Community Learning Day 2016
August 15, 2016, Illinois Mathematics and Science Academy, Aurora, Illinois
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On August 25, 1986 the charter faculty and staff met for the first time at IMSA. Imagine the scene: No students. No specific curriculum, nor SSL's. No history. Never had a Community Learning Day! No nothing! Only a promise that we would be better than the alternative.

Let's take a moment right now to share with 2/3 persons sitting near you about what might have been going through your mind and heart if you had been here on that first Community Learning Day in 1986—a little time travel!

Today, we are gathered for our 30th Community Learning Day! Welcome to our 30th year!

This morning, rather than just welcome you to the year and provide you some updates, I'd like to reflect on that first year in 1986 using the original words and primary documents of that period; take stock of where we are today given that original vision; and paint a picture of how we might move forward together in our next 30 years.

On that day on August 25, 1986 Dr. Stephanie Pace Marshall shared that in less than a week, 211 students will be arriving! She said, "Our commitment is first to them, to provide an unparalleled academic program and psychologically and socially nurturing environment. Our second commitment is to the educational community in Illinois to serve as a laboratory for educational exploration and innovation—so that we can both collaborate and share what we have learned to ensure that the benefit of the state's commitment to this Academy can be felt throughout the State."

For our students in the residential academy: Offer 21 courses whose learning objectives would include interdisciplinary and would inspire and provoke, stretch the imagination and demand detail, and encourage daydreaming and require accountability. A daily emphasis will be on inquiry and discovery. We'll call our students "Apprentice Investigators" and "we will treat our charge as if each one is capable of extraordinary achievement" (Marshall *Remarks* 1986).

For our State: What we do in the Academy is to be exported to the State! Serve as a laboratory for developing, testing, and disseminating innovative techniques in math, science and humanities. Humanities are not second class citizens. We include a strong element of the humanities which adds wisdom to knowledge social studies and world languages arts and music.

Why did/do we have to state this? "Humanities are not second class citizens"? We're still saying this. If humanities, English, fine arts, world languages were important 30 years ago, how much more important are they in a more interconnected, web-based society?

"The Brochure for Teachers: the Life of Staff at IMSA" published February 3, 1986 contained the following reminder: "We are concerned that our instructors have time—time to be available to individual students, time to enhance their own professional standing, time to be with one another so that we generate an interdisciplinary ethic that demonstrates the unity of knowledge. We want faculty to devise and run seminars, to supervise research projects and enhance that

role model effect that we know is responsible for so many of our intellectual leaders. Another important role...transfer of educational "technology" to the schools in Illinois and the nation. We'll need to send people out to the schools to lecture and demonstrate, we'll need to operate teacher institute in summer, perhaps on weekend.

On that day, 30 years ago, staff were told, "In an effort to open the Academy and get things started in an incredibly short time, we have undoubtedly already made some mistakes—but quite frankly if we have, the control is ours to change it. We need to take the time to reflect on and plan for what we want to become and then do it—together" (Marshall *Remarks* 1986).

Today on August 15, 2016 we find ourselves in the midst of transition, but perhaps not too different from intervening years and "undoubtedly already made some mistakes—but quite frankly if we have, the control is ours to change it." It is still true that it is in our collective power to make this institution what we want. I'm not merely talking about going back. We can never go back, but moving forward to create the kind of "learning laboratory" that would tug at our heart, inspire our imagination, catalyze our energies.

For our students today, there are an increasing number of courses and electives—incredible opportunities with SIR, Innovation and Entrepreneurship. How do we foster a greater sense of interconnections/interdisciplinary thinking, inquiry, and excellence among our students? While preparation for college and outside the classroom activities has always been important, how do we assist our students to become even more focused on their academic work and on academic excellence?

For the State of Illinois today, in some way, we are victims of our own success. Our outreach, PBL, Kids Institute, the Center, E2K have continued to change and improve. And, we have been successful! Kudos to PFS! In the past several years we have had 10,000 students and 2,000 educators participants in different IMSA activities, including Fusion, PBL, in-service days, Golden Apple, Allies, and summer student outreach programs here at IMSA, throughout Aurora, Chicago, Springfield, Metro-East, and other locations.

But let's be clear, we can do better. Our mantra both in the residential academy as well as in outreach is *how can we improve*? When you consider what we are doing to "further educational excellence" throughout Illinois, how are we currently "transferring" educational technology from the residential academy to the rest of the state? And how are we continuing to "serve as a laboratory for developing, testing, and disseminating innovative techniques in mathematics, science and humanities?"

Throughout the past 30 years, IMSA's identity and purpose has evolved:

- IMSA 1.0 (1985-1992): A community of scholars dedicated to intellectual exploration and discovery to develop leaders who know the joy of discovering and forging inter-connections among mathematics, science, the arts and the humanities by example and by instruction inspire others to live in harmony within themselves, other human beings, and the physical world.
- IMSA 2.0 (1993-2006): A pioneering educational community to transform mathematics and science teaching and learning by developing ethical leaders who know the joy of discovering and forging connections within and among mathematics, science, the arts and the humanities by means of an exemplary laboratory environment, characterized by research, innovative teaching and service.
- IMSA 3.0 (2007-present): The world's leading teaching and learning laboratory for imagination and inquiry to ignite and nurture creative and ethical scientific minds that

advance the human condition through a system distinguished by profound questions, collaborative relationships, personalized experiential learning, global networking, generative use of technology and pioneering outreach.

This morning, I want to remind us of our IMSA Philosophy—*Enrolling in our Possibility*. Here's a card with our philosophy printed on it for you to have. Colleagues, this is our philosophy.

> If we do what we know and feel is right, it is bound to happen that among our graduates there will be numbered scientists, engineers, and those who go on to earn degrees in law and letters. There are likely to be those few who *create* new intellectual worlds, cure a dreaded human ailment or in some other way significantly influence life on our planet. Our philosophy will be to treat our charges as if each one is capable of this extraordinary achievement. Only one such product will make the effort and expense of this school for its entire duration worthwhile (Lederman 1986).

Our charge for the next 30 years. On January 20, 2016 the Board of Trustees approved IMSA Impact Statement and Priority Outcomes: "By 2022, IMSA is a recognized global leader and catalyst in equity and excellence in STEM teaching & learning, innovation and entrepreneurship." I'd like to amplify this Impact Statement: Global—Leader—Catalyst—Equity and Excellence—STEM—Teaching & Learning, Innovation & Entrepreneurship.

The priority outcomes include: Strengthening identity as a learning laboratory and our current theme social entrepreneurship. As we've considered our current theme in the "Learning Laboratory" Social Entrepreneurship, we have begun to embrace the grand challenges. And, while not synonymous with SE, the grand challenges are certainly part of SE.

How is all this going to work? I am not sure! I don't know! Dr. Robert Hernandez said to me the other day after our Cabinet Retreat, "I've never heard the phrase 'I don't know' from you." I thought that I had said this before, that I don't know how we're going to integrate "advancing the human condition with social entrepreneurship, with solving for grand challenges, but I'm certain that we must move toward a focused effort on advancing the human condition through solving the grand challenges. Together we can figure this out!

In saying "I do not know," incidentally, I'm not alone. Then IMSA Board President, Jim Pearson said in 1985, "The Academy should have an impact throughout the state. I see the Academy as setting a standard for education, that is, of the highest repute. How we get there, I do not know" (Coates, 1998).

How will we make major contributions to solving environmental problems, or substantially reduce poverty? I do not know exactly. As we embark on a more deliberate path to "Advance the human condition," we begin by lacing into the Academy courses, where appropriate, a focus on solving the grand challenges of our current world.

There are eight that we've identified: poverty, education, energy, environment, water, health, food, security. There are other schemas include additional grand challenges—others like the United Nations, the Bill and Melinda Gates Foundation, Singularity University, include: space exploration, prosperity, disaster resilience, end hunger, gender equality, reduced inequality, sustainable cities, peace and justice, climate action, etc. Today's worldwide problems are just too big to ignore, according to Singularity University.

Moving boldly is in our DNA. In 1985, Dr. Lederman said “we must think in enormously bold terms!” (Coates, 1998). Could we envision a world where we end poverty, ensure learning for all, support the energy needs of everyone at all times without harming the environment? Is a world where there’s abundance of water, health, food and security within our reach?

My response is *yes! If we come together—all of us.* My response is that IMSA, as a learning community of passionate, curious, change agents can leverage our minds and hearts to solve humanity's’ grand challenges thereby significantly influencing life on our planet by encouraging experimentation, innovation, and breakthrough technologies and leadership! For our students in the next few years and for our State in the next few years...create programs or modules that teach STEM through solving grand challenges.

As I wrap up, let me leave you with a few thoughts. Simon Sinek, author of *Start with Why* and *Leaders Eat Last*, recently staid, “Working hard for something we don’t care about is called stress; working hard for something we love is called passion.”

Think about this coming academic year and ask yourself whether you are looking forward to it with a heart full of stress or with a heart full of passion?

Let me cite one last time from Dr. Marshall’s remarks when she quoted *In Search of Excellence*, "When you have a true passion for excellence and when you act on it, you will stand straighter. You will look people in the eye. You will see things happen. You will see heroes created, and watch ideas unfold, and take shape. You will walk with springier step. You will have something to fight for, to care about, to share, scary as it is, with other people. There will be times when you swing from dedicated to obsessed. We don't pretend it is easy. It takes real courage to step out and stake your claim, but we think the renewed sense of purpose, of making a difference, of recovered self-respect is well worth the price of admission" (Peters, Austin 1985).

Remember "Brochure for Teachers: the Life of Staff at IMSA" from February 3, 1986 that I mentioned earlier? The brochure stated that, "we will settle for nothing less than to be the *premier school in the nation.*" I would add "the world.” I have no doubt that should we pursue being a leader for equity and excellence in STEM teaching and learning, innovation and entrepreneurship, we will be the “*premier learning laboratory in the world*" we can democratize STEM education for gifted (and non-gifted) young people everywhere.

So as I close, let me ask you to engage in a little more time travel! It’s the beginning of the 2017 year, it’s our 31st Community Learning Day—one year from now. What do you hope we will have accomplished by this time next year? And what do you commit yourself to do to support this community in accomplishing this? Take a minute to reflect on these questions.

Art Turock said, “There’s a difference between interest and commitment. When you’re interested in doing something, you do it only when circumstance permit. When you’re committed to something, you accept no excuses, only results.”

Colleagues, let’s commit to expecting the highest effort and excellence from our students, let’s commit to behaving with the highest character and professionalism possible, and let’s commit to supporting each other to accomplish excellence as a “learning laboratory”—and let’s fulfill Carl Sagan’s promise, IMSA is “a gift from the people of Illinois to the human future.”

Thank you.

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