

# Conversations on Economic Inclusion with Philip Oreopoulos

## **Dionissi Aliprantis:**

This is Conversations on Economic Inclusion. I'm Dionissi Aliprantis, the Director of the Program on Economic Inclusion here at the Federal Reserve Bank of Cleveland. In our program, we aim to bring together researchers and practitioners to learn about what it takes for more people to participate more fully in the economy. There is a growing body of evidence that providing comprehensive services to low-income students involving support such as tutoring, mentoring, group activities, and financial assistance can lead to sustained improvements in high school graduation rates and other measures of academic achievement. The catch for scaling such services though is that they're expensive. I spoke with Professor Philip Oreopoulos, an economics professor at the University of Toronto, about the evidence on tutoring and mentoring programs and strategies for successfully scaling them. Before we get started, I should mention that the views expressed here are those of the participants and not necessarily those of the Federal Reserve Bank of Cleveland or the Federal Reserve System. And now here's my conversation with Professor Philip Oreopoulos.

I'd really like to speak with you about your work on tutoring and mentoring programs, and I'm thinking particularly to start, about Pathways to Education. I'm wondering if you could talk a little bit about that intervention and some of your research on it?

## **Philip Oreopoulos:**

Sure. So Pathways to Education is an interesting program that was actually started in Toronto, and so not everyone had heard about it. The program was started in the early 2000s as a grassroots effort in the very disadvantaged neighborhood in Toronto. It was the largest public housing project in Toronto where you had 5,000, 6,000 households all paying rent geared to income on a very high density public housing project.

And at that time, the high school dropout rate was something like 50%. And so more than half of the students going to high school from those projects were not even finishing high school. The community center that was set up in there was given some money from the province to try to do something, and they decided after looking around they would construct this program to try to reverse this type of training and really support students at the high school level, thinking if we could break the cycle of these dropouts, that would potentially change the community.

So they put together an interesting program which involved many different angles of support, and they ended up noting there were four pillars. And so, one pillar was coaching. So a student would meet with a parent support worker every two weeks and sit down and discuss what's going on in their lives. The second pillar was tutoring. And so until their grades were sufficiently high, they would be required to attend tutoring during I think at least three or four times a week after school.

The third pillar was group activities. So every three or four weeks they would be organized to do some fun activity together with the idea of maybe keeping kids out of trouble and doing more interesting activities like going bowling or a pizza night, or even going to a baseball game, things like that. And the fourth pillar would be financial incentives to do all of this so that if someone was going to attend the coaching or tutoring, going to the group activities, then they would get free public transportation, which appealed to a lot of people that we wouldn't have pay to go to school or get around.

And also a cumulative scholarship that would get up to \$4,000 or \$5,000 to allow them to go to college. And then in the middle of all that, there was some contract that both the parent and the child was sign, committing saying, "If I do this program, I commit to taking it seriously and working with my coach to

make everything happen." This was for the entire years of high school, so starting grade nine and every year after that they would get asked program. So a lot of support.

And in that setting, the organizers hired a consulting firm who... Well, the consulting firm I guess was working pro bono, and they looked at the project and they said, "Look, the high school dropout rate before the program was going on was 50%." If you look at the Pathway students that started the program soon after that, their dropout rate was only 13%.

**Dionissi Aliprantis:**

Massive. Again, I think for maybe a non-economist listening, it's worth saying that those are just eye-popping numbers and you don't get those kinds of effects I guess very often. That is an absolutely massive difference.

**Philip Oreopoulos:**

That's right. Anyone working in education policy, it's just mind-blowing. If you could replicate it everywhere else, you would just basically solve the scoring problem. And so I became interested in this from my perspective of someone looking for causal inference. Of course, the immediate potential problem is that you're not looking at the same kinds of people. On one hand, you're looking at everyone from the public housing project before the program. And then after the program, they're reporting only results from those who participate in Pathways, while the ones who during the program obviously might be the ones who would've not dropped out anyway.

So I approached this with some skepticism, but I got wellness to be sure I managed to get a hold of the data. And so I was almost gleefully looking at a chance to say, "This program is not as successful as they would've said." So when I looked at the data and mapped on intent to treat effects, meaning what happened to anyone who would be eligible for the program, it appeared that a dropout rate went from 50% to something like 25% or 30%. It's not that 40% drop.

However, a 20% reduction in high school dropout is still off the charts, very exciting, and we're doing more of. And I was pleasantly surprised on that. The results seemed to be quite convincing. This has worked with Adam Lavecchia, by the way, and him and I kept looking at the data and looking at other sites and came to the conclusion that in fact, this type of program might actually be quite influential as a way to not only improve high school graduation rates, but also other education outcomes as well.

So as I said earlier, once you find a program that works, you can put in everything on the outcomes that you can get your hands on. We started looking at college outcomes and then eventually earnings to once they were 30, and the results were, every time we looked, quite encouraging, we're looking at crime now and also finding reduction. So the program seems to have improved high school graduation rates, college enrollment, and increased earnings significantly, all from this type of scaffolding approach.

**Dionissi Aliprantis:**

I'm thinking about those pillars that you're talking about. I don't know if you have any hypotheses about those?

**Philip Oreopoulos:**

One reason why we were generally confident about the Pathways results, even though we used more of a difference in difference design and the results were a bit noisy, there's a very similar program to Pathways at the college level in the US called the ASAP program. The ASAP program looks like Pathways in that it provides multiple layers of support for students entering two-year colleges with often

disadvantaged background. And [MDRC](#) was the organization that ran these experiments, looking at the impact of the program, and they did it twice. So in both experiments, once in New York and another school, I think in Ohio, in both cases when they offered college students coaching, tutoring and financial incentives like public transportation and textbook money, they consistently found a very large improvement in graduation rates.

And so that maps on with what we were finding in Pathways, which makes us feel that there's a growing story here that these types of intensive, multi-pronged approaches to help support students can be very effective. There's just one catch. They're super expensive, and so you might be able to justify their cost-effectiveness because they have such long run benefits, but tell that to the administrator who needs to come up with an extra \$3,000 a year in order to support these.

So that's a nice segue to this question around trying to think about which of the four pillars matter more? Can you just focus on one of them? Can you get the cost down? That is related to the direction I've been going now with tutoring and other people going coaching to try to understand, can you have as much of the impact or almost as much of the impact from focusing on these efforts almost one at a time, or do you need the collection of services together? I think those are really interesting questions.

I think some people feel you need a multi-pronged approach to stand the chance of reaching the most amount people because in the same program, students and people are different. And where in one case, one person might be helped from coaching, the other person wouldn't, but would be helped with the tutoring. And so if you have this, "We're just going to try to support you every way we can, hopefully something's going to stick and then make the difference in the aggregate kind of way." I think some people feel that. That's a very expensive approach. And so that's what-

**Dionissi Aliprantis:**

Let's be clear, it's not that you are in any way against that. It's just that you want to support as many students as possible. And so as a result, you want to know, is it that one of these is super... Can we target it to the students that would benefit the most from one of these approaches? And you're thinking about scale and trying to figure out how to get as many students this kind of support as possible.

**Philip Oreopoulos:**

Right. And maybe a common denominator for a lot of these studies that seem to work is that they have a personal touch. Something I've been interested in for a while now to recognize that the behavioral interventions that seem to have a more meaningful effect are the ones where you have a real person connecting with the person that you're trying to help. And that person is often someone that becomes trusted and meets not just once, but on a regular basis. And so a bond or a social connection happens in a way that makes it easier for the student or individual to go along with the advice or feel good about what they're trying to say.

**Dionissi Aliprantis:**

Okay, I'm thinking of whether it's coaching or tutoring. And I think the idea of group activities and community is also this really important thing, right? Because I feel like maybe you can get people to come along even if they're having a bad day or they're not as excited, they have this community they can go to, they feel good with those people. I'm curious to know how much do you think it is just what you just said, that there's this personal connection and is that the underlying denominator?

**Philip Oreopoulos:**

I think so. I also think it's hard to create that chemistry that's going to happen that generates the effect that you're so interested in. It's unpredictable. So maybe having this multi-pronged approach increases the chances of that chemistry happening, if not with the coach, the tutor. And like you say with the group activities, the importance of your social identity at that time when you're going to school just can't be underestimated in that importance.

And so people's feelings about what matters in life are just greatly impacted by their immediate friends and how their social life is going. And in that space, it's just really hard to have an adult come in and try to help change your life if you have a lot of problems or other issues going on at your group level. And so changing the group or steering in that direction could also be very important.

**Dionissi Aliprantis:**

So yeah. Can you talk to me about tutoring a little bit? Some of your recent research on tutoring again, I think is also very eye-popping. I think it really points in this direction of, okay, we need to understand this better. And I think that's one of the main takeaways from some of your recent work. And I'm wondering if you could describe that a little bit for us?

**Philip Oreopoulos:**

Sure. So one of my roles as co-Chair in Education at J-PAL is to put together these review articles of randomized controlled trials and try to gather conclusions from a collection of work rather than just one experiment at a time. And so a few years ago, my colleagues and I started to investigate what does the research say about tutoring interventions in general? Having come across a few studies in the Chicago Ed Lab and others that seemed to suggest offering more personalized learning through tutoring could be promising. So we went through a long exercise of collecting the 100 or so randomized controlled trials in tutoring in the last 40 years or so. And when you put them all together, you find roughly 85% of them find significant effects. The median effect is around improving test scores by around 40% of a standard deviation, which is the equivalent of something like eight months of learning. And that effect is-

**Dionissi Aliprantis:**

Off the charts. It's massive.

**Philip Oreopoulos:**

It's very large. And the fact that so many of these studies consistently find this impact, sometimes they describe it as close as consensus as we're ever going to get in education policy of a program that seems to be very effective. And so I was really excited about this because of all the things that I explore in my research and looking at other people's research and in teaching education policy, often you get a little bit discouraged because the more convincing the study appears to be, the smaller the effect.

Whereas in tutoring, it does seem to be that providing more individualized learning in a way that allows students to progress at their own pace, get immediate feedback and work until they understand the material, especially in reading and math really seems to be something that we should be doing more of. The catch again is that tutoring is expensive, often costing \$3,000, \$4,000 per student per year in a way that makes it prohibitive.

**Dionissi Aliprantis:**

Well, so that brings up the next question I wanted to ask you was, I'm curious if you could speak about Matt Kraft's proposal for scaling up near peer tutoring. And I was going to suggest that. So I've worked in

the field with some 501(c)(3)s most recently with a program called The Math Movement, where we do a lot of work with near peer mentoring with middle and high school students. And I've seen firsthand what I consider to be very effective strategies for improving academic outcomes.

And I'm curious, I'm thinking about near peer mentors for two reasons. Number one, it can address the issue of cost. Maybe they're not as effective, but maybe they are because they're closer to the kids and they're cool and all that. And then the other thing is I actually think, and I don't know if there's any evidence on this, I actually think these kinds of relationships also have a really big effect on the tutors themselves. If you're a high schooler and you're encouraging some middle schooler to apply themselves, to work hard, that they can do it, it changes your perspective when you look back at your own classes and your own educational path.

So I'm curious to know how you think about this issue of scaling up tutors and individualized learning? Some of that might be with technology, but have you given much thought to near peer mentors?

**Philip Oreopoulos:**

Yeah, all of this stuff is all I think about right now, so I'm really interested and happy to chat more about this stuff. There's surprisingly little research done on peer-to-peer, especially in an experimental setting. So I don't think we really have a good idea, but I think that the fair extrapolation from the tutoring results is that it has potential. We certainly found that the tutoring effects are larger when you have paraprofessionals, basically qualified teachers who are providing the tutors. But we also found notable and still significant and encouraging impacts from volunteers providing the tutors as well. So there does seem to be potential there.

I also think that it is just as important thinking about how the tutoring is provided in a way that makes it easier for someone with less experience or just an older grade to offer that tutoring. So if you just ask any grade 10 student to come in and help a grade six student in math, it might not be enough set up to expect to have a large impact. But if you give them a set of problems that you want them to go through or you ask to go through a computer exercise with the child where they get immediate feedback, then it makes it easier for the older student to help the younger student because there's more the structure.

So I think there is a lot of potential, and I agree that having older kids help younger kids not only could be very cost-effective, but it also could really help the older kid in making them feel more responsible and [inaudible] community. There are some hints that that would happen. There was this one study in Italy by Michela Carlana and Eliana La Ferrara, who set up a tutoring program during the pandemic where they managed to cooperate with the three large universities in Italy and send out requests for volunteers to give just two or three hours a week of their time to help struggling elementary and secondary students in Italy.

The tutoring occurred either virtually or over the phone, whichever was convenient. And this was done as a randomized control trial. In some of those studies, they not only randomized the tutees who were selected to receive the tutoring, but they also randomized the tutors who got the program. And so we not only found that the tutees improved in the subjects that they were working with on the tutors, whether it be math or language, but also the experience and mental health of the tutors also improved from this relationship.

And so I think that's really encouraging for this idea of a win-win. I think that there is a lot of exciting potential to develop a culture of tutoring through volunteering at colleges. And I think it could be set up in a way with better and better technology that doesn't involve a lot of time where you give back an hour or two hours a week of your time and are able to help students who really can benefit from that in return.

**Dionissi Aliprantis:**

That's a very exciting idea.

**Philip Oreopoulos:**

So in addition to peer to peers or volunteers to trying to solve the tutoring cost issue, I think technology can also play a role. I think what's really exciting about this area of research right now is one, there's a lot of people recognizing that personalized learning is really needed right now, especially to address learning loss. And that's occurred from the pandemic. I think that there's a lot of interest in trying different things and there's a need for that as well. There's many different variants of the tutoring programs and we're hopeful that we can find a recipe for scaling up, but there are a lot of things that need to happen and there are a lot of complications along the way that we need to figure out. So the good news is a lot of people want to look at this, and so it's a fun area to be working on.

I have been also working on my own version of what might be scalable, thinking about how education technology can help. One of the projects on my to-do list for a long time has been trying to evaluate Khan Academy, which is this online platform that's been set up, was one of the first to offer an easy way for any student to go online and get help with the subjects that they're trying to learn in school. And over time, Khan Academy offers this wide breadth of subjects to take for free, even entire curriculums, especially in math. So all the way going to from grade three up to college calculus, they have these roadmaps where you can take very short incremental topics, watch a video for three or five minutes, and then take an exercise as four or seven questions long.

And the idea is that it simulates the tutoring experience in that it provides anyone the opportunity to get a short lesson and then try to test your knowledge on whether you understand it by doing these short questions. And if you get the question wrong, you get immediate feedback on why it was wrong and what the correct answer is. And then it allows you to try again and again and again until you understand. And that kind of approach is very much in line of how educators think that we should be learning. And as long as you start at a level that's not too easy and not too hard, you can progress incrementally enough that there's no step that's too complicated that you can't get. And that approach avoids the classroom type of setting where whether you get or understand a topic or not, you always move on.

So it has the potential, like tutoring does, to try to allow students to progress at their own pace, making sure that they don't lose gaps along the way so they have the strong foundation as they build up and up. And so that's really exciting, the catches that students don't just go up on Khan Academy by themselves and starts going through it and does this on their free time. And so in order to facilitate more use of something like it, we can bring in partners like teachers themselves to view something like Khan Academy as a better way to do homework or something that could be a substitute for the time for something else that they're doing.

**Dionissi Aliprantis:**

So one of it can be a tool.

**Philip Oreopoulos:**

It can be a tool then that can be leveraged. So we take advantage of new and new technologies to be able to try to teach in a better way that we didn't have before.

**Dionissi Aliprantis:**

Like a book. Before, we didn't have a book that you could tell the kid, "Go read the book, there's content there." Now we have these videos and this content, same way, it might reach some kids that it might engage with them in a way that nothing has before.

**Philip Oreopoulos:**

Right. And so giving a student 20 questions to try to solve on their own at home, where the student missed the lesson because they were sick or didn't quite understand it and can't solve any of the questions, it's just a terrible way to do homework compared to something like having a chance to go online, review the video, try the questions again, get the answers and understand if you're not getting it right or wrong. And then having that data feedback to the teacher who can then see where the student is struggling and then maybe help zero in. So it is a nice way of trying to personalize learning more.

The program that we're trying to test within that structure, we call it Coaching with Khan Academy. And we're trying to coach, not the students, but the teachers how to use Khan Academy more effectively in the classroom. And the recipe that we're encouraging the teachers to follow is to once a week introduce an assignment, a small assignment to the students in class, give them a chance to practice in class. The assignment may or may not line up with what they're doing. And also, if a student is struggling, they might get a different assignment. So not everyone may get the same assignment depending on where they are and what they need to be working on the most. And then ideally, the student has the rest of the week to work on the assignment, maybe sometime during school, but maybe as homework, with the important thing to keep working on it until they get all the questions correct.

So we think that this approach lines up really well and like simulating a tutoring experience. And we hope to even add onto that an additional component where for students where that's not enough for them to be making progress, we would offer them a volunteer tutor to work with them virtually at home on their homework. The teacher and the coach works to try to identify which students could use the most extra help. And then getting back to what we were talking about earlier, taking advantage of volunteers or peer to peers and the structure, it's nice because everything is working together. They go home and the parents invited to find some time, one or two hours a week to have a volunteer tutor connect virtually. And then once the virtual connection happens, all the student has to do is share their screen on Khan Academy with the assignment they're working on. And so that the tutor has to structure to just help them look over their shoulder and see how they're doing. And that's linked back to what they're doing in the classroom.

So they could potentially go really well together. And notice this all for free or very low cost compared to the one-on-one tutoring model. So it sounds nice.

**Dionissi Aliprantis:**

So I will end with the proverbial last question. At this point, I'm curious to know, is there anything we should have talked about that I didn't ask you about or that we should have emphasized more or that you'd like to emphasize?

**Philip Oreopoulos:**

No, I think that was a fun tour of what I've been working on for the last 20 years. So I enjoyed the conversation. I do think I teach a graduate class in education policy now, and the course outlines potentially a book that I'd like to write around where we're at on some of this stuff. And one of the conclusions is around how little effective are most of the programs or policies that we try at least at the margin now and trying to make a big difference and move the dial. I think some of that is because the differences in academic achievement arise very early, and I'm receptive to this idea that we need to find

better ways to assist development even before school starts. I like the things that Dana Suskind and John List are working on trying to find a way to encourage just more interaction at home.

But aside from that, offering more personalized learning to keep track of when individuals start to fall or have difficulty, I think is where the most promise is. Maybe one other thing I would add is one thing I'm really interested now or would like to pivot to is to start considering student mental health as this additional component of their developments. I have a sense that what are we trying to help with, not just skill development and to get a job and earning a lot, but at the end of the day, it's all about long-term well-being. I think mental health plays a really big role in determining how someone is doing or their trajectory.

I think it makes a lot of sense to consider equipping students with tools about how to address mental health at a much younger age. There is some effort along those lines. I don't think economists have really come at it, this issue. It's not something that we typically deal with, but for me personally, I think it's something that there's a lot of potential. So that's maybe where I hope to also steer some of my research agenda going on in the future.

**Dionissi Aliprantis:**

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