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Howard University Middle School of Mathematics and Science

United States House of Representatives
Committee on Education and the Workforce
“Education Reforms: Promoting Flexibility and Innovation”
Testimony of the Howard University Middle School of Mathematics & Science
Delivered by Mr. Yohance C. Maqubela

Good morning Chairman Kline, members of the Committee and invited guests. My name is Yohance Maqubela, and I am the Chief Operating Officer for the Howard University Middle School of Mathematics and Science (MS)², a fully authorized District of Columbia public charter school serving grades 6 through 8.

In the prestigious tradition of Howard University, (MS)² provides an educational experience of exceptional quality for a diverse middle school student population with high academic potential. Located directly on Howard University’s main campus, as a non-selective school, (MS)² opens its doors to students regardless of their past academic performance, social-economic condition, race or ethnicity, or learning style. Through an educational model that is student-centered and inquiry-based, (MS)² creates an environment that is engaging, nurturing, fun, and safe for the academic risk-taking needed to master rigorous scholarly disciplines.

The primary principle underpinning (MS)²’s foundation is the belief that all students should have a truly equal opportunity, not just to any education, but to a top-flight education, regardless of the various factors that have shaped their lives. Through the flexibility provided in charter school legislation, we have been able to create a truly unique educational model for our student population that takes into account and addresses the specific circumstances that have shaped their lives, without compromising our commitment to the highest levels of academic excellence.

So, what is our program, and how do we use this flexibility to make it truly innovative? First, and foremost, is our partnership with a major research university. Though we are a separate legal entity from Howard University, for all intents and purposes, we are a full part of the Howard University family. In creating our school, its’ founder Dr. Hassan Minor, a Senior Vice President at Howard University, was able to draw on the collective intellectual capital of the University community to ensure that no design element, academic or otherwise, was overlooked. Input from the School of Education, College of Engineering, Architecture, and Computer Science, and School of Social Work was used to create a school of academic excellence where all students can thrive. In practice, this forward-thinking model translates into a synergistic relationship where annually, over 50 Howard University graduate and undergraduate students work in our school as interns, ensuring that each of our teachers has at least one part-time teaching assistant who is either an education major or is pursuing a degree in the same subject as the class in which he or she works. Moreover, (MS)² students have the ability to personally interact with university students, faculty, and staff on a daily basis, all while being educated on an elite college campus.

On such a campus, our students have the added benefit of being able to participate in the many special events, lectures, and visits of distinguished guests. All of this goes into creating middle school students who are not only educated for success, but also confident in interacting with those who have attained success and stature.

Possibly the greatest demonstration of the flexibility created by the charter model is the fact that we are our own Local Education Agency (LEA). As such, the power to create the most dynamic academic program for our specific student population, and adjust it at any point in time as deemed necessary, rests in the hands of those who are best equipped: the faculty. Despite the fact that incoming students are not required to demonstrate past academic success, or a particular degree of scholarly aptitude to gain admission, the academic program is extremely rigorous, and designed to prepare middle school students for the highest levels of success in high school, college, and their varied professional pursuits. However, with nearly two thirds of our students coming to us performing woefully below grade level in the core academic areas, it is clear that the traditional six-hour day, five days a week, 180 days of the year is terribly insufficient. Thus, our program contains a longer school day, which affords two additional academic periods per day, a Saturday Academy, and a Summer Academy. Further, we provide every student and every teacher with the most appropriate resources, including a plethora of school-based instructional technology and a two-to-one computer-to-student ratio that puts a computer in every student's home allowing access to an online version of his or her specific academic program.

Our longer school day includes a mandatory component where we operate our S.T.E.M.-Connections Program. Through this program our students engage in practical applications of the various scholarly disciplines that they study throughout the course of the traditional day. University graduate students and professors, along with professionals from the community at large teach such courses as Engineering Design and Technology, Nanotechnology, Architecture, Robotics, Digital Media, Aerospace Engineering, and Computer science, just to name a few. Our S.T.E.M.-Connections program is so impressive that recently our school received major funding from Google to build a state-of-the-art Computer Automated Design and Manufacture Lab, patterned after the renown M.I.T. Fab Lab.

Trust me when I tell you that the details of our success are far too many to list in the time allotted to me today. However, as a brief sample I submit the following: for three years (MS)² has received the most awards and honors in the D.C. Citywide Science Fair, including this past Saturday, 2 April 2011, five of our six participants winning awards; for the past two years an (MS)² student has won the D.C. Citywide Spelling Bee and gone on to represent the District in the Scripts National Spelling Bee; for the past three years (MS)² has won the Regional Sprint Solar Car Competition and gone on to place in the National Finals; and for the past two years (MS)² has been the only public or public charter school team to make it to the State Finals for the middle school MATHCOUNTS competition. In short, over the past four years, no other public or public charter school has been as awarded in competitions on a regional or national basis. In fact, in 2006, when then Director of the National Science Foundation, Dr. Arden Bement, Jr. visited our school, he was so impressed that he tasked his media staff to create a documentary film (which was completed last year) about the school highlighting our program as a national model of how to best use technology in the instruction of mathematics and science.

In addition to attending a school with an excellent academic program, in order for students from this nation's most impoverished urban areas to attain the highest levels of success in school and in their future professional lives, it is important that they see and interact with individuals who have already attained the most advanced levels of the excellence that they aspire to. To this end, it is part of (MS)²'s model to provide opportunities where our students can regularly meet, hear from, and interact with the dynamic people who shape the world around them. Individuals such as US Secretary of Education Arne Duncan, his British counterpart Education Secretary Michael Gove, radio personality Mr. Tom Joyner, Chemistry and Physics Nobel Laureate Dr. Ivar Giaver, acclaimed actress Ms. Cicely Tyson, and Chairman of Citigroup Mr. Richard Parsons, are just a few of the movers and shakers who have visited our school.

Clearly, no singular model is the answer to fixing our nation's entire educational crisis. However, I am hesitant to think of where our program would be if it were not for the flexibility permitted. I am sure that it would mean that we would not have Ms. Kimberly Worthy, an uncertified yet Highly Qualified teacher who was D.C.'s first State Teacher of the Year from a charter school. Nor would we be able to have Mr. Wesley Ellis as Chair of our Social Studies Department. While only in his third year of the profession, Mr. Ellis is such an outstanding teacher that when three members of the Executive Council from the Boeing Company visited his class last year, he was invited to attend Space Camp even though such invitations were previously reserved exclusively for math and science teachers. Again, these are just two further examples, from a nearly endless list, of how such flexibility has allowed our school to shine.

In regard to the No Child Left Behind legislation, in its current form it is flawed in its sole use of "adequate yearly progress" (as it is presently defined) to determine whether or not a school system is failing. When taking into account that many charter school Local Education Agencies do not start in elementary school, but rather, like us, begin to receive their students in middle school, or high school, it is not reasonable to require that all students can be completely remediated in the seven prior to their assessment. In fact, how can a school be judged on annual progress in the first year that a student enrolls? Rather, a school should be assessed on how much its students grow over the course of the year. Secondly, the desire to see schools test high in math and reading comes at the detriment of so many other vital subject areas. Students from the truly best schools can do more than read and perform math on grade level. They are well-rounded and well-versed in all of the disciplines. Changes to NCLB need to be reflective of this. Finally, millions of students across this country are unintentionally shortchanged by the adults who believe they are part of the solution. This is because the national conversation around urban educational reform is centered upon fixing the lowest standard and not attaining the highest standard. In the global arena in which our children live and compete, it is not enough just to be on grade level. Our children must command their studies. The only way to guarantee this is to ensure that all students are being instructed properly skilled professionals who believe in their greatness.

At its core, (MS)² was founded out of a commitment to service. For nearly 150 years Howard University has been serving some of this nation. This service has not been delivered at some substandard or mediocre level, but rather, at a high standard of excellence. So in deciding to do its part in improving K-12 education, Howard invoked the Gold Standard. And in a short period

of time, the Howard University Middle School of Mathematics and Science has established itself as a leading institution on the national landscape of public education.