

**Written Testimony of  
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**United States Senate  
Committee on Health, Education, Labor, and Pensions  
Elementary and Secondary Education Act Reauthorization:  
Improving America's Secondary Schools**

**Introduction:**

Thank you Chairman Harkin, Senator Enzi, and the Members of the Health, Education, Labor, and Pensions Committee for the opportunity to share with you Denver School of Science and Technology's (DSST) vision and program in the context of Elementary and Secondary Education Act reauthorization and the goal of ensuring that every student in every classroom achieves at the highest levels. In Denver, Colorado, our team of educators at DSST has taken on the task of redefining a world class secondary school program that looks to double the number of students going to four year colleges and universities without remediation from the city of Denver. It is my hope that DSST's program can be replicated to improve our expanding network of schools in Denver as well as shape the direction of Secondary School reform.

**Issues facing Secondary School reform: National and Local Contexts**

With the election of President Obama and the work around the Elementary and Secondary Education Act reauthorization, a dynamic national landscape for school reform has developed. Charter schools are becoming recognized as high quality organizations which successfully educate our nation's young people. Within this broader context, the United States has been struggling to improve student achievement over the last decade. Student achievement trends and four-year college-going rates continue to be a significant national problem that will undermine future economic and civic growth of the country. A national crisis persists around successfully educating our population and graduating students from four year colleges - particularly low income and minority students.

Denver Public Schools currently faces many of the same challenges of other large urban districts. Many schools are segregated by race and income. The district is challenged by a high rate of poverty and a large percentage of students who are not native English speakers. The data around college readiness calls for a sense of urgency around secondary school reform:

- Out of 6,310 9<sup>th</sup> graders in Denver Public Schools in 2004, 612, or 9.7% are likely to earn a four-year college degree within 10 years;
- Of 4,164 low income 9<sup>th</sup> graders in Denver Public Schools, 186, or 4.5% are likely to earn a four-year college degree within 10 years.

These numbers in Denver are directly tied to the level of college readiness in middle school, where one in three students is meeting state standards in reading, writing, math, and science by the end of 8<sup>th</sup> grade.

There are very few highly successful one-track college preparatory school models in the country today that significantly increase student achievement in the context of truly diverse populations. In response to this crisis, DSST Public Schools looks to drastically change the outcomes for young people in the city of Denver and model the reform necessary to increase student achievement and prepare students for four year colleges and universities.

### **DSST Public Schools: Background and History**

DSST Public Schools currently operate open-enrollment STEM-focused charter schools. We are part of the Denver Public Schools system.

What sets us apart from urban charter schools, traditional district schools, and magnet schools is the rich student diversity of our program. Currently in our middle and high school, 48% of the students are from low income households, and we are 68% minority – we are excited to attract a diverse student population that mirrors the general population of Denver. We draw from over 100 different elementary and middle school programs in our open-enrollment process. Our students learn to thrive in a diverse environment, which is a valuable asset that equips them to enter college, the workplace, and the real world.

Through a network of schools, DSST Public Schools is dedicated to providing a diverse student body with an outstanding secondary liberal arts education with a science and technology focus. By creating powerful learning communities centered on core values and a shared commitment to academic excellence, we will increase the number of underrepresented students (girls, minorities and economically disadvantaged) who attain college science and liberal arts degrees. Our graduates will be responsible, engaged citizens who are prepared to be leaders of the future.

Denver School of Science and Technology welcomed its first class of 9<sup>th</sup> graders in 2004 and has since become one of the most successful high schools in the state of Colorado. DSST added a middle school program to its model in 2008. For three years in a row, DSST's graduating classes have earned 100% acceptances into four-year colleges, and our college remediation rate thus far is 7%. DSST has been the highest performing Colorado public high school over the last three years as measured by value-added student achievement growth on the Colorado State Growth Model. Locally, DSST's Middle and High School program was the highest performing Denver Public School in the according to district's School Performance Framework.

DSST's middle and high school program has consistently been the highest performing secondary school in the district in both growth and absolute performance. And most importantly, DSST has demonstrated that all students, regardless of income, background, or ethnicity, can earn a truly rigorous high school diploma and attend a four-year college. As a result, DSST has become a national model for school reform, hosting thousands of educators from all over the country.

Unlike most districts, the reform effort in Denver is defined by the collaboration between district and charter schools. DSST's secondary schools will help Denver Public Schools to become a truly integrated school system –a national model for such efforts.

### **Introduction: DSST's Secondary School Program**

DSST's secondary program mirrors the recommendations and focus points in the Elementary and Secondary Education Act. DSST is a unique charter school and offers a distinctive value proposition based on serving diverse students, a 100% four year college acceptance track record, data-driven instruction that yields high value-added student growth, and our STEM focus.

- **100% four year college readiness and acceptance focus:** Every aspect of our secondary school program is designed to prepare students to succeed academically and socially in the context of four

year colleges. Preparing every student to gain acceptance to and succeed in a four-year college is at the center of DSST's academic program, and work towards this goal starts the minute a student walks in the door for summer school in the 6<sup>th</sup> grade year. In June 2009, Education Secretary Arne Duncan spoke at the National Alliance for Public Charter Schools Conference.

*The Denver School of Science and Technology serves grades 6 to 12. They take the 6th graders on college visits. Those children spend years choosing a college – instead of months – and 100 percent of their graduates go on to four-year colleges and universities.*

From Summer School in the 6<sup>th</sup> grade through Senior Project, students strive to master the standards, knowledge, and skills that will prepare them for a four year college or university without remediation.

- **Real-Time Data Driven Systems that yields Value-added student growth:** Identifying the value-added growth is the most important metric of student learning. DSST is committed to using data and up-to-date research to inform, reflect upon, and adapt instruction to meet student needs. DSST relentlessly focuses on the academic growth of our students. The result of this focus is outstanding student growth year-to-year as measured by state and nationally norm referenced tests. Most schools that use data driven instruction places the data in the hands of select teachers and school leaders a few times a year. At DSST, every teacher uses technology to transform teaching and learning, harnessing powerful assessment and data tools to measure student progress towards standards on a daily basis and to adapt instruction accordingly. Teachers develop of strategies to spiral and re-teach standards on which students, both individually and collectively, have not achieved mastery. Students use trackers to manage their own data and progress toward standards on a daily basis as well. Thus, they own the data, are fully transparent as to what they need to study and review, and own their progress toward grade level mastery. Even 6<sup>th</sup> graders at DSST keep track of their data on mastery checks, tests and quizzes, and benchmark exams in their notebooks.
- **STEM (Science, Technology, Engineering and Mathematics):** Young adults who are well educated in STEM are critical to the functioning of our democracy in our increasingly technological society and represent the next generation of economic growth in the innovation economy. DSST fully realizes that a college preparatory STEM education has to start with a middle school program. We work to develop a strong literacy foundation and laser-like focus on math conceptual understanding and demonstration of skills, and investing the necessary time in reading recovery and math interventions for the many students who come to our program grade levels behind. The expectation of our math curriculum is designed to take all students to Calculus by their senior year. In the middle school program, every student takes an hour and a half of an integrated science sequence each day; in the high school, all students take the equivalent of five and a half years of science as part of their graduation requirement. Our one-to-one laptop program also drives our teaching and learning. DSST has a requirement that every student pass every core academic course that they take and our graduation requirements exceed Colorado's higher education entrance requirements. DSST has created a rigorous core curriculum and STEM program that engages students in the field and prepares them to succeed in STEM college majors. We anticipate that 47% of our students will go into STEM fields in college, considerably higher than the national average of 14%.

### **A Democratic Open-Enrollment Process - Creating Choice and Demand in our Program**

DSST's status as a charter school has allowed for a democratic open-enrollment process so that any student, regardless of academic ability or background, can apply for admissions through our lottery process. This is a unique and important element of DSST as we enroll a truly diverse student population in terms of both

income and race. Most traditional urban public schools suffer from a *de facto* segregation based on income and neighborhood and housing patterns.

However, DSST is in a relatively unique and fortunate position of operating in a city that is becoming more diverse. As a result, DSST has the opportunity to serve ethnically and economically diverse student populations. One reason for the unprecedented level of cooperation and support from Denver Public Schools is the District's interest in developing more diverse, high-performing schools, and meeting the demand for these schools – as a note, DSST Public Schools had over 1500 applications for 400 available seats in our 6<sup>th</sup> and 9<sup>th</sup> grade entry points in our schools. Within Denver's secondary school reform movement, there is widespread public belief that DSST's model reflects the world in which students will live and work. This model has greater long-term potential to transform public secondary school reform as students, regardless of race, income, or geography, have access to high performing and high growth schools. As we expand to a network of schools in Denver, DSST – through parental and student choice – has the opportunity to reintegrate Denver schools.

### **DSST's Core Practices: Innovation, Autonomy, and Diversity**

Our student outcomes can be attributed to innovative strategies that have guided the organization over the first six years. DSST's guiding principles mirror the direction our nation looks to take through the Elementary and Secondary Education Act. DSST believes that all students can learn, and that it is the responsibility of educators to ensure that students achieve. Our operating principles permeate every aspect of our work. We are mission and values focused, and our success lies in the development of highly effective people. We are outcomes-focused, relying on purposeful use of real-time data. Our organization is committed to innovation and excellence. Most importantly, our status as a charter school as well as our focus to meet the academic and social needs of a diverse population has allowed for innovation in the areas of school culture, instructional approach, and supporting our student population. Learning is at the core of our organization. We constantly seek to find out why things work, how we can we do them better, and we never stop learning.

Our school culture is grounded in our school's six core values: Respect, Responsibility, Integrity, Courage, Curiosity, and Doing your Best. Our school culture is defined by our approach with young adults through these values. We hold high expectations for all students, and insure that our educators will do whatever it takes to enable students to meet these high standards. In DSST's high-accountability culture, doing your best is a core value, and doing well in school is "cool." Students are individually known and cared for, and they are held accountable and challenged to do their best. This high-accountability culture includes:

- Recognizing that every group of people implicitly operates based on a set of values, whether defined or not, DSST defines the values of our community with 100% clarity and purpose, leaving little to be defined unintentionally. Our core values form the heart of the DSST community. We gather as a school community to share in reflection, praise, and acknowledgement of our collective direction.
- DSST was founded on the premise that the common good of our community has far more value than the pervasive "individualistic" culture teenagers live in today. An intentional shared community not only challenges students to think of others, but it also contributes to their sense of belonging to something much larger than themselves. DSST's rituals and routines, including our community morning meetings, promote a sense of belonging and common purpose that guide all students, faculty and staff.
- A required after-school study hall for students who have not completed their homework.

DSST believes that every student learns differently and that our classroom instruction must accommodate diverse abilities and learning styles. Rather than adhering to a single teaching philosophy or instructional model, DSST has tapped deeply into cutting-edge brain research to ensure that teachers are using the most

effective strategies possible to attain maximum student growth and achievement. With brain research as a foundation, DSST also draws on the best practices from the field, visiting high-performing schools across the country, and then piloting practices in our own classrooms to define a set of *DSST Core Instructional Practices*. This balanced pedagogical approach, both incredibly progressive and surprisingly traditional, maximizes growth and achievement for all students. *DSST Core Instructional Practices* include:

- Planning Lessons in 10-minute time segments and using hooks and real-world connections to maximize student engagement.
- Using Differentiation to reach diverse learning styles and abilities in non-tracked, heterogeneous classrooms.
- Spiraling and fluency activities that provide the repetition necessary to move new learning into long-term memory and to maintain previously learned concepts and skills.
- Multi-sensory classroom approaches to improve access and retention.

DSST realizes the challenges of supporting the needs of a diverse student population, particularly the at-risk. The more deeply a student is known and cared for, the more effectively a student can be challenged to learn and grow. At DSST all students are known deeply enough that teachers and staff in the building can personally care for them and hold them accountable so that they can realize their full learning and developmental potential. Clear expectations are communicated, and strong systems of accountability are in place to help students meet our high expectations. DSST provides an academic advisor for every student, who monitors student performance and maintains regular communication with parents and guardians; the advisor also works to build meaningful connections necessary to reflect on student progress academically, as well as with the development of character and expressions of core values. Our student support is defined by the combination of our focus on building relationships and our intervention systems. We provide:

- Mandatory after-school tutoring, where our teachers work with students who fail a quiz or test;
- Math and English summer school for students who have not mastered grade-level skills.
- Math and English support classes that students must take, in addition to their regular courses, until they master basic fluency skills.
- Weekly recognition of students for academic effort and success.

### **Partnership with Denver Public Schools: A Model for Urban Education Reform**

DSST has the opportunity to dramatically impact K-12 education in Denver. DSST's ultimate goal is that Denver becomes the national leader of urban public education, as indicated by: 1) dramatically increasing the percentage of college-ready students from all backgrounds; 2) rigorous STEM education and programs that make Denver the national urban leader of science education; and 3) racially and socioeconomically diverse college preparatory schools that reflect today's workplace and society.

To achieve these outcomes, Denver Public School (DPS) Board approved charters for four additional DSST 6-12 schools. By 2020, DSST Public Schools' five schools will be fully enrolled with over 4,000 students, will graduate approximately 500 students per year and will double the number of college ready students from DPS matriculating to four year college each year (from 500 today to 1,000). DSST Public Schools will serve 10% of DPS's 6<sup>th</sup> through 12<sup>th</sup> grade population, but graduate the same number of college ready graduates. And 100% of DSST Public Schools' graduates will be prepared to succeed in STEM fields of study.

Securing financially viable facilities and funding meaningful professional development are great challenges for charter schools. DSST Public Schools has developed a strong pro-active strategy to deal with this issue, but must successfully execute the strategy. DSST has a written commitment from the Superintendent of DPS that DPS will provide leased facilities to DSST Public Schools for all four of the growth campuses and has already assigned DSST to a new DPS building for its second campus. DSST hosts many DPS teachers and school leaders on learning walks, and over the last two years hosted the Denver Teaching Fellows Program

through The New Teacher Project. Taking our partnership to the next level, DSST will be submitting an i3 grant with Denver Public Schools. In this grant, DSST will be sharing the DNA of our innovative instructional model with the district to impact student achievement in several schools across the city.

Under the leadership of Senator Bennet, the former Superintendent of Denver Public Schools, Denver has recently emerged as one of the more promising cities for education reform efforts. Denver Public Schools has aggressively supported the expansion of charter and innovation schools, begun to create a pay-for-performance compensation system, has opened up facilities to charter schools, and created school performance metrics to measure a variety of value-added student achievement data.

Within this promising context, however, district student achievement continues to suffer. By any measure, Denver is failing to educate an entire generation of young people, which will have long-term consequences for our city and state. Today, 49% of DPS students graduate high school, and of those that do, less than 45% are academically prepared for college. There is an acute shortage of high performing secondary schools in Denver. As the Obama Administration seeks to scale effective practices at a pace never seen before, DSST, together with DPS, is positioned to build a national model partnership that will expand impact and support positive change throughout a large urban district.

## **Conclusion**

There is much debate in our nation about how to improve our public schools. This is a critical conversation for many constituents as the stakes could not be higher. We suggest a simple guiding principle to guide the conversation: center the conversation around what kids need. Every student in every neighborhood deserves a high-performing school, so we simply must debate the quality of our schools first. Our nation's policy must strongly favor having more high-performing schools in every neighborhood- regardless of their classification – district or charter school.

There is nothing more important to our nation's future than improving our public education system. The health of our democracy, the social and civic fabric of our communities, and the nation's economic future depend upon it. Providing all students from all backgrounds and incomes with an outstanding K-12 education and the academic preparation to go to college without remediation should be the singular focus of the reauthorization of the Elementary and Secondary Education Act.

As charter school leaders, we recognize that charter schools are one of many strategies to accomplish this goal. We do not believe that charter schools are the only path to take. Traditional district schools and alternative schools all have an important role to play in dramatically improving our nation's public secondary education. Instead of using different governance or management structures of public schools to divide and distract our efforts to educate all students, we should be encouraged that there are multiple strategies that our districts can use to insure a great education for all students, and focus on the results that each teacher, school and district achieve for their students. This is one of many reasons why charter schools are a critical component of our education reform strategy.

As the nation seeks to improve student outcomes in STEM and increase the pipeline of well prepared students entering STEM fields, DSST Public Schools has much to offer these efforts through advocacy and the sharing of a proven model. We would like to present the three recommendations based on DSST Public School's work with the Denver Public Schools for the re-authorization of the Elementary and Secondary Education Act:

- Create more high-performing secondary schools in every neighborhood – regardless of their classification as district or charter schools – that meet the needs of our nation's diversity;
- Acknowledge the innovative work of high growth and high performance charter schools that seek to serve under-represented and diverse groups of students on the track to a four year college or university, and involve them in the secondary school reform effort;

- Encourage charter schools and district schools working together to share in innovation around data-driven instruction, increasing student achievement and college readiness, and promote choice and demand of high performance schools.

On behalf of Denver School of Science and Technology and Denver Public Schools, I thank you for the opportunity to share, and welcome further dialogue around the needs of our students.