



# Real Impact: Student Opinions for a Change

An Education|Evolving initiative to connect today's students with the nation's education policy leaders

## Student Academic Competitions:

Should students' choices about their outside-of-school activities influence how adults design schools and education policy?  
What's the value of competing on academics, anyway?

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What do students' choices for outside-of-school learning tell us about how we might design in-school learning models and education policy?

Students learn outside-of-school in all sorts of ways. Some of students' more obvious choices include electronic gaming, sports, and music lessons. Perhaps less well-known, however, is the choice many students make to participate in academic competitions.

Thousands of people watch, in awe, the Scripps National Spelling Bee on cable's ESPN each year. But few know that similar competitions exist for students to test their skills in numerous subjects which they also study in more traditional school settings.

A couple hours of "Googling" indicates that the universe of student academic competitions is surprisingly large. It seems no one is tracking this universe comprehensively. And no one has studied it in any comprehensive way.

Yet, even at a glance, this universe begs the attention of anyone interested in how to motivate students; not to mention anyone interested in earning political clout.

Students and families invest an incredible amount of time participating in these competitions. Businesses and professional associations are eager to sponsor them. And some teachers are building on competition models to yield better classroom behavior and performance.

Given these initial findings, Education/Evolving began to wonder, "What's behind this great level of interest?" And, "What lessons might there be for education policy and school and curriculum design?"

To start forming hypotheses, Kim Farris-Berg, coordinator of E/E's "Real Impact: Student Opinions for a Change" initiative, interviewed three competition spokespersons, including Marie Gentile of the Siemens Westinghouse Competition in Math, Science, and Technology; Cheryl Whitesitt of the Minnesota Chapter for the international Future Problem Solving Program (FPSP); and Linda Stump of the Music Teachers National Association Performance Competitions. (For more information on each competition, see page 2).

### **Sponsoring organizations have clear agendas; some include influencing schools**

All three spokespeople indicated that one of the philosophies driving the sponsoring organizations to administer the competitions is the belief that trophies, lettering, and scholarships shouldn't be reserved for athletes alone. Institutions ought to more explicitly reward academic accomplishments, too.

Cheryl Whitesitt of the FPSP believes students should also be rewarded for competing cooperatively—as part of a team—with other students. "The Future Problem Solving Program competition is not about who can throw the farthest," she said.

Each organization interviewed also seeks to advance an organizational agenda. The FPSP strives to balance cooperation with competition. The organization teaches students to think critically and creatively, to set and meet goals, and to pool their knowledge with others so they

can play up one another's strengths. The FPSP competition also advances service-learning and works to inspire teachers to use the competitions model to advance critical and creative thinking for all students, inside the classroom.

Siemens, a technology company, has a business and economic interest in running its competition. The organization needs professionals trained in math and science to be its business leaders of the future, and consequently strives to inspire schools to further improve learning in these academic areas.

Siemens finds that competitions get students on track to study math and science early-on and to continue their studies through high school and college. The majority eventually go into a science-based career.

Siemens is so invested in building a future pool of employees that they're not competitive with the two other major national science competitions run by Intel (<http://www.sciserv.org/isef/>) and FIRST (<http://www.usfirst.org/robotics/>). Many students compete in all three.

The Music Teachers National Association (MTNA) hosts its competition to provide performance experiences to students of all ability levels. Although some states and public school districts are very supportive of music education, the availability of programs in public schools is becoming more limited—particularly in California—as traditional schools make choices to allocate available resources to other activities. Stump believes one might find that students attending specialized arts and/or magnet schools to have more opportunities to focus on their interest in music. The MTNA competition helps students, with or without such opportunities during school, to further nourish their interest in music. Many

competitors become music majors and professional musicians.

**Siemens Westinghouse Competition in Math, Science, & Technology:**

A research competition, sponsored by Siemens (a technology company), for students with "remarkable talent." Students compete for recognition of original science research projects they complete in high school. Students compete as individuals or in teams of two to three people. Regional scholarship awards start at \$1,000 for a regional finalist to \$3,000 for a regional winner. National finalists compete for scholarships ranging from \$10,000 up to a top prize of \$100,000. Schools receive \$2,000 for each regional finalist project that represents their school. [www.siemens-foundation.org](http://www.siemens-foundation.org)

**Future Problem Solving Program:** An international competition, funded by donations and participation fees, that challenges students to develop and apply critical and creative thinking skills in order to identify and promote solutions to a community problem that adults anticipate will need to be addressed in the future. Students from grades 4-12 compete at school, state, and international levels in an individual writing or team (2-4 students) setting. There is also a Community Problem Solving Competition in which small teams, or entire classes, compete while addressing today's community problems. A noncompetitive component of the program is geared toward students in grades K-9. [www.fpsp.org](http://www.fpsp.org) (international) [www.mnfpsp.org](http://www.mnfpsp.org) (Minnesota)

**Music Teachers National Association Performance Competitions:** The performance competitions provide educational experiences for students and teachers and to recognize exceptionally talented young artists and their teachers in pursuit of musical excellence. Students of all abilities compete at state-level competitions. Division and national-level competitions showcase outstanding performance and honor significant pedagogical achievement. National finalists compete for cash prizes and top-of-the-line instruments, such as a Steinway piano. [www.mtna.org/competitions.htm](http://www.mtna.org/competitions.htm)

## Students compete because they enjoy pursuing their interests

Why do students participate? Quite simply: They enjoy sharpening and practicing their skills in subjects that interest them.

Gentile said, "Typically, the highly motivated students compete. Kids in the Siemens competition aren't playing computer games; they're writing them. They're not playing with electronic toys; they're building them. They do science, and compete, because they like it. They do math for fun. Six hour math marathons, sometimes. When asked why, students say they enjoy it."

Whitesitt said that students are eager for a break from memorizing "stuff" for tests. "Kids who participate in the competitions are screaming for an opportunity to think," she reported. Students tell her, "This is the only place I can think! I like it; even though it's hard." She said very few students drop the program.

Stump indicated that it takes a special personality to want to do competitions. Students who enter a national competition thrive on competing and are very often supported by their parents. Participation in the competition is increasing, perhaps due to some students' increasing desire to engage in the challenge of

competing. She sees the same students participating year after year. “They really like it,” she says. Gentile says such students also thrive on keeping busy with activities. “Students who do this tend to be engaged in a lot of extracurricular activities —music; chess club; editors of school magazines; drama club; AP courses. They’re into everything.”

Sometimes, according to Whitesitt, schools and teachers recommend students for the competitions. Students, in turn, choose to participate. Both Gentile and Whitesitt said that teachers often remain involved as coaches of student competitors. They provide resources and guidance. Even so, a critical element of the competitions is that students must conduct their own work. For students, this opportunity to drive their own projects is one of the most appealing elements of the competitions.

Another factor influencing students and their families to participate in competitions, according to Gentile, is the possibility of earning money for college. She said that if one took a serious look at student competitions, nationally, one would likely notice that students from New York State dominate. It’s not that the kids are smarter, but competitions (particularly in science and math research) are a priority. This has been the case for years. In fact, Gentile reported, school districts on Long Island, New York actually bring people in to prepare the students for competitions.

Whitesitt said that Minnesota’s Mounds View School District is similarly prioritizing the training of student teams for academic programs, and students can letter in academics for participating.

## **Parents may influence affluent districts to prepare students for academic competitions**

Gentile hypothesizes that parent-teacher groups probably drive some school districts’ choices to train students for academic competitions, particularly in affluent districts. The students in these districts are getting every advantage. If individual students place well in the competitions, then it looks good on their college applications and they can get into top colleges and universities. They can also win money for college. Given rising tuition costs, being admitted doesn’t ensure the possibility of actually attending. “Even state college is expensive,” Gentile said, “But attending a university like Duke costs over \$40,000 per year now for tuition, room, and board. Even if you’re wealthy, you must go after scholarships.”

Whitesitt, on the other hand, expressed that the pressure students feel to save money for college is a disincentive to their participation in the FPSP competition. When FPSP noticed a decrease in competition

participation levels, the organization did a study to find out why. Students said they were too busy, not with sports or other extracurricular activities, but with jobs. Students said they needed to be saving for college.

When FPSP asked, “What would it take for you to be involved again,” students reported that they would need to use in-school time to participate in the competition. In some cases, this can already be arranged. Students who participate in the scenario writing competition with FPSP, for example, are often able to receive school credit for their work. They arrange with teachers (of Honors English, for example) to test out of subjects. Then the teachers give the students feedback throughout the writing process and eventually give competitors a final grade for the “course.”

## **Student competitions are affected by teacher behavior; and vice versa**

In its mission to advance students’ opportunities to think critically, the FPSP believes it is competing with teachers’ mentalities, which, according to Whitesitt, seem to be changing dramatically as a result of the No Child Left Behind Act. Whitesitt says that testing required by the Act seems to be hindering teachers from seeing, much less using, creative learning models. Testing may also be causing teachers to worry more about their job security than student learning, she thinks.

On the other hand, some teachers witness gifted students’ excitement about FPSP and work to bring the creative, critical thinking model into their classrooms for all of their students. Teachers now use it to teach science and other subjects, or to engage students in creating their own consequences for classroom behavior and performance.

For example, one Minnesota teacher asked students to come up with ways for him to deal with students’ varying learning paces. Students developed study groups and policies, including one that said students would help one another first and then go to teachers for additional needs. The first time the teacher engaged students in this way he said, “I’ve never had such a great class!”

## **So, what might be learned from the experience of students and educators involved in academic competitions?**

So what might adults influencing education policy and school design learn from these initial observations about student academic competitions? What should we con-

sider as we observe how students choose to spend their time outside-of-school and how businesses and professional associations choose to spend their capital?

- Low school-completion rates and test scores bring up questions about how we can improve school and learning-program design to better motivate students to attend school and graduate. Students who participate in competitions are willing to spend a large amount of time preparing, whether or not they receive school credit. It seems this is mainly because of the opportunity to focus on a subject matter of their interest and students' ability to manage their own work, with teachers as "coaches" instead of "instructors" and "assigners". The idea that students want real-world experiences from their schools, and students' desire to be more "in control" of their learning has been more pronounced in the past several years. Their publications are available at [www.educationevolving.org/studentvoices](http://www.educationevolving.org/studentvoices), specifically "Listening to Student Voices," "Tech Savvy Students Stuck in Text-Dominated Schools," and "Positive School Culture."
- High school students' belief that they must spend their free time earning money for college may be hindering them from further excelling in their areas of interest. Many students view outside-of-school competitions as their main outlet for pursuing interests they are not able to pursue in school. Yet competitions are an outlet they must forgo as they prioritize money-earning endeavors. If lowering tuition is not an easy option, education policy and school designers might allocate resources to provide in-school opportunities for students to pursue their interests. Or, designers might continue to foster an environment in which people can create new and different schools. As Stump from MTNA said, in many cases the students attending specialized arts and magnet schools have more opportunities to focus on music than students in traditional public schools. More students ought to have such opportunities.

In Minnesota, legislators and district administrators are already enhancing and/or taking advantage of the connections between the FPSP competition and student learning. In 2005, the Minnesota legislature increased funds for school districts to spend on gifted and talented students. The number of teams involved in the Minnesota FPSP competition increased by twenty-one, likely because more districts chose to use the money to promote or work with the program to help engage their gifted students.

Minneapolis Public School District is also working with the Minnesota FPSP to incorporate the program's processes into its K-12 curriculum. District

officials realize that competition is a key element of the FPSP-related learning exercises for high-achieving students, and will utilize the competition component as an enrichment tool.

- Businesses and professional associations may not be particularly confident in schools' ability to prepare students well for careers in their industry (in this case math and science; music). They hope that their competitions will help influence schools to improve their programs. But just in case that will not happen soon, the competitions also aim to motivate students to study subjects that may not be as appealing if left solely in the hands of schools. Education policy and school designers ought to work with the leaders of academic competitions to better understand their concerns and the relevance of these concerns to the future of our states and nation.
- Academic competitions are a largely-unexplored and little-understood aspect of student learning. Such competitions deserve additional attention from academic researchers, professional educators, and education policy leaders to better determine how students learn, what motivates students, and what skills and experiences are most relevant to the real world.

## About the author

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