

Quality Review Report 2011-2012

**CITY POLYTECHNIC HIGH SCHOOL OF ENGINEERING,
ARCHITECTURE, AND TECHNOLOGY**

High School 674

**105 JOHNSON STREET
BROOKLYN
NY 11201**

Principal: CHRIS AGUIRRE

Dates of review: April 30 - May 1, 2012

Lead Reviewer: Karen Watts

Part 1: The school context

Information about the school

CITY POLYTECHNIC HIGH SCHOOL OF ENGINEERING, ARCHITECTURE and TECHNOLOGY is a high school with 247 students from grade 9 through grade 12. The school population comprises 62% Black, 23% Hispanic, 4% White, and 9% Asian students. The student body includes 5% English language learners and 17% special education students. Boys account for 80% of the students enrolled and girls account for 20%. The average attendance rate for the school year 2010 - 2011 was 88%.

Overall Evaluation

This school is proficient.

Part 2: Overview

What the school does well

- The school's post-secondary ready culture promotes an environment where students excel beyond high school requirements. (1.4)
 - o City Poly exemplifies a post-secondary ready, inclusive culture by exposing students to college level work to develop students' college and career ready skills. The school belief that students learn better when they are challenged in a supportive environment is evidenced as all students, including English language learners and students with disabilities are accelerated and encouraged to take college courses during their third year and then transition into an associate degree program at the City University of New York, CUNY's City Tech. All students embody the philosophy of going to college and are ready to be successful at college level work. Beginning in the ninth grade orientation and Summer Bridge program taught by City Tech professors, to the college courses they take for City Tech college credit during their third year, students continue with a number of visits to New York City and out-of-State colleges that helping them become adequately prepared. Additionally, the school has created a character rubric that assesses students' behaviors in six traits relative to being college and career ready students, thus furthering the support to encourage social/emotional and academic growth of all students. These practices have resulted in 62% of all third year students enrolling in an associate's degree program at City Tech for the 2012-2013 school year.
- The school's partners, industry relationships, and guidance services expose students to real world career fields promoting college and career readiness. (4.4)
 - o The principal and faculty foster many industry and higher education partnerships that drive City Poly's mission of preparing college and career ready graduates. The school's college advisor and guidance counselor ensure that students are making adequate progress to complete high school in three years. The members of the school's Advisory Board, comprised of both industry and higher education professionals, actively seek out internships for City Poly's students every summer so that students participate in real world and college level learning opportunities. As a result, students develop their career and college readiness to such a degree that City Tech professors state that City Poly students demonstrate proficient 21st Century skills such as team work and writing to a greater degree than students who attend City Tech from other high schools around the City. The National Academy Foundation that supports the Academy of Engineering at City Poly also stated that of the 435 Academies across the country, City Poly is in the top four at preparing students' post secondary pathways.
- The school's comprehensive curriculum aligned to State standards includes college level and career and technical education (CTE), courses that rigorously engage students in academic tasks that increase their postsecondary success. (1.1)
 - o The school's five-year Early College High School accelerated curriculum including CTE and college level courses ensures that students complete high school after three years and then enroll in an associate degree program at City Tech campus. The rigorous hands-on project-based curricula, developed by teachers and/or college professors, or adopted from the National Academy Foundation's Engineering Academy, are all aligned to New York State

Standards, (NYSS), the Common Core State Standards, CCSS and College and Career standards, promoting critical thinking and deep engagement in learning. Consequently, there is a closing of the achievement gap for English language learners, (ELL's) and students with disabilities, (SWD's), and opportunities for all students to attend college.

- The principal's belief that open-ended questions lead to increase student thinking permeates classrooms resulting in rich discussions and high quality student work products. (1.2)
 - o All teachers embrace the use of open-ended higher order questions with appropriate wait times that allow students to think deeply and formulate their answers before responding. Teachers routinely circle back to students who may have answered incorrectly to ensure their conceptual understanding before moving forward with the lesson. Additionally, the faculty strongly believes that students efficiently and effectively learn engineering, architecture, or math concepts when they work in small groups and learn from each other as they solve real world problems using appropriate tools and materials. Whether in small groups of students or in the class as a whole, classroom practices promote higher order thinking and rich discussions and have produced industry-level student work products and solutions.
- The school engages with families through a variety of means by engaging them in decision-making and providing information to increase students' academic success. (2.4)
 - o Parents state that their children are rising to, meeting, and exceeding the high expectations set for them by the principal and teachers. Furthermore, they like that the school is focused on preparing their children for college and careers and particularly like the exposure to colleges and the participation in internships that their children are afforded as students of City Poly. Parents are involved on the school leadership team, parent teacher association, and in all aspects of the school, and consider the school a second home for their children. They like the accessibility of their children's academic and behavior information through Pupil Path, a computer program that allows all teachers to post their lessons so that, as one parent stated, when her child was at home with a medical emergency she continued to communicate with her teachers and completed all of her work in a timely manner. The school's focus on student attendance, punctuality, character development, academic rigor, and acceleration, and on constant communication with families, leads to improvements in students' scholarship.
- The principal's strategic use of instructional time and resources and hiring decisions promote effective classroom practices that improve student learning. (1.3)
 - o The school year is divided into trimesters and students participate in self-paced online courses to accelerated credit accumulation and the completion of high school in three years. The principal is skilled in using the funds from the Department of Education, as well as substantial financial contributions from the school's various industry and higher education partners, to support his vision and mission of making City Poly a CTE demonstration site. He has used the funds to innovatively move the school forward with outside expertise in curriculum development, special education supports, and in programming the school using the trimester model. The practices promote student learning as evidenced in the successful student outcomes that this school has posted in its three years of existence.

What the school needs to improve

- Refine assessment practices to include frequent checks for understanding and opportunities for students to self assess so that they can identify their next learning steps. (2.2)
 - o Students receive Academic Skills Checklists aligned to the NYSS so that they are aware of the expected learning outcomes in each subject. Teachers administer mock Regents' exams to ascertain students' strengths and areas of need so that in-class lessons and after-school/summer preparation programs are suitably created. They also create and use assessments aligned to the expected learning outcomes from the standards-based units and lesson plans. However, teacher analyses of student performances on these outcomes do not yet provide disaggregated data by outcome that can provide targeted actionable feedback to change instructional practices thus limiting students' further academic progress. Additionally, although students' use of rubrics allows them to check for understanding and self assess progress during a lesson, it does not provide next steps students must take to gain full mastery of the expected learning outcomes.
- Enhance the observation process to include a management system that will identify patterns of practice across the school in need of professional development support. (4.1)
 - o The administrators use the Teacher Protocol Record, TPR, as an observation tool to collect data on teaching and learning during classroom visits coupled with a robust pre-and post-observation process that provides frequent feedback to individual teachers. However, this process does not sufficiently identify areas of practice across classrooms that must be strengthen and for which targeted professional development should be offered, limiting enhancements in teacher practice.
- Improve the structure for sharing the findings of teacher teams so that distributive leadership capacity increases across the school's community. (4.2)
 - o All teachers participate on grade or subject teams and look at student work using an inquiry approach from which they gather valuable information about their practice. Teams of teachers pilot strategies to address areas of deficiencies that may surface and implement them in their classrooms. However, the sharing of their findings with other teams of teachers or school wide is only now emerging as a shared leadership practice, thus limiting opportunities for teachers to make key decisions that affect school wide student learning.
- Provide professional development opportunities that include peer-to-peer visitations and the integration of the CCSS, both vertically and horizontally, to sharpen content expertise. (4.3)
 - o Professional development opportunities include collaborative discussions on teacher teams that cover topics ranging from classroom management to the incorporation of the CCSS in ELA and math. However, opportunities for teachers to learn from visits to the classrooms of their peers are minimal and limit the opportunity for teachers to receive feedback from colleagues as another way to improve instructional practices schoolwide.

Part 3: School Quality Criteria 2011-2012

School name: CITY POLYTECHNIC HIGH SCHOOL OF ENGINEERING, ARCHITECTURE, AND TECHNOLOGY	UD	D	P	WD
Overall QR Score			X	
Quality Statement 1 – Instructional and Organizational Coherence: The school has a coherent strategy to support student learning that aligns curriculum, instruction and organizational decisions.				
<i>To what extent does the school regularly...</i>	UD	D	P	WD
1.1 Design engaging, rigorous and coherent curricula, including the Arts, for a variety of learners and aligned to key State standards?			X	
1..2 Develop teacher pedagogy from a coherent set of beliefs about how students learn best, and ensure that it is: aligned to the curriculum, engaging, and differentiated to enable all students to produce meaningful work products?			X	
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?			X	
1.4 Maintain a culture of mutual trust and positive attitudes toward learning that support the academic and personal growth of students and adults?				X
Quality Statement 2 – Gather and Analyze Data: School leaders and faculty consistently gather, analyze and share information on student learning outcomes to understand school and student progress over time.				
<i>To what extent does the school ...</i>	UD	D	P	WD
2.1 Gather and analyze information on student learning outcomes to identify trends, strengths, and areas of need at the school level?			X	
2.2 Align assessments to curriculum, use on-going assessment practices and analyze information on student learning outcomes to adjust instructional decisions at the team and classroom level?			X	
2.3 Use grading policies and tools to enable school leaders and teachers to organize, aggregate, and analyze student performance trends to inform instruction and curriculum?			X	
2.4 Engage families in school decision-making, activities and an open exchange of information regarding students' progress toward school and class expectations?			X	
Quality Statement 3 – Plan and Set Goals: School leaders and faculty consistently engage the school community and use data to set and track suitably high goals for accelerating student learning.				
<i>To what extent does the school ...</i>	UD	D	P	WD
3.1 Establish a coherent vision of future development that is reflected in a short list of focused, data-based goals that are understood and supported by the entire school community?			X	
3.2 Use collaborative and data informed processes to set measurable and differentiated learning goals for student subgroups, and students in need of additional support?			X	
3.3 Ensure the achievement of learning goals by tracking progress at the school, teacher team and classroom level?			X	
3.4 Communicate high expectations to staff, students and families, and support students and families to achieve them?			X	

Quality Statement 4 – Align Capacity Building: The school aligns its leadership development and structured professional collaboration around meeting the school’s goals and student learning and emotional needs.

<i>To what extent does the school...</i>	UD	D	P	WD
4.1 Use the observation of classroom teaching and the analysis of learning outcomes to elevate school-wide instructional practices and implement strategies that promote professional growth and reflection, with a special focus on new teachers?			X	
4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning?			X	
4.3 Provide professional development that promotes independent and shared reflection, opportunities for leadership growth, and enables teachers to continuously evaluate and revise their classroom practices to improve learning outcomes?			X	
1..4 Integrate child/youth development, guidance/advisement support services and partnerships with families and outside organizations with the school-wide goals to accelerate the academic and personal growth of students?				X

Quality Statement 5 – Monitor and Revise: The school has structures for monitoring and evaluating progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.

<i>To what extent does the school...</i>	UD	D	P	WD
5.1 Evaluate the quality of curricular, instructional and organizational decisions, making adjustments as needed to increase the coherence of policies and practices across the school, with particular attention to the CCLS?			X	
5.2 Evaluate systems for assessing students, organizing data, and sharing information with student and families, making adjustments as needed to increase the coherence of policies and practices across the school?			X	
5.3 Establish and sustain a transparent, collaborative system for measuring progress towards interim and long term goals and making adjustments during the year and over time?			X	
5.4 Use data to regularly evaluate the effectiveness of structured professional collaboration, capacity building and leadership development strategies?			X	

Quality Review Scoring Key

UD	Underdeveloped	D	Developing	P	Proficient	WD	Well Developed
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