



The New York City Department of Education



Quality Review Report

Bronx Center for Science and Mathematics

High School 260

**1363 Fulton Avenue
Bronx
NY 10456**

Principal: Edward Tom

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Reviewer: Ken Bryan

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Part 1: The school context

Information about the school

The Bronx Center for Science and Mathematics is a replication of another highly successful high school in New York. The Bronx Center is an open enrollment high school created under the new small school model with an expected enrollment reaching 432 pupils in 2009. Currently, the school's capacity stands at approximately 50% which is significantly lower than similar and City-wide schools.

The school's ethnic composition is 61% Hispanic, 31% Black, 5% Asian and others, and 1% White. The proportion of students eligible for Title 1 funding is 76%, which is higher than similar schools. There are 4 special education students and 11 English language learners, whose first language is Spanish. The student attendance rate is 93% which is significantly better than similar and City-wide school averages.

The Bronx Center for Science and Mathematics is an empowerment school. Empowerment schools have more flexibility to make 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 is highly visible, accessible and demonstrates excellent instructional and operational leadership.
- The generation and use of data lies at the heart of student achievement, the setting of goals, planning for professional development and within the instructional programs.
- Instruction is of a consistently high quality which has led to excellent student progress and achievement.
- Additional programs to facilitate early test successes, preparation for college and timely graduation is exemplary.
- The principal and his faculty know the children extremely well and the academic and personal guidance is excellent.
- The school has extremely high expectations for all members of the school community and it very effectively sets goals for future improvement.
- Levels of attendance and Regents examinations pass rates are very high.
- The effectiveness of the intervention programs for special education students and English language learners is a very strong feature of the school.
- The school has excellent relationships with external services and other providers who significantly enhance the education provided by the school.
- The school runs very smoothly on a day-to-day basis, the student body is well dressed and courteous and the teachers are dedicated to developing the whole child.

What the school needs to improve

- Further develop the use of disaggregated data to set quantifiable goals for all groups of learners.
- Carefully plan the development and growth of the school, taking into account capacity, facilities and atmosphere.
- Continue to generate higher levels of parental participation in the school through the development of parent workshops and on-line communication.

Part 3: Main findings

Overall Evaluation

This is a well-developed school.

The Bronx Center for Science and Mathematics uses data very effectively to set challenging goals for all members and aspects of the school community. The robust use of a mixture of formal, informal and periodic assessments has resulted in significant progress for all groups of students. The dynamic and very visible principal has extremely high expectations and this has resulted in high attendance rates, notable successes in the State Regents exams and very effective procedures for the setting and reviewing of goals and plans.

The Bronx Center has a formal dress code policy and the focus is upon very high academic performance, particularly in mathematics and science. While the school has very high academic expectations, it focuses very successfully upon the development of the whole child through the teaching of a deeper understanding of the seven core values of respect, integrity, honor, excellence, commitment, perseverance and service. Academic success lies at the heart of the school. A significant number of students pass the Regents exams in mathematics and science (100% and 95% respectively). The school is committed to its 90-90-90 goal which is 90% plus attendance, 90% pass on Regents at 90% or above. These lofty goals are being achieved quickly with all students regardless of their level of achievement upon entry.

School-based and externally sourced professional development has been informed by the rigorous scrutiny of data. This has resulted in a very open culture of professional support within the faculty. The school fully utilizes a range of excellent additional intervention programs and it has very effective collaborations with other schools, colleges and other organizations to enhance the education of all students.

The Bronx Center for Science and Mathematics shares the same building as another high school. This will affect future capacity and the potential for growth as there are some shared facilities.

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 well developed.

The Bronx Center for Science and Mathematics generates a wide range of assessment data and it effectively uses the information to inform student progress. There is clear evidence that the data has been efficiently collected and analyzed to inform individual student performance and goal setting. Benchmarking data for the incoming freshman is analyzed rigorously and early identification of need is deemed essential. This includes an excellent in-house survey to determine contextual information. Students are placed into 'ten to one' ratio small group intervention classes, or are assigned to honors and advanced programs. Student recruitment is given a high priority. The principal has vigorously set

out to attract self-motivated, high achieving students. Students are also supported by an advisory program which successfully supports academic and personal development.

The data provided by the continuous assessment schedule, is analyzed thoroughly to identify trends and to demonstrate achievement for all groups of learners. This includes an Empowerment Schools' Initiative sub-group who are being monitored in terms of results and outcome using well structured periodic assessments. The compilation of student transcripts is very methodical and they are regularly up-dated and these lead to differentiation throughout the school. Student performance data is fully integrated and trends are effectively communicated to each learner, teachers and parents. Another example of this rigor is the way in which special education students are tracked effectively through the analysis of diagnostic assessments in English, personal portfolios, reading and mathematics tests, phonic analyses and academic intervention services team conferencing. The consequence of this is the formulation of well-targeted individual education intervention programs involving multi-agency support and the parents. The needs of higher achieving students are well met through the robust use of student data.

The use of the Saturday academy, summer school and extended day ten-to-one sessions has resulted in students passing Regents exams early and the achievement of high promotion and attendance rates. The school effectively compares its performance with other peer horizon schools and it analyzes its year-on-year data. Special education students make excellent progress and the small numbers of English language learners quickly test out of the program. The school generates scholarship mark analysis reports to demonstrate the achievement of all students by subject and by grade. These are diligently analyzed as the data drives professional development and the design of instructional programs.

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 well developed.

The schools administration and faculty work collaboratively to set intrinsic and coherent short, medium and long-term goals. This process is integrated and is informed by a rigorous school improvement cycle. The use of a wide range of data underpins this process. All constituent groups have a clear understanding of the implications of the data analyses. The planning cycle is well structured and effectively informed by the available data. The school successfully uses a spring retreat, a June planning meeting and a mid-year review to support the very effective school improvement team who create a 'living', constantly modified and data driven Comprehensive Education Plan. All staff can clearly articulate their understanding of the data and the way it is used to set goals for individual students, subject areas and grades. Constituent teams use the data effectively, such as the committee of student affairs and the different subject teams. Individual teachers plan remediation and academic intervention through the rigorous use of the available data from interim assessments, mock regents, unit exams and other forms of summative and diagnostic assessments. All students have a very clear idea about what they need to do to improve and the school strives to communicate this to all parents.

Detailed goals are set for students in greatest need of improvement following early identification. Referral sheets are completed and are followed up by the guidance counselor who regularly meets with parents. The school's very high expectations are

communicated successfully to an increasing percentage of parents at events such as orientation and parent workshops. The school's extremely challenging goals, such as the 90-90-90 target and the aim to have all 12th grade students take one college level course before graduation are on track.

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 well developed.

The school's clearly organized and detailed curriculum maps reflect the mandated curriculum content and creative modifications to the instructional programs. The very effective use of interim and formal data determines the frequent and focused adjustments as the curriculum maps are reviewed each month within department meetings. The faculty is currently very involved in modifying the curriculum binders as they determine interdisciplinary connections.

Teachers are held accountable for improving instructional programs and student performance. The principal has very high expectations for his staff, within a culture of openness and collaboration. All teachers are actively encouraged to differentiate instruction and the principal has been very influential during his regular visits to the classrooms and grade meetings. The principal believes in the value of human capital and he has freely invested in professional development, creative scheduling, additional programs, very generous student teacher ratios and resources. This has had a huge impact upon student progress.

All students are very eager to learn and they are highly motivated and goal oriented. Students have been very actively involved in peer tutoring sessions, after-school academic support programs and enrichment classes and in pre-SAT and college preparation modules. The relationships between students and the faculty are excellent. The teachers know the students extremely well and they provide outstanding academic guidance and counseling. One student used the phrase 'tough love' to describe the mixture of care and guidance of the school's family. Student attendance levels are high (95% on the day of the review) and the school actively challenges absence through robust systems. High individual student attendance is celebrated through the use of appropriate rewards.

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 well developed.

The principal has carefully selected his staff using specific criteria. He has hired a balanced faculty consisting of Teach for America program teachers, New York City Teaching Fellows and veterans who have demonstrated skills and expertise in a subject area, who show the capacity or potential to receive further professional development and who show a willingness to use data. All staff set very high expectations for student performance and they have a passion for the holistic development of every child. The faculty is well supported by an extensive and differentiated professional development program which is informed by data. The process is teacher oriented and the principal has

very creatively used his budget to provide in-school opportunities to supplement out of school programming. There is a robust and constantly modified professional development action plan within the Comprehensive Education Plan.

There is an intrinsic and integrated culture of openness amongst the faculty with regard to peer support, observations of instructions and walkthroughs. The principal and his departmental leaders frequently conduct observations and action plans are modified accordingly. Collaborative planning is particularly strong during departmental and grade meetings and through the very effective common planning time. Feedback from professional development is effectively turn-keyed in to these meetings. The principal is highly accessible and demonstrates excellent instructional and operational leadership.

The school has other collaborations and partnerships which support the professional development program. A partnership with the Horace Mann private school provides support in mathematics, science and drama. The College Board provides support for SAT preparation and the use of Australian and United States Services in Education consultants is another effective intervention.

Further excellent relationships have been developed to enhance the education provided by the school. The principal has been particularly successful in attracting support from a number of community based organizations, colleges, other schools and other providers, such as Dartmouth College, Kaplan Inc. and Replications Inc. who have been central to the establishment of the school.

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 well developed.

The school continuously reviews its goals and plans within a clearly defined process. Through the use of a spring retreat for all staff, non-teaching days, a mid-year review, June planning and through the monthly meetings of the school leadership team, medium and long-term goals are planned and reviewed using the available data.

The school leadership team meets each month to consider data from the regular departmental meetings where data is analyzed and the pacing calendars are adjusted. This is an excellent and well evidenced process of self evaluation. Modifications are made to plans and goals throughout the year and rigorous comparisons are made regarding past performance, progress in relation to departments and grades and with similar schools. This is a very strong feature of the school as it involves all the constituents of the school.

School self evaluation is an intrinsic and constantly updated part of the school's planning cycle. The school is developing an excellent web-based tool to link key checkpoints to performance data. This will enhance the communication with all stakeholders in the process, including parents.

Part 4: School Quality Criteria Summary

SCHOOL NAME: Bronx Center for Science and Mathematics (HS 260)	∅	✓	+
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