



The New York City Department of Education



Quality Review Report

Brooklyn Technical High School

High School 430

**29 Fort Greene Place
Brooklyn
NY 11217**

Principal: Randy Asher

Dates of review: April 23 - 25, 2007

Reviewer: Bruce Berry

Content of the report

Part 1: The School Context

Information about the school

Part 2: Overview

What the school does well

What the school needs to improve

Part 3: Main Findings

Overall evaluation

How well the school meets New York City's evaluation criteria

Part 4: School Quality Criteria Summary

Part 1: The school context

Information about the school

Brooklyn Technical High School has 4239 students in grades 9 to 12. The ethnic breakdown is 51% Asian, 21% White, 14% Black, 8% Hispanic and 6% other ethnic groups. There are approximately 1% special education students.

The school has 33% Title I eligible students. The attendance figure for 2006 was 91.4% and for this academic year is 94.5% to date.

The school is one of six specialized mathematics and science high schools under the New York City Department of Education and is the largest specialized high school for science, technology, engineering and mathematics in the United States.

As an empowerment school, it has more flexibility to make key decisions and control the resources for their school community. Empowerment schools are free to develop or purchase professional development services, choose which schools to affiliate with and benefit from reduced reporting and paperwork requirements.

Part 2: Overview

What the school does well

- The principal's very good strategic leadership and management are having a major impact on the implementation of the modernization program of the school.
- The introduction of learning communities in grade 9 is providing a positive experience for students on their induction and integration into the school.
- There are very high expectations on the part of all members of the school community with respect to student outcomes.
- The majors program provides good quality curriculum opportunities for students to experience high levels of academic challenge and rigor in their learning.
- The students achieve high levels of graduation and college placements.
- There is a respectful, caring and work-focused culture in the school.
- Students are very positive about being educated in the diverse community within the school and of the wide range of educational opportunities available to them.
- The alumni association provides a wide range of support and resources for the school in order to support student opportunities and achievement.
- The parents are very supportive of the school and the high quality of education their children receive.
- Very good procedures for promoting and rewarding good attendance are leading to high levels of student attendance.

What the school needs to improve

- Develop middle leader capacity to assume greater responsibility in moving forward the school's agenda and for professionally developing the staff under their supervision.
- Further develop consistent assessment practices at classroom, grade and subject level.
- Develop systems to improve collaboration and communication in order to fully engage all members of the school community in setting measurable and demanding goals.
- Develop a consistent approach to instruction planning to include clear learning objectives and outcomes for students.
- Provide professional development opportunities for teachers to support data driven instruction.
- Establish collaboratively agreed medium term goals to support the agenda for change and modernization.

Part 3: Main findings

Overall Evaluation

This is a proficient school.

The principal's very good strategic leadership and management are having a major impact on the implementation of the modernization program of the school. His dynamic leadership is injecting pace and energy into the change process to establish the long overdue updating of the school's vision and values.

As an empowerment school it has more flexibility to make key decisions and control resources for the school's community. Empowerment schools are free to develop or purchase professional development services, choose which schools to affiliate with, and benefit from reduced reporting paperwork requirements. As an empowerment school, periodic assessment data outcomes are used to track student progress and inform curriculum and instruction.

In this specialized school, students have the opportunity to study a wide range of subjects and choose one of a range of majors to study in the final two years. A very high percentage of students achieve good success in Regents tests, graduation and go on to take two and four year college and university courses. Parents and students are very positive about the high quality education and opportunities available to the students. The school is an orderly and caring community. A wide range of activities available beyond the normal curriculum, provide further enrichment opportunities for the students. The modernization agenda has not been fully embraced by some staff and communication systems are not yet sophisticated enough to cope with the demands of such a large institution.

How well the school meets New York City's evaluation criteria

Quality Statement 1 – Gather Data: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor student progress over time.

This area of the school's work is proficient.

There are good systems in place for the use of data, at whole school level, for tracking the progress of individual students and classes. Data is used to track students' progress towards graduation and to identify gaps in individual students' qualification requirements. A tutoring program is available to all students to receive individual help in any of their subject areas. The data is also used to identify students who are unsuccessful in any of their courses and credit recovery sessions are available after school. Data is collected and analyzed by student and by class at the end of each marking period. However, there is inconsistent assessment practice at classroom, grade and subject levels. In some subjects and courses the assessment criteria is at the discretion of the individual teacher, which leads to inconsistency in the measurement and comparison of student progress.

The small number of special education students, whose progress is effectively tracked through normal assessment processes, with a teacher overseeing their individual education plan progress against the set goals. The school tracks students by ethnic and

nationality groupings. All categories of students at the school achieve very high levels of graduation and acceptance to colleges. The school is a high performing school in respect of graduation rates and its performance compares well with the few similar schools with which a comparison is appropriate. The school has consistently high rates of graduation and Regents success over the years and uses data to track course and classroom progress at periodic intervals. However, the lack of consistent assessment practice is detrimental to the comparison of student performance across classrooms.

Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use available data to understand each student’s next learning step. Through collaborative planning and student and parent engagement, they set high goals for improving teaching practice and accelerating each student’s learning.

This area of the school’s work is proficient.

The school has developed an extensive modernization plan, which is highly appropriate in preparing students for the demands of present and future society. The principal has made a rapid start on the implementation process in appropriate key areas of the plan, but there is inconsistency in the collaboration. Communication processes do not fully engage all members of the school community in setting measurable and demanding goals and in their implementation. The plans and goals appropriately focus on all aspects of the educational processes in the school which will have maximum impact on student achievement. They range from upgrading facilities to embrace modern technology to the restructuring of the large number of students in grade 9 into smaller learning communities to enable new students to have a smooth transition into this large establishment.

There are good procedures for the identification of students in greatest need of improvement. Using the outcomes of periodic assessment data, identified students are targeted and encouraged to attend after school tutoring and credit recovery sessions. There are very high expectations on the part of all members of the school community with respect to student outcomes. The students follow a range of very demanding academic courses designed to provide challenge in line with their high achievement levels which result in very high graduation rates.

Parents are very supportive of the school and the high quality of education their children receive. They receive regular feedback on the progress of their children and are able to meet with teachers at any time if they have particular concerns. Staff are driven by improving achievement and providing high levels of successful outcomes for the students. Almost all students achieve graduation, pass Regents tests and have successful outcomes in the Advanced Placement and majors courses they follow. However, there is inconsistency in Regent’s test outcomes at the 85 plus level between subjects for similar groups of high achieving students.

Quality Statement 3 – Align Instruction: The school aligns its instructional activity and resources, and student engagement around its focused plans for accelerating learning for each student.

This area of the school’s work is proficient.

The school has an appropriately challenging curriculum and provides opportunities for high achieving students. The school’s focus is on mathematics, science and technology, but also has a wide range of other courses available to the students, including a wide selection

of majors of which students make an informed choice to study one throughout grades 11 and 12. The majors program provides good quality curriculum opportunities for students to experience high levels of academic challenge and rigor in their learning. As part of the modernization program, the school is upgrading information technology facilities in the school and it is beginning to have an impact on the learning opportunities for students in some curriculum areas. The curriculum is driven by State standards, with the higher level advanced placements and majors courses having assessments aligned to external college standards. Appropriate procedures are in place for ensuring teachers' accountability for student outcomes, through lesson observations and the tracking of progress from the periodic data. Teachers plan differentiated instruction to meet the needs of the high achieving students through the wide range of classes and courses they teach. However, there is inconsistency at middle management level in taking a proactive role in ensuring accountability, consistency of practice and outcomes achieved by the group of teachers for whom they are responsible.

Budgeting, staffing and scheduling decisions are appropriately driven by the modernization agenda. The upgrading of information technology is a major budgetary priority, with staffing and scheduling decisions focusing on the introduction of learning communities in grade 9 to provide a positive experience for students on their induction and integration into the school. Instruction programs provide appropriate rigor and challenge to match the high achievement levels of the students attending the school. There are examples of good instruction practice which provide learning opportunities with high levels of engagement for students and where students are active participants in the learning process. Some instruction is teacher led without much in the way of student involvement. The school does not have a consistent approach to planning which would include clear learning objectives and outcomes for students.

Great respect is evident between all members of the school community. Students are very positive about being educated in the diverse community within the school and of the wide range of educational opportunities available to them. There is a respectful, caring and work focused culture in the school and students can approach teachers about any issue. The students do not, however, have confidence in the guidance system to provide the level of support they need in this large establishment, a situation which the principal is planning to address in the next academic year. There are good procedures for promoting and rewarding good attendance, which are leading to high levels of student attendance.

Quality Statement 4 - Build and Align Capacity: The development of instructional leadership, staff, and capacity are aligned around the school's collaboratively established goals for accelerating the learning of each student.

This area of the school's work is proficient.

The school has good teacher hiring procedures in place. All applicants are only considered if they hold a university degree in the subject specific area required and are asked to demonstrate how to teach a particular skill. The school also targets recruitment from certain industries for very specialized courses that are offered. Appropriate professional development programs allow teachers to extend their knowledge of curriculum and improve instruction. As a result of inconsistent practice in the use of the outcomes of data, the principal is planning to provide professional development opportunities for teachers to support data driven instruction. The principal has a program of formal and informal lesson observations. Middle managers also take part in lesson observations of the teachers in their areas of responsibility. Teachers have an opportunity to observe one another teach and they undertake a review session with the principal to

discuss the learning outcomes from the observations. There are an appropriate range of opportunities for staff to work in teams to plan curriculum and instruction. Teams include the cabinet who meet daily to discuss strategic and operational issues, the wider cabinet with a curriculum and instructional focus and subject and grade teams which focus on student progress, intervention and instruction. However, middle leaders are not assuming a great enough responsibility in moving forward the school's agenda and for professionally developing the staff under their supervision.

The principal is highly respected by the majority of teachers, the students and the parent community. Only having been in post a short time, he has quickly begun to initiate the much needed modernization program to enable the school to look to the future rather than resting on its past reputation. The school runs smoothly on a day to day basis. Procedures are in place and are regularly reviewed and revised. Parents, students and teachers, however, all indicate that communication systems in the school are not effective enough to provide the required flow of information and consultation necessary for such a large establishment. Extensive additional programs are providing high quality academic and social enrichment opportunities for the students. The school has a variety of partnerships which enhance the opportunities of the students to gain wide ranging experiences beyond those within the normal curriculum. The alumni association provides a wide range of support and resources for the school in order to support student opportunities and achievement.

Quality Statement 5 - Monitor and Revise: The school has built-in structures for evaluating each student's progress throughout the year, recognizing weaknesses in its improvement plans and teaching practices, and flexibly adapting plans and practices to meet its goals for accelerated learning.

This area of the school's work is proficient.

There is a strong strategic drive for change and modernization in the school which is being dynamically led by the principal. He has drawn together the school plans and goals and the modernization plan and has developed a strategic action plan for each semester to ensure that all activities have the required level of ownership, accountability and resources to sustain their implementation within a given timeframe. There is not, however, the same level of ownership in the process by some middle leaders and teachers to ensure the establishment of collaboratively agreed medium term goals which would support the agenda for change and modernization. Periodic assessment outcomes are used well to track student progress, which in turn leads to curriculum and instructional realignment. As a result schools progress in meeting agreed goals. Comparisons across classrooms are available within the data outcomes, but are not used effectively by middle managers to review the difference in outcomes of different groups of students with teachers.

All plans and goals are effectively monitored and evaluated regularly in the light of periodic data and progress against the action plan. Adjustments and modifications are made where necessary to take account of outcomes or of new and revised requirements. There is a cycle of planning, monitoring and evaluation which drives the strategic processes in the school. There is not, as yet, a collective ownership and accountability in the process by some middle leaders and some teachers.

Part 4: School Quality Criteria Summary

SCHOOL NAME: Brooklyn Technical High School (HS 430)	∅	✓	+
Quality Score		X	

Quality Statement 1 – Gather Data: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor student progress over time.	∅	✓	+
1.1 The school uses available data and generates its own data to provide an objective, constantly updated understanding of the performance and progress of: <ul style="list-style-type: none"> each student, classroom, grade level, 		X	
1.2 The school uses available data and generates its own data to provide an objective, constantly updated understanding of the performance and progress of: <ul style="list-style-type: none"> ethnic groups, English language learners, special education students* 		X	
1.3 The school uses available data and generates its own data to provide an objective, constantly updated understanding of the performance and progress of: <ul style="list-style-type: none"> all other categories of interest to the school* 		X	
1.4 Performance and progress are measured based on comparisons with similar schools, with the school's own past performance, and among students, classrooms, grade levels, academic subject areas, ethnic groups, and other groupings of interest within the school.		X	
Overall score for Quality Statement 1		X	

* These criteria are partially aspirational as of now because schools do not have routine access to all of this data. The NYC DOE plans to provide schools with enhanced access to the necessary data in 2007.

Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use available data to understand each student's next learning step. Through collaborative planning and student and parent engagement, they set high goals for improving teaching practice and accelerating each student's learning.	∅	✓	+
2.1 Using data, school leaders and faculty engage in a collaborative process to set demanding, objectively measurable goals for immediate and long-range improvement, and to develop plans and timeframes for reaching those goals.		X	
2.2 Goals and plans focus on the school as a whole and on each student, classroom, grade level, academic subject, and group of students whose performance or progress has been identified by the school as a particular focus area.		X	
2.3 Particular attention is given to improving the performance and progress of students in greatest need of improvement.		X	
2.4 High expectations are conveyed to students and parents/caregivers. Students and their parents/caregivers are regularly invited to provide information about each student's performance and how to improve. This information is central to setting challenging goals and developing, evaluating, and revising plans.			X
2.5 Goals and plans for improving student performance and progress drive the activity of all members of the school community: leaders, staff, students, parents, and other partners.		X	
Overall score for Quality Statement 2		X	

Quality Statement 3 – Align Instruction: The school aligns its instructional activity, resources, and student engagement around its focused plans for accelerating learning for each student.	∅	✓	+
3.1 The school selects the curriculum based on how well it aligns with or implements the mandated curriculum and on the curriculum's capacity to generate meaningful interim data about progress towards goals and to support the school's high expectations and improvement plans.		X	
3.2 Teachers are accountable for improving instruction and student outcomes. They plan and differentiate their instruction based on the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes.		X	
3.3 Budgeting decisions are driven by the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes.		X	
3.4 Staffing decisions are driven by the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes.		X	
3.5 Scheduling decisions about the use of teacher and student time are guided by the needs that emerge from examining student data and by the focused plan the school develops to improve student outcomes.		X	
3.6 Instructional programs actively engage students.		X	
3.7 Staff know and respect students and respond to their academic needs, as well as their personal needs that affect academic performance. Each student knows and trusts an adult on the staff who is concerned about him or her.		X	
3.8 Student attendance and engagement are high priorities. High rates and patterns of absences trigger immediate intervention.			X
Overall score for Quality Statement 3		X	
Quality Statement 4 – Build and Align Capacity: The development of instructional leadership, staff, and capacity are aligned around the school's collaboratively established goals for accelerating the learning of each student.	∅	✓	+
4.1 Leaders, faculty, and staff are selected based on their high expectations for student performance and progress and based on their commitment and capacity to use data, compare outcomes within and across classrooms and schools and develop and revise plans and methods to improve performance and progress.		X	
4.2 Professional development decisions are driven by the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes. Professional development is designed to help leaders, faculty, and staff use data, self- and peer-assessments, and collaboration with peers to achieve goals for improved school and student outcomes. Professional development and self- and peer-evaluation are aligned and overlap.		X	
4.3 The principal frequently observes classroom teaching and has a considered strategy for improving the quality of each teacher's instruction. Teachers frequently observe and support each other's classroom instruction with the goal of improving student outcomes.		X	
4.4 Planning, evaluation of results, and revision of plans takes place in teams. Leaders and faculty inform each other of their goals and results, candidly evaluate themselves and each other, and use what is learned to drive improvement.		X	
4.5 The principal is respected and has capacity to effect change.			X
4.6 The school runs smoothly. Procedures are clear, communicated to all, and are generally followed.		X	
4.7 The school aligns youth development and support services around stated academic goals. Partnerships with outside bodies are routinely used to achieve academic goals.			X
Overall score for Quality Statement 4		X	
Quality Statement 5 – Monitor and Revise: The school has built-in structures for evaluating each student's progress throughout the year, recognizing weaknesses in its improvement plans and teaching practices, and flexibly adapting plans and practices to meet its goals for accelerating learning.	∅	✓	+
5.1 All school plans and other interventions include frequent interim goals and diagnostic assessments of progress designed to reveal in objectively measurable ways whether the plan is being effectively implemented and reaching stated goals.		X	
5.2 Comparisons of student progress within and across classrooms and schools are used in making interim diagnostic assessments and measuring the progress of plans and interventions.		X	
5.3 Information generated by periodic assessments and diagnostic measures of progress and comparisons is used to revise plans immediately in order to reach stated goals. Interim and final goals are modified when data objectively demonstrate that revision is required.		X	
5.4 Each plan's interim and final outcomes drive successive phases of goal setting and improvement planning, and each successive phase is characterized by agile and flexible realignment of practices and resources to improve student academic outcomes.		X	
Overall score for Quality Statement 5		X	