

## What is Social Capital?

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### **Two Constructs: Human Capital & Social Capital**

In the context of schools, human capital is a teacher’s cumulative abilities, knowledge, and skills developed through formal education and on-the-job experience. For many years, teacher human capital was thought to be attained through a combination of formal education and certification both before entering the profession and throughout the course of a teacher’s career. This has been a boon to the universities that provide such training, but several studies conducted largely by economists have shown little relationship between a teacher’s accumulation of formal education and actual student learning. In our studies, teacher educational attainment similarly shows little effect on improving student achievement.

Due partly to the questions raised by these studies, recent approaches to developing teacher human capital have looked beyond formal educational requirements. Many approaches emphasize ongoing professional development. At a different end of the spectrum are the approaches of education economists, who use value-added modeling to tie teacher performance directly to student achievement with the effect of exposing underperforming teachers. A variant of this is merit pay, which monetarily rewards teachers whose students demonstrate high achievement and sometimes imposes a financial penalty on teachers whose students perform poorly.

Social capital, by comparison, is not a characteristic of the individual teacher but instead resides in the *relationships* among teachers. In response to the question “Why are some teachers better than others?” a human capital perspective would answer that some teachers are just better trained, more gifted, or more motivated. A social capital perspective would answer the same question by looking not just at what a teacher knows, but also where she gets that knowledge. If she has a problem with a particular student, where does the teacher go for information and advice? Who does she use to sound out her own ideas or assumptions about teaching? Who does she confide in about the gaps in her understanding of her subject knowledge?

Social capital is a concept that gained traction in sociology with the publication of James Coleman’s work comparing students in public and parochial schools. He found that parochial school students performed better and attributed this to the social links among parents and within neighborhoods, which strengthened student support systems. In business, social capital has received attention because of its role in creating intellectual resources within a firm.

Our research shows that social capital is also at work in schools. When a teacher needs information or advice about how to do her job more effectively, she goes to other teachers. She turns far less frequently to the experts and is even less likely to talk to her principal. Further, when the relationships among teachers in a school are characterized by high trust

and frequent interaction—that is, when social capital is strong—student achievement scores improve.

### **Research Findings**

Although we have conducted studies of teacher human and social capital in several school districts, I will focus here on a large-scale project conducted in the New York City public schools. Between 2005 and 2007, we followed more than 1,000 fourth- and fifth-grade teachers in a representative sample of 130 elementary schools across the city. We examined one-year changes in student achievement scores in mathematics. That is, we looked at how much each student's knowledge of mathematics advanced in the year he or she spent with a particular teacher. We also took into account the economic need, attendance, and special education status of a child, because these factors might affect not just the level of student learning but also the rate of learning growth.

We examined several facets of teacher human capital, including experience in the classroom and educational attainment, as predictors of student achievement gains. We also had all teachers respond to a series of classroom scenarios developed and validated at the University of Michigan, which measured each teacher's ability to instruct children in the logic of mathematics. Thus our human capital indicators included teacher education, experience, and ability in the classroom.

In addition to these more objective indicators, we surveyed more than 1,200 kindergarten through fifth grade teachers in one New York City subdistrict and asked them to report how competent they felt teaching particular aspects of math. We found that many elementary school teachers reported that they did not like to teach math and did not feel particularly competent at it. Teachers in the early grades were particularly uncomfortable, but even in fifth grade, three in 10 teachers expressed little confidence in their preparation for teaching basic math concepts like ratios and fractions. As explained by one New York City math coach: "Elementary school teachers are math-phobes. They are scared of teaching math because they don't feel like they're very good at it themselves."

So we asked the teachers whom they talked to when they had questions or needed advice. Did they go to other teachers, to the school principal, or to the coaches hired by the district specifically to help them to be better math teachers? And how much did they trust the source of the advice they received? What we found is that in most instances teachers seek advice from one another. Teachers were almost twice as likely to turn to their peers as to the experts designated by the school district, and four times more likely to seek advice from one another than from the principal. As one New York City teacher explained, "It's dangerous to express vulnerability to experts or administrators because they will take your professional status away" and replace it with scripted textbooks.

Most striking, students showed higher gains in math achievement when their teachers reported frequent conversations with their peers that centered on math, and when there was a feeling of trust or closeness among teachers. In other words, teacher social capital was a significant predictor of student achievement gains above and beyond teacher experience or ability in the classroom. And the effects of teacher social capital on student

performance were powerful. If a teacher's social capital was just one standard deviation higher than the average, her students' math scores increased by 5.7 percent.

One New York City teacher described how social capital works in her school: "Teaching is not an isolated activity. If it's going to be done well, it has to be done collaboratively over time. Each of us sets our own priorities in terms of student outcomes. For example, one teacher might emphasize students knowing all the facts and operational skills. Another might think that what's most important is to develop a love of learning in students. Still another teacher might want to develop students to be better critical thinkers and problem solvers, and they're not as concerned about students memorizing the facts. A good teacher needs to help students develop all of those things, but it's easy to get stuck in your own ideology if you are working alone. With collaboration, you are exposed to other teachers' priorities and are better able to incorporate them to broaden your own approach in the classroom."

What happens when you combine human and social capital? What if teachers are good at their jobs and also talk to one another frankly and on a regular basis about what they do in math class? If human capital is strong, individual teachers should have the knowledge and skills to do a good job in their own classrooms. But if social capital is also strong, teachers can continually learn from their conversations with one another and become even better at what they do.