their school and administration. Student progress is tracked each marking period through scholarship conferences, in which administrators and teachers collaborate to improve student outcomes. Through the bridge program, parents and students are made aware of graduation requirements. As a result, the school maintains a 98% college entrance rate.
- College and career readiness for students is supported through individual counseling. The school college office uses a college readiness survey created by the guidance counselors, which indicates where students fall in terms of college readiness. The survey measures socio-emotional and career, preparedness. Students are informed as to being ready, somewhat ready or not ready for college. The survey serves as a database to support the students and helps the students take ownership of their learning and college preparation. According to this year's survey, the vast majority of students in the current cohort are ready for college, validating the positive impact of this practice.
- The principal provided a comparison of the graduation rate for students with disabilities from 2014-2015 and the anticipated rate for 2015-2016. The data shows that in 2014-2015, one student with disabilities achieved an Advanced Regents diploma compared to six for the 2015-2016 school year and six students with disabilities received a Regents diploma compared to 19 for the 2015-2016 school year.

Area of Focus

Quality Indicator:	4.2 Teacher teams and leadership development	Rating:	Proficient
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Findings

The majority of teachers are engaged in structured, inquiry-based professional collaborations. Data and student work is analyzed on a consistent basis by teacher teams.

Impact

Teacher team collaborations result in improved teacher practices and progress towards goals for groups of students.

Supporting Evidence

- An item on a teacher team meeting agenda was to increase student performance on SAT and PSAT college entrance exams. An additional item on the agenda was to change and adapt their instructional practices to address student needs. This was evident as they looked at different ranges of student performance, areas of development and sub-categories.
- Teacher teams meet every Monday as part of their professional learning time. During these meetings they examine student work to ensure that it is common core aligned. Data includes, document-based questions, essays, lab reports, and uniform writing assessments in math. Additional data includes summative assessments, finals and Regents exams. Teachers align instructional practices to the Danielson *Framework for Teaching*. Eighty-six percent of students successfully completed approved college or career preparatory courses or assessments in 2015. The school leadership projects an improvement in this level based on early Regents exam and schoolwide assessment scores.
- Teachers stated that teacher collaborations have resulted in improvements in student performance. For example, the grade 9 English writing team developed an after school writing center where writing assignments were reassessed across the content area. Teachers stated that as a result, writing has improved across the content areas. When interviewing grade 12 students, several stated that their writing has improved over the course of four years while attending the school. The team also looked at the performance of students with IEPs. One team member discussed using sentence starters to create multiple entry points for students with disabilities, while exposing them to the same content as the general education population. Other members agreed that this would be an effective method of engaging not only students with disabilities but also students who are under performing. The use of sentence starters was observed in classrooms and evident in student work samples. School leadership and teachers project improved outcomes for all students nearing their goal of having 50% of students with disabilities achieving Advanced Regents diplomas.

Additional Findings

Quality Indicator:	1.1 Curriculum	Rating:	Well Developed
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Findings

School leaders and faculty ensure that curricula are aligned to the Common Core Learning Standards and strategically integrate instructional shifts. Curricula and academic tasks are planned and refined using student work and data.

Impact

There is coherence across the grades and subject areas, and students are college and career ready. Individual groups, including students with disabilities, low and high achieving students and English Language Learners have access to the curricula and are cognitively engaged.

Supporting Evidence

- The curricula indicate close alignment to Common Core Learning Standards and the instructional learning shifts. The Common Core Learning Standards are listed in English curriculum documents in the areas of reading literature, reading informational text and writing. Instructional shifts are evident in the student objectives. For example, lesson plans include objectives centered on students discussing and reflecting on how narrative writing helps their exploration of the world around them. This is further demonstrated in a writing lesson plan which includes an objective focused on students drawing on their knowledge and experience to identify artificial intelligence's possible growth in society. Students were further required to evaluate how this may affect society, formulating their own claim. In the math curriculum, for Algebra, the Common Core Learning Standards specific to numbers and quantity, seeing structure in expressions, and arithmetic with polynomials and rational expressions are contained within the curricula maps and evidenced in daily lesson plans.
- The curriculum for languages other than English utilizes English Language Arts Common Core Learning Standards to ensure that all students are exposed to the same level of instruction. The same curriculum also provides instruction for English Language Learners addressing strengths and weaknesses focusing on speaking, listening, reading, and writing. Students with disabilities are provided scaffolding, chunking material through graphic organizers and Venn diagrams. A French lesson plan included an activity where students match house-related words to a chore. English Language Learners and students with disabilities were required to complete the same task with additional response choices providing them access to this curriculum.
- School leaders and faculty promote college and career readiness through Advanced Placement (AP) courses. In an AP calculus class, the objective stated, "Students will be able to understand what type of answers College Boards deem as correct/incorrect." Teachers use a College Board rubric to align student work with college readiness. Grade 9 and 10 students partner with the Double Discovery Center at Columbia University. They provide college workshops and Saturday tutoring sessions.

Quality Indicator:	1.2 Pedagogy	Rating:	Well Developed
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Findings

Across the vast majority of classrooms, teaching practices are aligned to the curriculum and reflect a coherent set of beliefs about how students learn best informed by the Danielson *Framework for Teaching* and integrate the instructional shifts.

Impact

Common core aligned teaching practices are evident in the classrooms and reflected on team and school levels. The vast majority of classrooms reflect high levels of student thinking, participation and ownership.

Supporting Evidence

- Across all classrooms observed, instructional practices using the Danielson *Framework for Teaching* were evident. In an English 8 class the aim centered on the analysis of chapter one of the “*The Brief Wondrous Life of Oscar Wao?*” Students used a chart and discussed what they knew and what they wondered about in addition to a quote from the text. Students engaged in dialogue and made observations about the text. One student noted that the character had self-esteem issues and attempted to make changes in his beliefs to help him become more confident. In a Grade 9 writing class, students were in small groups and the teacher asked questions, which pushed the students to use high-level vocabulary through context clues. In small groups students were required to evaluate evidence to create an argumentative essay. Students worked independently in pairs to build their argumentative essays displaying ownership of their work.
- Across all classrooms, student work and work products reflect higher order thinking skills. In all classes, students were required to write and explain their work. In an English literacy class students were required to write an argument to support claims in an analysis of substantive text using valid reasoning. This was the task resulting from their reading an article on the pros and cons of gun control. Students wrote independently and relied on their peers’ for questions and took ownership of their work.
- Students expressed that they learn best through the use of peer assessments working in small groups. All classrooms demonstrated small group, student-led discussions. In an Earth Science class, students worked in small groups using pencils, pens and a ruler to demonstrate the maneuvering of the planets’ orbit around the sun. Students had to rely on each other to complete the task. In a Chemistry class, students worked in groups of three and four. Each group had a presenter, who circulated throughout the room receiving feedback from other students to report back to the group. After receiving feedback, the group revised their presentation to the class. When interviewing students, they stated they learn more when they work with each other.

Quality Indicator:	2.2 Assessment	Rating:	Well Developed
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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 demonstrate a clear portrait of student mastery. The school uses common assessments to create a clear picture of student progress.

Impact

Teachers provide actionable meaningful feedback to students with regards to achievement. All students, including English Language Learners and students with disabilities are aware of their next learning steps and demonstrate increased mastery.

Supporting Evidence

- Actionable feedback is evident in the student work displayed on bulletin boards inside and outside of classrooms. It is further displayed in student work folders. Feedback consists of commendations and next steps. Students shared their work during the student meeting, highlighting the actionable feedback with commendations and next steps they were provided by their teacher. They stated that it impacts their learning immensely when they receive feedback from their teachers because they know what must be done in order to do better. Teachers have also stated that the feedback they receive from students help them to better plan their lessons and adjust their instruction.
- Teachers frequently evaluate student work through quizzes and teacher-created local exams. In the vast majority of classes visited, teachers used exit slips and classroom inspection of student work while circulating during the lesson. This led to mid-lesson adjustments and ensured that all students understood the content and concepts taught. In a tenth grade English class, the teacher reminded the students that the exit slips were used to gauge comprehension and plan next steps for their learning. Students shared that all of their teachers check for understanding and ensure that all students are on task. In an Integrated Co-Teaching class (ICT), the Do Now was differentiated for students with IEPs through the use of sentence starters.
- Student self-assessment is conducted through the use of rubrics, encouraging them to formulate questions and encouraging them to challenge each other through the use of premise and counter premise. Teachers formulate defining questions as a result of student responses and counter arguments. In an ICT class all students used a rubric to paraphrase and analyze textual evidence in a small group.