

PUBLIC COMMENT

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My name is Richard Rusczyk.

I run a company and a Foundation that designs materials and programs for eager math students. I work online with many very strong math students all over the country, including several members of the US math team, around half of the Clay junior fellows from the last few years, and winners of the Siemens, Intel, and Davidson research competitions.

But the students I work with are not just good at math. They also love math.

But whenever I ask a group of my students 'What is your least favorite subject in your regular school?', by far the most common answer is 'Math class'. And yet these students spend dozens of hours a week on our site (which is www.artofproblemsolving.com) and in our classes, and our classes aren't even for credit.

Why this dichotomy? Because the standard curriculum is not designed for students who like math. It's designed for students who are being forced to learn it. Even honors classes focus far more on perfecting simple algorithms than on reasoning and problem solving. The result: our best and brightest are turned off from math in droves. They want to be challenged. They want to think about beautiful ideas. They don't want to memorize tricks for tests or punch buttons on a calculator. But, the curriculum they are presented seems almost designed to kill interest in math among our most eager young students, and it's working brilliantly at that.

It's not just the students who are being taught to hate math. The teachers are, too. I once had a student thank me for giving him the chance to have a teacher who liked math. As a result of the joy and the beauty of math being sucked out of the classroom, many of the best students simply quit. And so do many of the best teachers.

And the worst thing about this is, everyone knows the kids who want to learn are getting shortchanged. The kids know. The teachers know. The parents know.

Moreover, as restrictive standards and state testing become more and more important, schools have less and less interest in doing anything but getting the students who don't want to learn above some minimal level. As a result, we're stopping the eager students dead in their tracks.

I'm not asking you as the National Math Panel to come in and tell the teachers exactly what to do to engage the best students. These teachers and students, they don't need to be told exactly what to do. They need suggestions and guidance, not restrictions. They need the freedom to do what needs to be done.

What's needed is more flexibility, not less. More experimentation, not less. More options for students and teachers. More ways for them to be engaged and shine.

We must provide teachers options for dealing with our most eager students. I often get asked by teachers or parents what to do with those 3-5 students that the teachers can't teach without leaving the rest of the class behind. The answer is easy. Our role as teachers and parents of these students is to deliver useful resources, create opportunities, remove obstacles, and stay out of the way.

The resources are out there. The curriculum isn't well-designed for eager students, but there are good materials out there for students who really want to challenge themselves. Opportunities are all over, and inexpensive ones at that, if only teachers are given a little support and guidance where to look.

Removing obstacles and staying out of the way, however, are not strong suits of the educational system.

The barriers confronting a teacher who would like to present options to the students are immense. Textbook adoption is a nightmare that only giant companies can navigate, thus squeezing out small publishers who are the only people writing for top math students anymore.

Administrations pour money on their football team, but this Wednesday, I'm going to a middle to teach parents how to help the teachers in their school form a math team. A math team that my foundation is providing all of the funding and teacher training for. And still, some in the administration are blocking its formation.

Look, there's no silver bullet. There's no one-size-fits all solution to math education. And the more we try to find one, the worse the problem gets.

So, I simply ask you to use your position on the Math Panel to do what I ask school teachers to do for my students. I ask that you provide resources, make opportunities, remove obstacles, and stay out of the way.

Let our great young minds develop. Don't hold them back. We've all heard people argue, 'don't worry about the smart kids, they'll be fine.' That attitude is pernicious to the kids and dangerous for our future. Technology has put us in a position to leverage the ability of the few to the benefit of the many. And who are those few who are most likely to benefit the many with advances in science, engineering, technology, medicine? It's our most eager math students in middle school who are the ones most likely to make these breakthroughs in the next generation. Yet we continue to hold them down and chase them out of math, which hurts not only them, but all of us. Because once students turns away from math, you can hear the doors closing to them. And to all of us.

Thank you for your time.