

7-18-2009

Dr. Leon Lederman, Terri Willard '89, David Kung '89, and Dr. Stephanie Pace Marshall

Leon Lederman

Illinois Mathematics and Science Academy

Terri Willard '89

Illinois Mathematics and Science Academy

David Kung '89

Illinois Mathematics and Science Academy

Stephanie Pace Marshall

Illinois Mathematics and Science Academy

Follow this and additional works at: http://digitalcommons.imsa.edu/oral_hist

 Part of the [Gifted Education Commons](#), [Oral History Commons](#), and the [Science and Mathematics Education Commons](#)

Recommended Citation

Lederman, Leon; Willard, Terri '89; Kung, David '89; and Marshall, Stephanie Pace, "Dr. Leon Lederman, Terri Willard '89, David Kung '89, and Dr. Stephanie Pace Marshall" (2009). *Oral Histories*. 4.
http://digitalcommons.imsa.edu/oral_hist/4

This Oral History is brought to you for free and open access by the Archives & Special Collections at DigitalCommons@IMSA. It has been accepted for inclusion in Oral Histories by an authorized administrator of DigitalCommons@IMSA. For more information, please contact pgarrett@imsa.edu, jean@imsa.edu.

IMSA Oral History – Interviews from July 18th 2009

Participants: Dr. Leon Lederman, Terri Willard '89, David Kung '89, and Dr. Stephanie Pace Marshall

Stephanie: You had other choices. You could have stayed in your home school, and yet you decided to come to something that in many ways didn't really exist, and we weren't sure it would exist once you got here. So why?

Terri: Fortunately I don't think most of us knew it might not exist after the first year we came here.

David: That's true.

Terri: So a lot of it had to do with just making the decision about it; would IMSA be the right place for the three years, and I know I still remember sitting with my parents in our basement and we had a big whiteboard there and my dad had come up with some columns of pros and cons and really trying to weigh out between coming to IMSA and staying at my home school; and I still remember the list of pros included such, you know, in depth things that a 13 or 14 year old thinks of such as a swimming pool.

Stephanie: Oh ok

Terri: And the cons include in-depth things like cafeteria food. You know it's funny when you're that young you don't necessarily think through what this is going to mean for the rest of your future; all you know is well it's supposed to be a better school that they are trying to build more of a focus on math and science so we can go as far as we want. And they have three gyms and a swimming pool.

Stephanie: Why did you come?

David: Ah, I think for me I always had just a thirst for knowledge and learning and I was a geek; you know so I was like "A Math and Science School! Cool, yeah! Sign me up." So it was really just the opportunity, I mean it really ... in no way... I mean in a way there was no choice; when I first heard about IMSA I have to go there.

Stephanie: So what do you remember, I mean from the beginning?

Terri: From the very beginning, I remember walking in and thinking that I was probably the last person accepted into the class because everyone seems so amazing. And it was just very intimidating. And I think one of the earliest memories I also have, was of...there was a field trip going to cemeteries. Do you remember that?

David: Yes.

Stephanie: Bernie Hollister

Terri: And he ran field trips out to cemeteries and I remember something about running for student council or something around that time, I'd lost my petition sheet and I was away from home, and I was just sat there and cried on the bus all the way to the cemetery and back just feeling like what have I done, I gave up everything that I had at home; I may not even be on student council here, and I'm definitely not the smartest person here and wandering around the cemeteries and the atmosphere and the ambience of all of that. You just never know and IMSA's hard for a lot of kids when they're first moving away from home and realizing that there's a big, big world out there and so it's a tough transition, but I'm still convinced that the early and younger you learn that there is a big, big world with lots of brilliant and amazing people, the better off you are.

David: It really is the core, you know, of IMSA, a pioneering educational community. I think that summed it up better than anything else. I mean we were pioneering, I mean everything was new, you know, everything from the teaching, the support staff, the students, how we would collectively create this curriculum, create this, what really became a community. It really is that communal intimacy, for lack of a better term, that I really look most fondly upon. I mean just the support at every level, from the peers, to the counselors, to the teachers all really actively engaged and that sense of active engagement, you know accountability, but also true passion in learning.

Leon: If you look back and try to restrict yourself to the education, the intellectual excitement that stirred you is there any one thing that you could remember that stood out?

Terri: It was the sense of teaching ourselves and teaching each other. And there were two examples I have of that. One was in the English classes when we performed the tempest as part of class of actually working our way through literature, working our way through these difficult texts and actually having to produce this and act in it and it was a part of class time. It wasn't drama club after school. It was something everyone was expected to do. And I remember going from that to writing our own skits for the Elizabethan world picture. And I still know the Elizabethan worldview better than some of the modern ones because of that experience and being Vanna White and talking about how the planets moved and what was going on. And the other one was in Sue Eden's calculus class. I still remember Andy Chen and I trying to work our way through how to present and how to teach the rest some elements of calculus and you know there were hundreds of equations and each of us was responsible for presenting one chunk of things, having to come up with homework assignments. And having to understand something well enough to teach other people just really stood out, and is something I've used in other educational work that I've done since then, I find that I learn a lot better when I have to teach other people about it and you don't get that chance a lot in regular schools.

David: My two stories stem from the same core thing I took away from an educational perspective and that was a sense of empowerment they had at IMSA; like the sense you could take responsibility for your education. You know you go through all of schools and its all formal, like you're there as a receptor. But the two examples were, one was in Bernie Hollister's class and we're going through the textbook and he just sort of dropped it and he just said, "You know, you can learn all the facts that you want." And you could just see the frustration on his face. And what he really told us was that, you could really pick up any book and you can learn it. And you know but we're going to take a different approach. And the thing I really took away from that was: yeah it's not learning about the facts and figures, it's about learning how to learn. And that was one of the key things IMSA taught us it was like, Joe Meyer in the physics class. We would come to class in the morning, and he would say, "If you think you know the material you can go." It was like mind blowing, like what?

Stephanie: And did people leave?

David: Yeah! And the sense that the instructor would trust the students like if you think you know this and really that sense of a mentor or facilitator rather than a well-spring of knowledge.

Terri: I still remember some of the commitment to ethics and the fact that teachers really respected where the students were coming from. And I remember in Dr. Pine's biology class. There were a couple of the students, I think Sarah Yates was one I can't remember if Korin was the other, they didn't want to do the dissection lab because they didn't believe in doing, I think it was the fetal pig dissection. And he had found a road kill raccoon and he prepped it for them and he worked through that lab with them respecting their own beliefs and ethics around how to work with animals and what was acceptable or not. And the fact that a teacher would go out of his work, do extra work and work with them from where they were coming from. I still remember that now. It wasn't in my class, it wasn't me, but I have a lot of respect for teachers who would do that.]

Leon: You learn from one another. That's a technical subject. Peer instruction has a following, it probably has a procedure of how to do this and I don't know and in fact on the great proponents is this guy, this professor of math at Texas...

Stephanie: Uri Treisman.

Leon: Yeah. Who went from two or three math majors a year to over a hundred because he found the key to minority studies at Berkley, where we found that minorities don't talk to each other about serious things outside of the classroom. There was a kind of cultural demarcation and the great fact is that what he did in Texas so that they would talk to each other and that changed the whole outlook. So the fact that

we have a dormitory and you talk to each other in the dormitories, lots of our graduates have told us that the dormitory part was extremely important, that you learn from one another.

Terri: I think one of the interesting things for the charter class was that sense of there was no division between home and school was reinforced even more by living in the academic building. This was everything, there was no difference between what you did from 8 o'clock in the morning to 4 in the afternoon than what you did from 4 in the afternoon back to 8 o'clock in the morning. It was all just life and learning mixed together.

Stephanie: Are you conscious of thinking differently and seeing the world differently, having a different lens as a result of IMSA. Do you make any IMSA claims? Or you would have become who you are regardless of where you went?

Terri: "this is all a gift that you have received and you did nothing to earn this and you need to be able to pay people back for doing this and share this with others.

David: You sort of capture that spark with this community and that age where you catch your first glimpse to who you can be. And to be able to match that then with a community and a structure where then you are given the tools to go ahead and do that is such a gift. Something I thought about when I was working on my convocation speech from a few years ago and the message I told the students was "use this opportunity to explore your potential" I didn't really want to say push your potential because at that age you don't really know, but it's all about the opportunity to explore. I would say the difference between the IMSA and the college experience was IMSA was about exploring your potential while college was more like exploring how much you can endure. But there's no way I would be the same or think the same way if it weren't for IMSA. Thank you.

Leon: You now have other teaching experiences. Do you use or can you find ways in which we could encourage the student-to-student interactions even more efficiently or dramatically than your experience.

Terri: as Dr. Marshall knows my big push is linking up IMSA students with students around the world and getting to work on world projects together. I think that's the direction that we need to be going. That there are amazing and incredible young people around the world who are confronting serious problems. They don't have time in many countries to go through and study and get PhDs and wait until they're 35 to wait to make an impact on their countries and communities and if we can link up IMSA students to them so they can work as teams on addressing these challenges I think it's an amazing opportunity.

Leon: And you know the IMSA thing, whatever it is, could also be used as dramatically as let's say you know in Chicago. And in a city where you have a big choice of ethnicities, or in other parts of the country, like people who live in strange cities, like Massachusetts.

David: I think a part of it and it's something I see even in the professional world, you know as a student or a working professional you tend to put yourself in a box. Like you time box yourself, you task box yourself, but it's those opportunities when you take people out of their surroundings and even if you told them "we are going to lock them in a room for five days, here's a problem for you to solve." And one thing, it's knowing what you are capable of, you know a lot of times you don't think of it, because you are only thinking about what do I need to do in the next hour, what do I need to do in the next day? I'm sure you all are exploring stuff like this in intersession that we probably looked at from student projects. Really it's that opportunity to get the students to really apply what they've learned in real ways. Traditionally in school it's about the regurgitation, but the application is when you really feel the spark.

David: How do you think it turned out? Like this grand experiment.

Stephanie: Well you used the past tense. So I don't think it turned out yet. It's always interesting because Jim Thompson, Governor Thompson said years ago to both of us "I think it exceeded my wildest expectations". Well the little voice inside my head said, "it hasn't even come close to mine yet." So I think you know for me everything in our lives is an unfolding narrative story. And I think the story line has been consistent. And has great integrity. And it's continuing to be written by every class, by every group. IMSA, you know the challenge for us has always been trying to define, you say pedagogy, but trying to define what we call the IMSA way. What is the IMSA way? Because for people like me and lots of others here, but for all other over the country, school form is not working, we know it's not working. Children are being wounded, with the best of intentions, by very hard working people in systems that are trying to do their best, and yet there are some structures and processes that mitigate against success. So can the IMSA way, what is it, can we define it, and can that approach, whether its pedagogy and instruction, and curriculum, and learn on your own and don't come if you know it and throw the textbook on the floor. There isn't one way, it's a multiplicity of environments where people are trusting one another, and there is co-creation. Children are empowered, teachers are empowered, and it's not a quantifiable kind of thing. So it's always the question for me: how is it turning out? You know the transformation is all about IMSA's capacity to create conditions for you to transform not for IMSA.