Quality Review Report

2011-2012

Mathematics, Science Research and Technology Magnet High School

High School Q492

207- 01 116TH AVENUE
QUEENS
NY 11411

Principal: JOSE CRUZ

Dates of review: March 20-21, 2012
Lead Reviewer: Beverly Ffolkes-Bryant, Ed.D

Part 1: The school context

Information about the school

Mathematics, Science Research and Technology Magnet High School is a High school with 445 students from grade 9 through grade 12. The school population comprises 78% Black, 11% Hispanic, 1% White, 6% Asian students and 3% other students. The student body includes 4% English language learners and 10% special education students. Boys account for 58% of the students enrolled and girls account for 42%. The average attendance rate for the school year 2010 - 2011 was 89.5%.

Overall Evaluation

This school is developing.

Part 2: Overview

What the school does well

- The school is a safe place where students are engaged in learning and appreciate the good support they receive for their personal and academic development. (1.4)

    - Students from different grades remarked on how much they love the school. They all mention how comfortable they are in going to a teacher at anytime during the day to seek help with a personal problem or for more assistance with a concept or skill they did not fully understand in class. They mention how teachers have an open lunch period where students are free to come up and talk to them if needed. One student talked about how the school has many opportunities to be successful in life and has already taken two college classes through Queensborough Community College. These encouraging habits support teachers' efforts to keep students on track for academic success.

    - The principal and staff members know each student by name and address their social-emotional needs in a caring environment. The guidance counselor has an open door policy and students know that they can come to her office during lunch to discuss social as well as academic concerns. In addition to communicating with students, the guidance counselor has open communication with teachers via email for any concerns they may have about their students. The assistant principal for security in conjunction with the guidance counselor created a peer mediation team that provides students with the skills to resolve problems. He was also instrumental in finding alternate placements for students known to be involved in gang activity, were overage with low credits. As a result, school suspensions are at an all time low, the school's incident rate has declined by 20% over the previous year. These improvements have cultivated a climate where students feel safe as evidenced by the school being removed from the Persistently Dangerous School list.

- The principal makes informed organizational decisions across all aspects of the school to support improvements in learning. (1.3)

    - The principal has programmed the school’s schedule so that teacher teams meet twice a week. During their meetings teachers analyze multiple sources of student data, discuss targeted students as well as set goals for their next learning steps. Inquiry team members support the planning of the school's professional development plan. Teams also provide intervention with those students once a week during this time period. For example, the math team developed tasks from previous Regents examinations since those questions are designed to be rigorous. These decisions and others have deepened the level of instruction and have positively impacted teacher practice and student achievement as evidenced in the principal assigning the experienced math teachers to the 9th grade cohort of students across all subject areas in order to provide more support in helping them pass Regents that they have previously failed and support positive learning opportunities.

- The school provides families with ongoing communication that inform them on the progress of their children to support their academic success. (2.4)

    - The school's Jupiter website is a virtual teacher's grade book where both parents and students can log in to see performance grades, assignments and attendance. It

provides a tool for parents to view their children's grades and progress. Every fall, parents come in on a Saturday morning and are given lap top computers and teachers walk the parents through the log-in and use of the various features of Jupiter Grades. Each staff member focuses in on small groups of parents to explain how they can access the electronic gradebook from their home computer, as well as from their cell phones; and how they can use the email and texting features of Jupiter Grades to stay in constant contact with their child's teachers. Parents are also provided with user ID and passwords for their Jupiter accounts, and given ample opportunity to engage in the tutorials. Parents who cannot attend the Saturday introductory session to Jupiter Grades, have the option to come in at a time that is convenient for them, and meet with the Parent Coordinator, the Programmer, or an Assistant Principal who will help them navigate Jupiter Grades. This technology tool also provides an opportunity for parents to email and have conversations with teachers if they have questions or concerns, thus effectively enabling on-going reciprocal communication between parents and the school. Consequently, parents are able to receive comprehensive and timely information that serves to enhance the home and school connection to support their children's progress.

- Teachers use collaborative data-informed processes for timely planning and goal setting across grades and subjects for all students in an effort to boost school performance. (3.2)

    - An analysis of the 2010-2011 Progress Report data revealed a low percentage of students passing the weighted Regents in core subjects. Consequently, teacher teams created pre and post assessments using questions directly from past Regents to identify targeted students' strengths and weaknesses from the item analyses. Individual educational plans are created with short term goals. For example, the science teacher team's goal was to pass the Living Environment Regents in order to get science credits for graduation. These learning goals, well matched to student strengths and areas for further development enables increases in student progress as evidenced in the spring teacher scholarship report where the science department had an 85% average for students passing mock Regents exams.

    - Members of teacher teams state they have seen a marked improvement in their targeted students as a result of the implemented strategies they collaboratively developed aligned to students' goals. One teacher shared how one student who was failing a previous math Regent with 55% retook it and passed with 70%. This alignment has resulted in the implementation of focused school-wide initiatives to address individual student needs and improve academic achievement for all students.

- Teachers across the school welcome opportunities to participate in collaborative inquiry and use this process to strengthen instruction and raise learning outcomes. (4.2)

    - Across all grades and subjects, 90% of full-time staff members are involved in inquiry teams. Teams aggregate and review multiple forms of data to target and track a specific population of students based on the No Child Left Behind (NCLB) Act who represent the school's bottom third. Team members look at students' strengths and weaknesses and create an individual educational plan and set long and short term goals for their targeted populations. The teams utilize the Department of Education's (DOE) inquiry space website as a conduit in which ideas are shared with the entire school learning community in an effort to boost student performance.

    - Every team member has a role. The team selects a "teacher leader" who facilitates the meeting. The "data person" is responsible for the team's inquiry binder, which contains student work, the minutes and the collaborative analysis worksheets. Another member

is the "recorder" who uploads the minutes into the ARIS inquiry blog and another member is the "timekeeper". Teachers in the inquiry teams use data to drive instruction within the classroom. Vertical articulation takes place across content areas during common planning time. For example, one team's completion of the data wall, allowed for teachers in other disciplines to view suggestions used by this inquiry team for the students. The principal and assistant principals has met with inquiry teams during team meetings to view progress, listen to suggestions, give suggestions, and reflect on teacher practice. Teams have been given various professional development sessions (Differentiation in the Science Classroom, Differentiating the Common Core Learning Standards) as well as materials. Teams are focusing on ninth and tenth graders who are in the lowest third. Teams help to voice concerns that lead to professional development opportunities across the curriculum. This builds a reflective collaborative community that grows leadership capacity as well as focusing on improved student learning.

What the school needs to improve

- Develop coherence and alignment in the school's curriculum with State standards to ensure that all students make progress in their learning. (1.1)

    - In response to the 2010- 2011 Learning Environment Survey (LES) in which teachers indicated that "the curriculum instruction and assessment are not aligned within and across grade levels", the principal had the English language arts and math teachers redesign curriculum maps to include the Common Core Learning Standards (CCLS). However, it is unclear if the current strategies are setting a path towards mastery of skill and content for all groups of students across all subject areas. Thus, in the absence of alignment of the curriculum to key State standards across all curricula, students are missing opportunities to engage in standards based learning skills for college readiness.

    - Even though the New York State Education Department (NYSED) requires students to pass one science Regents for a Regents endorsed diploma and two science Regents for an advanced Regents diploma, the school, which has a math, science and technology theme does not offer chemistry and physics to its students as part of a more rigorous curriculum. This limits opportunities for students to meet requirements to apply to all colleges, specifically Tier I universities and engage them in tasks for post secondary success.

- Deepen differentiation of instruction so that lessons engage all students at their entry levels with challenging and effective questioning that elicits higher-order thinking to extend learning. (1.2)

    - One of the components of the principal's "daily rituals" was for teachers to incorporate differentiated, tiered tasks in the activity component of the lessons, as well as incorporating four to five pivotal questions using Webb's Depth of Knowledge (DOK) rubric. However this teaching strategy was not evident in classrooms observed, thereby limiting entry points in the curriculum and the opportunity for students to produce meaningful work products that demonstrate higher levels of thinking.

    - The administration had English language arts (ELA) and math teachers redesign their curriculum maps to incorporate the Common Core Learning Standards (CCLS) and to plan lessons that adhere to the school's "daily rituals", which includes differentiated activities based on data and subgroups. However, the activities in a majority of classroom visited did not adequately challenge learners in all subgroups. As a result,

the individual learning needs of students are not consistently targeted and higher achievers are not always challenged.

- Develop a cohesive system to ensure that all teachers know their individual students' needs, strengths, achievement and learning styles on an ongoing basis to support targeted instruction and foster task engagement. (2.2)

    - Teachers use rubrics from previous New York State Regents examinations to assess student work. However, the rubrics vary, for example some departments use four points while other departments use five. This inconsistency of rubrics lessens opportunities to surface coherent and meaningful information on effective teaching practices to inform adjustments to instruction in order to prepare students for post-secondary work.

    - In classrooms observed, evidence of teachers using on-going checks for understanding and student self-reflection was inconsistent. This lack of coherence in assessment practices inhibits teacher teams and individual teachers from identifying more granular strengths and needs of students in order to improve learning outcomes.

- Design a uniform protocol for all classroom observations to provide a common lens to evaluate teaching practices and identify next steps for professional growth. (4.1)

    - The administration informally observed teachers on one component, planning and preparation, from the Danielson researched based teacher evaluation rubric since teachers' previous lesson plans were sketchy and provided no learning outcomes. The principal has informally visited classrooms, and provided oral feedback to teachers but hasn't memorialized these conversations. This practice does not document clear expectations to drive teacher improvement and results in incongruence in instruction throughout the school as evidenced in teaching practices observed in classrooms.

    - The principal publishes a "Teacher Scholarship Report" based on student performance on midterms and other school wide examinations. It is published by both individual teachers and departments. He has established a benchmark of 80% of students in each class passing with a score of 65%. Those teachers who do not meet these benchmarks meet with the principal to discuss the results and provide lessons and assessments for this particular unit and discuss if teachers assessed what they have taught and take into account student's learning styles. However, action plans and a principal's plan of support for each teacher are not created. This results in the lack of targeted and differentiated professional development to support specific teacher needs.

- Expand the use of data analysis to elevate processes and programs within the school that lead to effective professional collaborations and leadership development to support student growth. (5.4)

    - Inquiry teams utilize agendas, protocols and memorialize their meetings on a regular basis. However, there is no system in place for the administration to evaluate what is being discussed with an analysis on how it correlates to student performance. The lack of a structure to measure the effectiveness of teams on student performance inhibits administrative decision-making to inform closing the achievement gap.

    - The Administration is currently developing systems to align their various walkthroughs and observations of staff and teams throughout the year to teacher effectiveness in order to create targeted professional development that will provide opportunities for professional growth. However, the lack of a current system lessens opportunities to identify and support teacher leaders.

Part 3: School Quality Criteria 2011-2012

School name: Mathematics, Science Research and Technology Magnet High School	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.				
To what extent does the school regularly…	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.				
To what extent does the school …	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.				
To what extent does the school …	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.				
To what extent does the school…	**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.				
To what extent does the school…	**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**