

I'm interested in students who don't fit the typical mold, they are most likely to be lost in the shuffle, says researcher from Michigan State University

Prof. Scott Imberman, professor of Economics and Education Policy at Michigan State University in the U.S., was recently invited to give a lecture on evaluating the impact of advanced academic programs for gifted students. The event was organized by Talent, a joint project of the RSJ Foundation and IDEA of CERGE-EI. In this interview, he answers questions about what makes assessing such programs complex, and why there is still limited solid evidence of their added value.

First, I'd like to ask you about the intersection of economics and education. I've noticed that economists are producing a growing body of research on education, even though the common perception may still be that economics is primarily about money.

Yes, that's a common misunderstanding — that economics is all about business cycles, inflation, and similar macroeconomic topics. But in fact, a much larger part of economics deals with the micro level. Broadly speaking, economics is the study of how people interact with one another, and that definition helps explain why economists are interested in public policies. Many economists study education, healthcare, labor market — and this has been the case for the past 20, 30, even 40 years.

In education, we focus on areas where economic theory can offer insight. For example — I'm not sure if this is relevant in the Czech Republic, but in many countries, there's a growing trend to also consider the preferences of parents and students when evaluating schools. It acknowledges that students may not attend just the school close to their home but choose a school, whether it's public or private. This trend is influenced by economic theory, which suggests that schools may underperform if they have no incentive to compete. They might lack motivation to attract students or improve. Now, I'm not saying this theory is universally true, but it's the rationale behind much of the work in this area. Economists are interested in the incentives within education systems, and study how students, parents, and other stakeholders respond to them. Another major focus is identifying the causal impact of different policies and features of the education system.

In other words, you are figuring out what effects a particular measure has? Whether it was worth putting money in it?

That's right.

These days, we have a lot of trust in "data" and we worship evidence-based decision-making. In your lecture, you put that belief into perspective. The main takeaway for me was that it's actually quite difficult to produce sound evidence even on things that may seem obvious. You shared results of several rigorous studies which brought only modest — not statistically significant — evidence of the effect of gifted programs.

Yes, as researchers we're trained to be cautious and to resist pressure from policymakers who want clear answers about whether something works and deserves funding. And our typical response is: "It depends." (*laughs*) The methods we use are designed to identify causal relationships and to filter out other influences. But the challenge is context. Studies of gifted programs often rely on small case studies, rather than large national samples. And it is hard to see from just one such study what the general pattern is.

When it comes to gifted programs, three key factors are usually considered: peer effects, teacher quality, and enriched curriculum. I'd add a fourth — the student's self-concept. In your lecture, you noted that the strongest positive impact from gifted programs in the U.S. was found among minority students, particularly Hispanic and African American students. Could it be that being recognized as gifted helped reshape how they saw themselves, which in turn boosted their motivation and performance?

Sure. Recently, economists have started to look more closely at psychological factors like those you mentioned. Previously, primarily psychologists and sociologists looked at these. These things are in the background, but they exist. Also, while we look for evidence in short term students' performance and often, we do not find it, studies that have a long-term perspective can be more successful. An example can be checking for a rate of enrollment to a college or graduation from a college instead of just checking the gain in test scores at the school. And there are studies which show that the relationship between access to a program for gifted and long-run outcomes of the enrolled students is very strong for ethnic minority students.

You mentioned a study by Fryer and Dobbie from 2014 in your lecture that found no long-term effects though. No difference in college enrollment or graduation rates for students admitted to advanced high schools in New York City. They compared students who barely passed the entrance exam with those who barely missed it.

Yes, that's true. One of the explanations can be that high school interventions just happen too late to really alter a student's path. However, there are some other studies that show that advanced placement courses in high school (which offer college-level instruction) do lead to higher college entrance exam scores and college enrollment.

You also mentioned that some studies suggest ability tracking can be beneficial for gifted students. "Ability tracking" refers to separating students by ability level. But the only study you showed with a clear positive effect was from Kenya, a country with a very different cultural context. To what extent is ability tracking practiced in American schools? I've read that many gifted programs in the U.S. were dismantled in recent decades in favor of inclusive education. Is that accurate?

I'm not sure about the statistics, but I think your impression is mostly correct. Tracking was never as widespread in the U.S. as in many European or Asian countries. And yes, there's been a decline in self-contained classrooms organized by ability. The more common approach now is for teachers to differentiate instruction within a mixed classroom, sometimes organizing students in clusters of students or to do "pull out" sessions where high achieving students spend a small portion of the day together on their own. Whether this shift is ideological or driven by the accountability systems in American schools, I'm not entirely sure. In 2003, the Bush administration passed a law, the No Child Left Behind Act, requiring schools to test students regularly, to ensure that a certain percentage passed. It emphasized getting all students to a basic level of proficiency, which had the effect of pushing schools to focus on low-performing

students — sometimes at the expense of those performing at higher levels. Some research suggests that high achievers may not have reached their full potential because of this.

There's a common belief in pro-inclusion circles that separating high achievers from other students harms the lower-achieving students. I also tend to believe that, but I haven't seen any solid evidence, with the exception of one case in a Czech school where gifted students were integrated into mixed classes, after dismantling a class for mathematically gifted, and the performance of weaker students in tests improved significantly. Do you know of any studies in the U.S. that confirm or disprove this?

Not really. It's hard to design a study that truly isolates that effect. The only relevant research I know of — which we already mentioned — is from Kenya, and it focused on the opposite approach: separating students by ability. It found benefits to that but it's difficult to generalize those findings to countries with very different educational systems, like the Czech Republic.

There are studies on tracking in general, but they often only compare students who barely made it into higher track with those who just missed it. That tells us something, but not much about the highest-achieving students. It's a similar limitation as in studies of gifted programs.

Actually, one study comes to mind. It looked at how high-achieving peers affected low-achieving ones — but it was done at the U.S. Air Force Academy, which is a very unique environment. Military academies in the U.S. can run experiments that would never be allowed elsewhere. In that study, they looked at what happened when they mixed high- and low-achieving students. The idea was similar to that of inclusion. But they found the opposite: performance among the lower achievers declined. Students self-segregated — high achievers worked with each other, and low achievers did the same. The groups didn't really mix. So, in the end, the weaker students did worse than if they had been grouped separately. But again, that was a unique setting, and I wouldn't generalize the findings to younger students in regular schools.

I would like to mention the issue of using standard tests to measure gifted students' achievement. They seem poorly suited to the task. Would you agree?

Absolutely true. One of the reasons for not finding sound effects in our studies may be the tests are not well suited to measure high achieving students. And we are very open about it. Among other things, the tests themselves tend to be targeted towards determining differences in students who are in the lower half of the distribution, especially the tests that we're using in the US, because they're aligned with this accountability system. Their goal is to try to measure basic proficiency. They're not very good at differentiating at the top. Unless a test is explicitly set up to measure high achievers, it is probably not a good outcome measure.

In one of your studies, you explored peer effects using a unique situation that changed the composition of classes. Could you say more about that?

Yes. In a 2012 study, we looked at how students from New Orleans who were displaced after Hurricane Katrina and reassigned to schools in Louisiana and Texas affected their new peers. We found modest peer effects — not specifically in gifted programs, but it still suggests that peers matter. We also saw some impact on students' behavior and school attendance.

Is your interest in gifted education personal in any way? Did it stem from your own family experience?

In a way, yes. It grew out of my interest in students with disabilities. My oldest son is autistic, and that got me into researching special education. Although now that I think about it, I actually did the gifted study first — so maybe I'm getting the timeline wrong. But what deepened my interest was indeed my personal situation: I have two children — one with a disability and one who's exceptionally smart. Seeing how differently they move through the system made me realize how important it is for education to be flexible. I'm interested in students who don't fit the typical mold. These are the students most likely to be lost in the shuffle, and we need to figure out how to better support them.

Are your sons close? Did growing up together help them?

Yes, definitely. When my younger son was in kindergarten or first grade, his older brother was in fourth or fifth. Developmentally, they were quite close despite the age gap. And the younger one often helped his older brother, which gave him someone to connect with, it really helped him, both of them. My older son has some speech issues, but he's in high school and on track for college — fingers crossed. Which means we have to start saving! Hopefully, I'll be able to use the faculty discount. *(laughs)*



Scott Imberman is a Professor of Economics and Education Policy at Michigan State University. His research primarily focuses on education and labor economics, with significant contributions to topics such as school choice, teacher incentives, special education, and COVID-19 recovery. Imberman's work has been published in prestigious journals like the American Economic Review and the Review of Economics and Statistics. He is also a research associate at the National Bureau of Economic Research and a co-editor for the Journal of Human Resources.