



**Department of
Education**
Carmen Fariña, Chancellor

Office of School Quality
Division of Teaching and Learning

Quality Review Report

2014-2015

**High School for Construction Trades, Engineering
and Architecture**

High School Q650

**94-06 104th Street
Queens
NY 11416**

Principal: Lakeisha Gordon

Date of review: March 13, 2015

Lead Reviewer: Renee Peart-Zachary

The School Context

High School for Construction Trades, Engineering, and Architecture is a high school with 958 students from grade 9 through grade 12. The school population comprises 11% Black, 40% Hispanic, 12% White, 1% American Indian, 35% Asian, and 1% other students. The student body includes 1% English language learners and 9% special education students. Boys account for 69% of the students enrolled and girls account for 31%. The average attendance rate for the school year 2013-2014 was 94.0%.

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 Framework for Teaching, aligned to the curricula, engaging, and meets the needs of all learners so that all students produce meaningful work products	Celebration	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	Focus	Proficient
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	Additional Findings	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	Additional Findings	Well Developed

Area of Celebration

Quality Indicator:

1.2 Pedagogy

Rating:

Well Developed

Findings

Across the vast majority of classrooms, teaching practices are aligned to the curricula and reflect a common set of beliefs that is informed by Danielson Framework for Teaching. Across the vast majority of classrooms, student discussions reflect high levels of student thinking, participation, and ownership.

Impact

Common pedagogical practices that are discussed at team and school levels result in students deepening their critical-thinking skills and producing high-level work products.

Supporting Evidence

- The principal reported that students learn best when they are exposed to higher-level questions, required to use textual evidence to support their ideas, engage in writing and reading across all subject areas, and participate in meaningful classroom discussions. All components of this shared belief were observed in 6 out of 7 classes. Furthermore, teachers collaborate in meetings to discuss the school's shared beliefs. A review of teacher team meeting agendas indicates that teachers create goals and discuss high level questions, reading and writing tasks, and lessons that include the Socratic Seminar strategy.
- The principal reported that teachers in every department believe that students need to increase their analytical skills by using the Claim, Transition, Evidence, and Analyze (CTEA) paragraph format that helps students prove their claims. Across all classrooms visited, the CTEA paragraph format was implemented into the lessons. For example, in a grade 9 Living Environment class, students were observed using a CTEA paragraph format that has been adjusted for science. Students were completing a CTEA paragraph graphic organizer as they supported their hypothesis on the role of bacteria in the environment.
- Across classrooms visited, students were engaged in high-level discussions. For example, in a grade 10 advanced placement World History class, students used the Socratic Seminar strategy to evaluate their viewpoint of the article "South America: Land of Immigrant and Emigrants – Italian and Japanese Migration," by Peter Winn. Students cited evidence from the text to support their claim to their peers. In a grade 12 English class, students used the Socratic Seminar strategy to analyze how characters build relationships in the novel *Their Eyes Were Watching God* by Zora Neale Hurston, and then annotated the article entitled, "Once Upon a Time" by Andrea Dworkin. Students used a Socratic Seminar rubric to provide their peers with feedback on their analysis.
- In a grade 11 English class, students were observed engaging in high-level discussions with their peers to characterize reasons for successful relationships. Students were citing textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the novel *The Great Gatsby* by Frances Scott Fitzgerald. Their peers gave them feedback on their claims and provided additional information on how they believed the texts left matters uncertain.

Area of Focus

Quality Indicator:

2.2 Assessment

Rating:

Proficient

Findings

Across grades and subjects, teachers use assessments, rubrics, and grading policies and give actionable feedback. Teachers' assessment practices include checks for understanding and students self-assess their work.

Impact

The school's assessment practices are resulting in some students receiving meaningful feedback and some learners are not always fully aware of their next learning steps.

Supporting Evidence

- Teachers create and administer baseline, interim, and final assessments, use Common Core aligned rubrics to assess student work products, and each department has a grading policy. A review of student notebooks and student work displayed on bulletin boards revealed that some students receive rubric-based feedback on assessments and student work products. For example, in a grade 11 English class, students received feedback that said, "Addresses all aspects of prompt, establishes and maintain a credible claim, accurately and effectively presents details, and presents thorough and detailed information." This type of rubric-based meaningful feedback was not seen on student work products across most classrooms visited.
- A review of student work products on classroom and hallway bulletin boards revealed that some students receive meaningful feedback such as "You addressed the prompt but not with accuracy or specificity. I would like to see you develop your ideas where you state your source of information," while other students receive feedback that does not give the learners clear next steps such as, "Well written historical background, solid discussion of properties, introduction is too lengthy."
- In a grade 11 Algebra II and Trigonometry class, the students worked in groups on using multiple representations to solve problems, investigate functions, and justify conclusions. The teacher circulated the classroom to observe students and took summative assessment notes. Students self-assessed their work and their peers gave them feedback on their answers. The teacher conducted a midpoint check to report his findings. The teacher walked around to each group and gave learners immediate feedback. In a grade 9 Algebra class, students worked in groups to use a graphing calculator to find the least squares regression line. The teacher recorded students' struggles, gave students feedback to support them in their next steps, and conducted a midpoint check to discuss her findings. The practice of teachers making effective adjustments where all students fully understand their next steps is emerging school-wide.

Additional Findings

Quality Indicator:	1.1 Curriculum	Rating:	Well Developed
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Findings

Teachers use student work and data to adjust curricula and academic tasks that consistently emphasize rigorous habits.

Impact

Across grades and subjects, all learners, including English Language Learners (ELLs), students with disabilities, and highest achieving students, are exposed to tasks that embed higher-order skills in a coherent way and tasks are cognitively engaging.

Supporting Evidence

- Every nine weeks, students take interim assessments across subject areas and teachers analyze the data in weekly teacher team meetings. The teachers review questions, skills, and standards to develop instructional action plans for all students and adjust curricula unit plans. The data from these assessments inform how teachers adjust forthcoming lessons for learners including higher achievers. For example, the math team reviewed the March interim assessments and modified the Solving Radical Equations unit by added multi-step radical equation problems for higher achieving students.
- The grade 9 teacher team reviewed student writing and adjusted the Literary Element and Plot unit plan by including activities for struggling students as well as students who are performing above grade level. The activities include reading short stories and writing an essay that analyzes how a particular literary element plays a part in the essence and workings of stories. Students are asked to state a thesis and include three pieces of evidence to support the thesis. Struggling students are given the CTEA paragraph format graphic organizer the help them organize their thoughts.
- Teachers design tasks in a coherent way across grades and subjects to deepen students' critical thinking skills for learners below, on, and above grade level. All tasks have a coherent connection to the instructional focus of textual evidence to support a claim, and writing and reading across all subject areas. For example, on a grade 11 English task, students are required to find three sources, read articles, provide a summary of each article, and incorporate the relevant information to prepare a speech and a PowerPoint presentation. On a grade 9 Algebra task, students worked on a college preparatory math task where they must solve multi-step problems to find the least square regression line using graphing calculators. On a grade 10 Global History and Geography task, students selected two belief systems from the study of global history and explain one major idea of the belief system and discuss the effects of the belief system has had on the politics, society, and economy of a specific nation. All incoming freshmen are expected to read *The Alchemist* by Paulo Coelho. Teachers selected this novel to introduce characteristics of a fable and mythology. On a grade 9 English task, students are asked to write an essay in which they take a position on whether or not Santiago or Odysseus exhibits characteristics of an epic hero. Students are asked to state a thesis and include three pieces of evidence to support their thesis. Additionally, students are asked to write an essay in which they compare how the theme of heroism is treated in *The Alchemist* or one of the Greek myths and one of the contemporary nonfiction accounts.

Quality Indicator:	3.4 High Expectations	Rating:	Well Developed
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Findings

School leaders communicate high expectations to the staff that align with the Danielson Framework for Teaching. School leaders and teachers foster a culture that communicates high expectations for all students and learners receive guidance supports in their academics.

Impact

Teachers are fully aware of school-wide instructional expectations and have a culture of mutual accountability for those expectations. A culture of high expectations is resulting in all scholars, including all subgroups, owning their educational experience and preparing for the next level.

Supporting Evidence

- The school plans career-based events that promote the students being prepared for their careers. For example, in the spring, the Construction Challenge event allows students to compete against one another in a construction competition in which the school community is invited as spectators to help celebrate student career-initiated accomplishments.
- All students take a College and Career Portfolio course in their sophomore year, as well as complete an annual Work-Skills Employability Profile, that assesses their college and career readiness. Students own their educational experience by developing a plan for their college and career path. Learners attend an advisory period weekly where they discuss their college and career plans. Furthermore, students use Engrade, an online grading system, where they track their academic progress and provide feedback to their teachers on homework assignments, projects, and assessments.
- School leaders hold staff accountable for instructional expectations through professional development on topics such as Common Core Learning Standards, disciplinary literacy, questioning and discussions, assessments, writing rubrics, Webb's Depth of Knowledge as well as written reports on classroom informal and formal observations. Teachers hold themselves accountable through intervisitations where they use a feedback protocol and provide their colleagues with feedback during common planning time. When teachers visit their colleagues' classrooms, they complete a list of sentences including, "During this time, I notice...", "My evidence for this is...", and "Based on Danielson; one strategy that would make your lesson highly effective is..."
- There are teacher led professional development sessions where teachers provide their peers with feedback on the professional development and teachers return to their colleagues' classrooms to see the implementation of the professional development. Teachers reported that they trust each other and feel comfortable visiting their peers' classrooms because they learn from each other. As one teacher said, "We meet daily during our common plan time and we are always giving each other feedback and support".

Quality Indicator:	4.2 Teacher teams and leadership development	Rating:	Well Developed
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Findings

Teacher teams analyze key teacher practices, assessment data, and student work. Distributive leadership structures are embedded school-wide.

Impact

Teacher teams contribute to shared improvement in teacher practice, mastery of goals for groups of students, and teacher leaders having an integral role in key instructional decisions that affect student learning.

Supporting Evidence

- Department teams meet once a week to thoroughly analyze data and student work. For example, in a math department team meeting observed, teachers analyzed scholarship data and interim assessment results and reviewed students' responses to open-ended questions. Teachers also created and reviewed a detailed item analysis from the Algebra Regents, baseline assessments, interim assessments, and student work products with a four-point Common Core aligned rubric. Furthermore, teachers created bar graphs to show the progress of students. Teachers discussed goals, trends, gaps, and next steps of using the College Preparatory Math program. Teachers noted the improvement in scores for groups of students on the November 2014 Geometry interim assessment to the March 2015 Geometry interim assessment and on the November 2014 Algebra II & Trigonometry interim assessment to the March 2015 Algebra II & Trigonometry interim assessment.
- School leaders reported that the work of the teacher team has led to teachers trusting each other, as evident in the responses on the 2014 New York City School Survey where 100% of the teachers say they agree or strongly agree that the teacher work on teams improved their instructional practice. School leaders also reported that the work of teacher teams has led to pedagogical improvement in Danielson Framework for Teaching in 3b: Using Questions, Discussions, and 3D: Using Assessments in Instruction.
- Every Wednesday, department and grade-level teacher leaders meet with school leaders to discuss team outcomes, student progress, and student action plans. Teachers play a central part in school-wide instructional decisions such as curricula adjustments, assessments, professional development, and student activities. For example, teachers led professional development sessions on visual and kinesthetic differentiation and created a Differentiation Toolbox booklet that is now used school-wide. Furthermore, teachers created the CTEA paragraph format that helps students organize their analysis and support it with text-based evidence. Students use the CTEA paragraph format across grades and subjects.