City of Aurora Hispanic Heritage Advisory Board 2015 Annual Community Breakfast Scholarship Awards Ceremony Friday, 30 January 2015, Gaslite Manor, Aurora, Illinois **"Education is Key" Dr. Jose M. Torres, President** Illinois Mathematics and Science Academy

It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends herself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if she fails, at least fails while daring greatly, so that her place shall never be with those cold and timid souls who neither know victory nor defeat. (Citizenship in a Republic is the title of a speech given by the former President of the United States, Theodore Roosevelt at the Sorbonne in Paris, France on April 23, 1910)

Thank you Mayor (Tom) Weisner— and good morning everyone. I am delighted to be here to support your commitment—our commitment—to *develop*, *empower* and *advance* Hispanics and their accomplishments in and beyond the community of Aurora, Illinois.

Your work as an organization and as leaders, role models and mentors for the next generation is so important. You are in the Arena. You are daring greatly!

From educational achievement to community service, your accomplishments are inspiring. I commend you, the City of Aurora Hispanic Heritage Advisory Board for supporting and motivating community stakeholders—to not only embrace Hispanic culture—but to involve the Hispanic community in opportunities at the local level. This is important and far-reaching work! Please join me in giving the Advisory Board, Mayor Weisner, Andrea a hand for their work! They are in the arena!

I've been an educator all my professional life and there are some beliefs that guide what I do each and every day. I'd like to share some stories that illustrate these beliefs.

Stories illuminate values and beliefs and embody our greatest aspirations. The stories that I want to share with you this morning illustrate how education is key for our remarkable students at IMSA. And, I'd like to end by sharing with you, briefly, my own story. Education was key for me, too.

Growth Mindset

I've always been inspired by the genius and achievements of the great Italian artist Michelangelo who was not just a "Teenage Mutant Ninja Turtle!" Michelangelo said, "If people knew how hard I worked to get my mastery, it wouldn't seem so wonderful at all." These words and his remarkable life are examples of a person with a "growth mindset"—whose hard work,

1

effort, persistence and dedication despite a lifetime of challenges and adversity led to achievement.

How many of you would consider yourselves as "hard working, focused on effort, persistent, dedicated despite challenges?" Turn to your neighbor and say, "I've got a 'growth mindset." Turn to your neighbor sitting on your other side and say, "You've got a 'growth mindset!"

This fall, our faculty and a group of students at IMSA studied the work of Dr. Carol Dweck, Professor of Psychology at Stanford University, author of *Mindset*, and a world-leading researcher in the field of motivation, achievement and success." As an educational community, IMSA works to create the conditions and organizational culture that celebrates hard work, development and resilience.

Now that I've described for you a growth mindset—let me state how it differs significantly from a fixed mindset. A fixed mindset assumes talents, abilities and intelligence are fixed, unchangeable, immutable, hard wired. Our growth mindset view at IMSA fosters a love of learning and the resilience that is needed for talent development and eminence. I love the idea of eminence! Excellence! Superior Accomplishment! Distinctive attainments!

A couple of years ago, 3 IMSA alumni were interviewed for an article that was published in a journal. After reading their stories I was compelled to speak to them personally so I called each of them over the past two weeks. I think you'll enjoy hearing about their lives and what IMSA gave them, things like: Following big dreams, developing resilience, Having a love of learning and Embracing the possibilities of a growth mindset. Their stories demonstrate that education is key! Their stories showcase a growth mindset! Their stories demonstrate PTG?

Do you know what PTG is? Have you heard of PTSD? Posttraumatic Stress Disorder (Syndrome). PTG is Posttraumatic Growth. PTG is positive change experienced as a result of stress! It's like body building; the only way to grow muscle is to stress them.

While IMSA has nearly 5,500 alumni, this morning I want to tell you about three of them: First, Terez Ivy is from East St. Louis, Illinois, one of the most economically and educationally impoverished regions of the country. Today, Terez leads new product design and systems integration for a leading Department of Defense Contractor in Washington, DC. Second, Lynn Sosa is from Chicago and first applied to IMSA 3 years after Education Secretary William Bennett called the Chicago Public Schools the "worst in the nation" (1987). She graduated from Harvard Medical School and today is a physician working in public health in Connecticut. Third, Miguel Garcia is from Aurora, and attended East Aurora High School for 9th grade—with an enrollment of 84% Hispanic and 70% low income. Today, Miguel is a junior in college studying International Business and Trade. Now let's get to know them better.

Terez Ivy

As you listen to the words written by Terez Ivy from East St. Louis, ask yourself, "who daydreams like this?" *"I daydream of speeding through unknown galaxies to discover planets unknown. I travel to the ends of the universe, observing its simple yet beautiful extravagancies… I master the beautiful and delicate intricacies of time and space. I explore the most intriguing and mystifying forms of a star, a 'Blackhole'… becoming the greatest scientist there ever was."*

That question again, "Who daydreams like this?" Terez does. And perhaps you do, too, or you know young people who daydream like this. Terez wrote these words on his admissions application to IMSA when he was 13 years old—and academically talented in mathematics and science—living in East St. Louis. He was a daydreamer and his hobbies were modeling and designing high speed aircraft. He was the youngest member of his high school freshmen class and he applied to IMSA: "for the experience of going beyond the ordinary and of crossing over the threshold to the extraordinary."

I spoke to Terez last weekend and he said that: "going to IMSA was the coolest period of my life" and he said, "I'm presently surrounded by technocrats and successful people in Washington, DC—but the smartest people I've ever been around were at IMSA—and that includes the faculty and staff." Now that's a pretty bold statement considering that Terez is currently working as a software engineer at CACI, a Defense contractor with over 16,200 employees in 120 offices worldwide.

Terez's interest in mathematics and science was nurtured at a young age by a mom, a *Star Trek* fan, a grandmother, who faithfully watched *Dr. Who* with him, and the director of gifted education for East St. Louis School District who took Terez and under her wing. She encouraged him to apply to IMSA and provided extensive support. Terez said he applied to IMSA because it was a "great opportunity" and that he had a "strong desire not to be poor." His mother would later say, "I want his mind to be challenged" and "I want him to be excited about getting up every day."

Terez found this to be true—that he learned how to think—not to just "spit back" the facts, but to develop self-confidence in offering his opinions to others. He also thought it was a tremendous opportunity to listen to the late Dr. Carl Sagan, a writer and scientist, during a special event of the IMSA Great Minds Program.

Living and learning with people from different cultures was a breakthrough experience for Terez who had lived in an almost exclusively African American city. He embraced the racial, ethnic, geographic and socioeconomic diversity of IMSA's student body and the diverse perspectives and ideas he encountered. He fully embraced the high expectations and rigor of IMSA and went as far as he could; saying his world view and sense of self was forever altered in the process. Terez is deeply grateful for his IMSA education and says it was his Golden Ticket to moving ahead.

You see, education is key! Post traumatic growth is possible!

Lynn Sosa

The first time she applied to IMSA, as an 8th grader (a year earlier than most applicants), Lynn Sosa from Chicago was not admitted. Undeterred, she applied again and was admitted. For Lynn, a Chicago magnet school student, science was always a "natural interest." She attended IMSA's Summer Ad'Ventures program, calling it a "key learning experience," adding, "I could see IMSA was a different place."

She enjoyed the social setting and saw IMSA as a great opportunity to "fit in to a peer group of like-minded students" and sustain relationships with other talented students. Attending magnet schools in Chicago had constrained her opportunities to interact with academic peers beyond the school day. The residential nature of IMSA was compelling to Lynn.

At IMSA, she loved the array of science classes citing Microbiology as most influential. She felt that she was not the smartest kid, but learned the value of evaluating herself and her abilities. During our recent conversation, Lynn said that her most important lesson, which followed her to Loyola University and then Harvard Medical School was this—these are wise words for us all.

If you've tuned out, tune back in.

Lynn said that she learned to "Know what you know; Know what you don't know, and Know who to ask when you don't know."

Let me repeat: "I had early experiences doing hands-on lab work in the field and ended up loving it," she said. Lynn said, "I am still running Gram stains that I learned at IMSA, and even now, still love it." She also took Pathogenic Microbiology at IMSA which fostered her interest in infectious diseases: "Patho was really cool, and I could see myself doing it."

After IMSA, Lynn pursued her study of infectious diseases at Harvard Medical School and had a fellowship at the Connecticut Department of Health, where she now works. After residency, she realized "public health made sense for me...I wanted to make a difference." At IMSA, we call this fulfilling our mission statement "to ignite and nurture creative, ethical, scientific minds that advance the human condition."

Today Lynn is the director for the Tuberculosis and Sexually Transmitted Diseases Program at the Connecticut Department of Public Health and is also the Connecticut Deputy State Epidemiologist. Lynn's Division also handles: immunizations, foodborne outbreaks and special situations like their Ebola response activities. Lynn credits IMSA with preparing her for how to learn and for Harvard Medical School where, like IMSA, "I was in charge of my own learning."

She said the IMSA classes in which she was most successful "forced me to apply my own learning on papers, problem sets and in labs...labs forced me to do it for myself, rather than listening to lectures. I learned by seeing how it works. I realized this is how learning happens." Behold a "growth mindset!

Miguel Garcia

Finally, let me introduce you to our hometown boy: Miguel Garcia of Aurora. Miguel demonstrated talent in the elementary school that he attended, which was right across from his house: Oak Park Elementary School. Miguel also attended—Calvert Middle School—as well as—East Aurora High School—where he was involved with the music program and other extracurriculars activities. His immigrant parents, from Durango, Mexico: Blanca and Miguel Garcia—just got their residency! Congratulations to the Garcias! Miguel told me, "I'm so proud of my parents!"

How many of us share his deep appreciation for our parents—who have overcome adversity and great personal struggles. Let's give a hand to our parents in the room for never giving up! The Garcias are on firm footing and Miguel is rightfully proud—his brother Edwin is an 11th grader at East Aurora High School and his father just launched a general contracting business.

I spoke recently with Miguel and was impressed with his story—a story of how he fell in love with IMSA. He said, that he: struggled with academics, found the coursework to be difficult, but it was all worthwhile because he was introduced to something—something that has set him on his life's path. Miguel was introduced to religious diversity and a vast array of cultures that

make-up our student body. This experience led Miguel to major in international trade. Looking back, Miguel said that "IMSA teaches you to learn how to learn."

What do we call this? A growth mindset! He'd heard about IMSA through connections in his community – a friend's older brother, a neighborhood "buddy" and most importantly, a teacher who recommended that as a 6th grader he participate in IMSA's FUSION program, an after school enrichment program for students talented, interested and motivated in mathematics and science.

In FUSION, Miguel experienced "real science" in a way that was entirely new to him: in "school science," he had quickly completed his work only to be given more worksheets, told to read or asked to help "slower" students. In IMSA FUSION he thrived, was challenged by hands-on experiments, participated in active discussions with other students, and engaged in dialogue with his teachers and parents. These experiences not only advanced his knowledge and skills, but motivated him to excel and seek further IMSA opportunities.

He enrolled in IMSA's Summer Enrichment Academics in Mathematics and Science (SEAMS) a two-week residential program, where he was again actively engaged in real science and found great delight in "blowing something to smithereens." His curiosity and interest ignited, he was now convinced he wanted to attend IMSA. Miguel encountered a host of challenges in the admission process: no home computer; had trouble navigating through SAT registration; faced peer pressures not to go; there was limited English at home; and some few less-than-supportive teachers. Yet Miguel persisted! You see Miguel has PTG; Posttraumatic growth!

With support from several advocates, he registered for the SAT and handwrote the IMSA application which included five essay questions. He selected the IMSA belief statement, "No one's path in life is predetermined," and he wrote a compelling autobiographical statement: "I come from a school that is not too high in academics and is always being criticized because of that ... a lot of people tell me that I cannot go very far coming from that school. That is <u>not true</u>, however, and as long as I work hard enough, <u>I can achieve anything</u>."

Miguel was admitted and participated in a 3 week pre-enrollment residential summer program, EXCEL, to strengthen his academic skills and deepen his engagement in inquiry-based and problem-centered learning. Today, after being accepted to University of Illinois Champaign and successfully completing two years of university work, Miguel is studying at Waubonsee Community College this semester (because he is saving money—if any of you have another scholarship to give, I can give you Miguel's phone number!). In any case, Miguel plans to return to University of Illinois at Champaign in the spring and graduate with a Bachelor's Degree in International Business and Trade.

Miguel embodies his belief that "with hard work, I can achieve anything"—a growth mindset; he shows us that education is key! And, of course, Miguel is a perfect example of Posttraumatic Growth! I'm serious, if any of you have additional funds to give Miguel a scholarship, I'd love to put you in touch with him!

So...what do you make of Miguel, Lynn, and Terez? Are they exceptions or are these three, three of many?—I believe that here are many Miguels, Lynns, Terez's in our schools and communities. Let me end with my own story. Is that okay?

5

I was born and grew up in Puerto Rico...1st Regional Sup in CPS hired from the outside 1st Hispanic Superintendent of schools –U-46. 1st Hispanic President (& 4th President) of the world's leading teaching and learning laboratory for imagination and inquiry, the Illinois Mathematics and Science Academy (IMSA). All...because my mother dared to dream and made my brother and I work hard. Incidentally, my brother became a medical doctor and practices medicine in Puerto Rico!

We developed a "growth mindset" and learned that if we "work hard" we could "get smart." We learned that education is key. We experienced stress as positive; we had posttraumatic growth! Friends, let us make a commitment to the young people here receiving scholarships, students in our schools and communities...that we will help them to work hard so that they, too can get smart!

Albert Einstein said, "It's not that I'm so smart, it's just that I stay with problems longer."

Maya Angelou said it this way, "You may encounter many defeats, but you must not be defeated. In fact, it may be necessary to encounter the defeats, so you can know who you are, what you can rise from, how you can still come out of it."

Supreme Court Justice, Sonia Sotomayor said, There are uses to adversity, and they don't reveal themselves until tested. Whether it's serious illness, financial hardship, or the simple constraint of parents who speak limited English, difficulty can tap unexpected strengths.

Finally, in the words of our great hero and role model, Cesar Chavez, "Si se puede, which means, "yes, it can be done or accomplished!

Please stand, hold the hands of the people near you and let's raise our hands up and together repeat in a loud voice, "si se puede." One, two, three: "Si se puede!" "Si se

References

Marshall, Stephanie Pace, McGee, Glenn W "Max," McLaren, Eric, Veal, Catherine C. *Gifted Child Today*. Waco: Winter 2011. Vol. 34, Iss. 1; pg. 16, 8 pgs. Full text posted with permission of Prufrock Press.