The School Context

Stuyvesant High School is a high school with 3,290 students from grade 9 through grade 12. The school population comprises 1% Black, 3% Hispanic, 21% White, 73% Asian and 2% Multi-racial students. The student body includes 0% English language learners and 1% special education students. Boys account for 59% of the students enrolled and girls account for 41%. The average attendance rate for the school year 2013-2014 was 97.0%.

### School Quality Criteria

#### Instructional Core

**To what extent does the school…**

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<thead>
<tr>
<th>Area of:</th>
<th>Rating:</th>
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<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 Findings</td>
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<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>Additional Findings</td>
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<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>Focus</td>
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#### School Culture

**To what extent does the school…**

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<th>Area of:</th>
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<tbody>
<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>Celebration</td>
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#### Systems for Improvement

**To what extent does the school…**

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<th>Area of:</th>
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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 Findings</td>
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Area of Celebration

| Quality Indicator: | 3.4 High Expectations | Rating: | Well Developed |

**Findings**
The school effectively communicates high expectations connected to a path of college readiness to families and all students.

**Impact**
The school has established a partnership with families, and provides feedback on progress and guidance supports to ensure students own their educational experience and are prepared for the next level.

**Supporting Evidence**
- The Parents' Association of Stuyvesant High School collaborates extensively with the school to provide additional information, resources, and support to families in navigating the high school process, school policies, after-school clubs and sports, and the college process. The PA maintains an extensive website along with publications with college process information, workshops, and other support for families in working with their children throughout the process. The PA works closely with families and the school ensuring access to information in the respective home language.

- All students are expected to earn a Stuyvesant endorsed diploma that in addition to New York State requirements includes additional courses reflecting the school’s science, technology, engineering and math (STEM) focus. For example, all students take computer science and technical drawing courses and select three further electives from the STEM field. In addition, core subjects offer selective courses that students may choose to satisfy New York State requirements based on their interest and allow for specialized study. Instead of taking a general English language arts course students can select from Women’s Voice in Literature, American Literature, or European Literature to satisfy the requirement.

- The school utilizes Naviance providing students and families with an online tool that reviews student course plans to ensure they are on track to meet graduation requirements and meet entrance requirements for specific colleges, monitors the student application process, and has the ability to communicate with school guidance. The school includes anonymous data from prior years so current students and families can determine best-fit colleges by seeing data cutoffs for acceptances of specific colleges.

- College guidance counselors conduct parallel workshops on the college process for students and parents. A review of the presentation decks demonstrates that while the content and calendar contain the same information, they are respectively presented to ensure students know their responsibilities and next steps, and parents/guardians know their responsibilities and next steps.

- During the student meetings, students stated they appreciate the opportunities to connect with academics, industry professionals, and policy makers as part of their educational experience and that they are empowered to be independent learners. For example, a group of students interested in exploring issues of equality independently organized an upcoming weekend conference for the Stuyvesant community that includes guest speakers from academia, non-profits, and government.
Findings
Across classrooms, teachers use assessments and rubrics aligned with departmental grading policies and curricula. The school uses common assessments to determine student progress.

Impact
While school and class assessments provide feedback to students and teachers regarding student achievement, the wide range of individual teacher grading policies and practices limits the quality of actionable feedback to students.

Supporting Evidence
- The English department has developed a common grading rubric for writing based on Phillip Andover’s grading rubric that unifies three different department grading systems (percentages 65-100, letter F-A+, scale 1-6) into a single translatable document. A rubric from a Modern European Literature course demonstrates the implementation of this policy with a highly descriptive rubric for an analysis writing task. However, feedback on student written work from several English courses does not connect specifically to the rubric so that the student understands the feedback in relation to the criteria.

- The world language department has developed a common grading policy for courses that includes three areas: oral work (speaking and participation), written work (including tests and assignments), and homework. There is a range of weight for each area. For example, written work will be 50%-55% of the final marking period grade. The department has also established a common rubric for oral presentations. Examples of student work with teacher feedback connect to the rubric with clear next learning steps.

- The principal stated that each department develops an overall grading policy that has built in flexibility for teachers to adjust to meet the needs of the course. A review of classroom assessments submitted by the school, indicate that teachers across courses such as Algebra 2/Trigonometry for example, have different class grading policies and different formative assessments within the departmental framework. While all courses have an assigned testing day, the actual assessment may vary across classes. For example, all geometry courses have Thursday as a designated test day, but assessments on that day may vary in form, rigor and skills assessed. In both student meetings, students indicated that the issue of different teacher’s grading policies and different assessments for the same course creates the perception of inconsistency and subjectivity and stated they “wish teachers would be more consistent in their grading. If I have a friend in the same course and my exam is harder than his and I get a lower score, I don’t believe that is fair.”

- The school uses common assessments such as placement exams, final department exams, and student achievement data to determine which courses students are eligible to take, as well as develop program interventions. For example, the number of Advanced Placement courses a student is eligible to take is determined by the student’s grade point average at the time of course selection. An example of a program decision was to place some ninth grade students in an additional math course based on placement exam results for geometry that indicated conceptual gaps in algebra.
Additional Findings

<table>
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<tr>
<th>Quality Indicator:</th>
<th>1.1 Curriculum</th>
<th>Rating:</th>
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Findings
School leaders and faculty ensure that curricula are aligned to the Common Core Learning Standards or specific content standards such as Advanced Placement (AP) strategically integrating the instructional shifts. Curricula and academic tasks emphasize rigorous habits and higher order thinking skills.

Impact
Curricular decisions result in embedded rigorous habits, creating coherence within courses and subject areas promoting college readiness for all students.

Supporting Evidence

- The English department has instituted a common research project titled “I-Search” for all ninth grade students that engages students in developing a unique question to research using several techniques such as interviewing experts and/or conducting experiments, analyzing multiple perspectives, and demonstrating their thinking and understanding through a structured research paper. The student develops their own question and develops a research plan with feedback from their teacher. Sample work products show how students explore such diverse topics as stereotypes of Asians in relation to their own cultural identity and heritage, to exploring Buddhist tenets by reviewing literature/texts, interviewing religious leaders such as monks, and practicing as a Buddhist for four weeks reflecting on the personal impact.

- A review of curricula in the world language departments demonstrates coherence in the earlier sequences of Japanese, Mandarin, and Spanish to build knowledge and skills towards the Advanced Placement course in each respective language. For example, the AP Japanese course is centered on the four language skills of speaking, listening, writing, and reading predominantly in real-life situations. Activities are structured to address the interpersonal, interpretive, and presentational modes of communication with Japanese cultural connections. The Japanese 1 course builds the four language skills with increasing sophistication all using real life situations. The Japanese 3 course utilizes projects with cultural connections for students to express their thinking using all three modes of communication required for the AP level course.

- A review of the Modern Biology course curriculum demonstrates the integration of content and skills from the New York State Living Environment and the SAT II Biology curricula into a single coherent course. For example, in the lesson plan on photosynthesis the major understanding and performance indicator from Living Environment is addressed in explaining the biochemical processes in living organisms and their importance in maintaining dynamic equilibrium, with the addition of SAT II content in addressing the alternative photosynthetic pathways such as the Calvin Cycle and C3,C4 pathways.

- The school offers over 30 Advanced Placement courses and exams. A review of curriculum documents from AP United States History, AP Biology, AP Chinese, and AP English Language and Composition consistently emphasize rigorous content and skills aligned to the AP expectations and tasks where students demonstrate higher order thinking such as constructing persuasive arguments using complex primary sources.
Findings
Across classrooms, teaching practices are aligned to the school's instructional focus of increased student engagement through questioning and discussion that is informed by the Danielson Framework for Teaching and the instructional shifts. Teaching strategies connected to this school wide instructional focus provide entry points into the curricula, however, they were not strategically provided across the vast majority classrooms.

Impact
Though instruction across classrooms evidenced strategies used to ensure students are engaged in rigorous tasks and higher order thinking skills, in some classes the opportunities for students to demonstrate these skills were limited.

Supporting Evidence
- In one Algebra 2/Trigonometry class, students were working in pairs to solve a series of application problems that engaged students in determining navigation using the Law of Sine/Cosines and triangle laws. All students discussed with their partner and the class their problem solving process to find the magnitude and direction of vectors in surveying problems, as well as make connections to physics in a discussion of magnitude and the resultant force. However, in two other math classes, student engagement was more passive and entry points limited in the form of taking notes from the board. Teacher directed questions were high level, but because the questioning was in the pattern of teacher-student/student-teacher only a small percentage of students were able to demonstrate their thinking.

- A biology class engaged students in understanding how cells synthesize polypeptides and convert them to functional proteins through collaborative pairing and group activities in which students problem-solved, discussed, and constructed meaning of this process demonstrating higher-order thinking. Students were heterogeneously grouped with activities utilizing visual images, writing explanations, student-to-student discussion, and coding problems providing various entry points. However, in a chemistry and different biology class, the lack of strategic structures and reliance on teacher directed questions to a few students limited the ability of all students to actively engage with the content.

- Students in a global history class used primary sources, time-lines, maps, visual images, and data sources in groups of four to develop arguments citing textual evidence for who or what was to blame for the plague’s spread in the Middle Ages. Students in a literature class used *The Bell Jar* with non-fiction text to develop an analysis of the significance of “the pill” as a form of birth control for women in the 20th Century. Students in another literature class actively engaged with text of a *The Brief Wondrous Life of Oscar Wao* to find evidence of magical realism and then work with a thought partner on applying the literary element to the symbolism in the chapter. However, in a world history class the instructional strategy of whole class discussion and the use of a common text limited the number of students able to demonstrate their thinking.
Findings
Teachers are engaged in structured professional collaborations that promote the implementation of school goals and the Common Core instructional shifts. Teacher teams consistently analyze student work for students enrolled in the shared course or for whom they are focused.

Impact
Professional collaborations on teams strengthen the instructional capacity of teachers resulting in improved and shared practices.

Supporting Evidence
- As a multi-session school, school leadership this year focused on programming teachers to create teams of three to four teachers within departments based on common prep periods. Based on this schedule, teachers attend a school-wide or department based professional development session, a teacher team meeting, and a period focused on parent outreach every week.

- Department teams collaboratively set yearly goals and develop strategies and structures to support the work. For example, the English language arts team established a goal “to establish greater consistency in grading among department members,” and another goal to “integrate the Common Core State Standards into our daily instruction and assessments.” The connected strategies to support these goals are classroom observations, inter-visitations, building a department collection of model assignments and sharing best practices.

- The observed biology team of four teachers focused on building shared practice regarding the implementation of case studies in the curriculum. The development of case studies is a departmental goal to create context for students to concepts as well as engage in using scientific evidence in supporting claims. A teacher presented student work from a case study from BioInteractive.org on the topic of “Diet and the Evolution of Salivary Amylase.” The team analyzed the work determining areas where students excelled and struggled. They then collaboratively began altering the assignment to adjust questions and processes for their class in relation to the needs of their course and their students. The revised case study is then posted online so all biology teachers have access.

- The school wide goal of writing across the curriculum was addressed in the Chemistry/Physics department team by collaborating with an English teacher in developing a writing project connected to The Disappearing Spoon, by Sam Kean. The department has worked to analyze student work and revise assignments connected to the project. They made the decision based on student work to move the assignment this year to the summer after Chemistry instead of before in order to ensure students have the necessary knowledge and context to engage deeper with the book and assignment.