INTERVIEW

Improving Academic Outcomes with a Nudge from Behavioral Science: An Interview with Todd Rogers

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Improving Academic Outcomes with a Nudge from Behavioral Science:

An Interview with Todd Rogers

Behavioral scientist Todd Rogers is applying his behavior-changing techniques known as "nudges" to help districts recover a million days of student attendance and raise student achievement. After receiving his Ph.D. in psychology from Harvard, Rogers put his research to use in politics. A member of the "Academic Dream Team" for Barack Obama's 2008 presidential campaign, Rogers was part of one of the biggest modern efforts to leverage behavioral science to influence voter behavior. He identified and implemented the most innovative and effective communication strategies to get voters to the polls. Since 2008, Rogers has brought his work to the education sector. Following the same principles he applied to get voters to the polls, Rogers uses his behavioral science research to help districts combat chronic absenteeism and raise student achievement through family engagement. Through his work at the Student Social Support Lab and In Class Today, Rogers and his team have identified communication methods for districts to employ to bring students back to class. Rogers's research initiatives, called Inviting the Village and Study Supporters, engage the community surrounding each student to increase achievement levels.

In this edited interview with DMGroup CEO John J-H Kim and Associate Dani Dichter, Todd Rogers discusses his work and explains how he and his team believe they can nudge families and students to improve educational outcomes.

Professor Todd Rogers, John J-H Kim, and Dani Dichter

Professor Todd Rogers
Harvard Kennedy School of Government

> **If we give parents more useful information, they'll use it, they'll improve student achievement, and they'll want more of it.**

Your work is in the field of behavioral science. To start, can you help our readers understand what behavioral science is?

Behavioral science is a collection of insights from across different disciplines—psychology, economics, sociology, political science, and adjacent disciplines—that identify principles that can be used to understand people's choices, and how their contextual environment can be changed to motivate them to make different choices.

Tell us about the work you were doing prior to applying your research in the education sector.

I started out as a political pollster, and I realized that there was this emerging science of behavioral science and behavior change that wasn't being used in politics. So, I wanted to go to grad school to learn more about this field. I got my Ph.D. in an interdisciplinary program in psychology at the Harvard Business School, where I worked with economists and political scientists on the science of behavior change.

After leaving academia, I started a research institute called The Analyst Institute where we translated behavioral insights into political strategy using large field experiments. Working on initiatives like Get Out the Vote, we developed tactics using randomized experiments where we called people and asked, "Do you intend to vote?" and they say, "Yes"; then we call others and ask, "Do you intend to vote?" and when they say

"Yes," we say, "Okay, what time will you vote? How are you going to get there? Where are you coming from?" We found that prompting people to make this concrete plan more than doubled the impact of Get Out the Vote. We discovered this in randomized experiments, and now it is almost universally used and it's amazing; we have about a half dozen tactics for Get Out the Vote that we think combine to triple the impact per dollar spent on voter mobilization. [To learn more about this work, see the popular press book by Sasha Issenberg, *The Victory Lab* (Crown Publishing Group, 2012)].

What led to your shift to the education sector?

I decided—I joke about this—that I didn't want to do politics anymore and instead I wanted to make the world better, so I shifted to education. I just felt like there was so much low-hanging fruit in education for these kinds of easy tactics to be implemented at scale without needing to change the structures of schools or the behaviors of teachers or principals.

Initially, I thought I would focus on students—doing the same kind of things—treating students like voters, and thinking of how we mobilize them to do their homework and show up to school and things like that. But then, I realized the real low-hanging fruit is finding ways to empower families to support kids outside of school, and so that has really been my focus for the last seven years.

It seems like there are a lot of fields ripe for these applications. Is there anything particular about education that makes this approach especially effective? Why education?

It's mostly personal. I just want to be able to help kids succeed. And I want our democracy to work better. I'd like our citizens to be better educated and I'd like humans to live up to their potential. So, I shifted to education because that's a domain that I care about. It's also a domain where I can see opportunities for this kind of work being really successful.

You mentioned that you shifted from wanting to focus on students to focusing on families. Why is that?

One of the challenges is that we administer treatments to kids seven hours a day, five days a week, one hundred and eighty days a year in schools. Light-touch, one-off interventions just don't seem like they're going to be as promising in that context. So, what can we do that will really be effective? I started learning about how little parents know about what's going on in school, and it's astonishing. It's not that there's anyone trying to exclude families from schools, but they're just structurally shut out. The average parent of a public high school student hears from their child's school in a personalized way (outside of report cards) less than a handful of times a year. They know very little about what's going on in school, and then there's a natural feedback process where schools think parents don't want to know and don't want to be involved. Parents get the impression that schools don't want them involved, and at the same time kids want autonomy and they're pushing parents away anyway. So, there's this convergence that creates the conditions where parents want to help their kids, but they're not even sure if they're invited to, and it's certainly not clear how. That creates opportunities for easy, light-touch tools that aren't a burden to teachers or schools and that leverage existing resources to empower families to take helpful actions.

Can you tell us about a specific example? You started an organization called In Class Today; what does that work look like?

Our model translates administrative data into information parents find useful and actionable. We are especially interested in beliefs parents hold that are inaccurate and correctable. With randomized experiments we can tell which of these beliefs are malleable, and when corrected, which actually change behavior. For example, it turns out that the average family underestimates their kid's absences by a factor

of two. So, hypothetically, my kid will have missed twenty days, but I truly believe my kid has missed only ten days. Part of this inaccuracy is that I'm motivated to think well of my kid, but it's also difficult as a human to keep a running tally of these sporadic, unpredictable events that unfold over the course of nine months. Another false belief that parents have is that the majority of parents of kids who are highly absent—have more absences than their classmates—actually think their kids have attended school *more* than their classmates.

> **We find that the mailings consistently reduce chronic absenteeism by 10–15% across these districts, which is just amazing. People are often surprised by how simple it is.**

How could a parent ever have any idea of what typical attendance looks like?

That's a big issue. We as educators never communicate that kind of information. We almost philosophically don't communicate it, and it turns out that both of these beliefs—how my kid's absences compare to her classmates' and how many total absences my kid has accumulated—are correctable with focused, repeated, tested communications. So we've developed this intervention where we repeatedly send mailings conveying easy-to-comprehend information that targets these false beliefs. We've tested it in randomized experiments in 13 districts, from urban districts like Philadelphia and Chicago to more suburban districts in San Mateo, California. We find that the mailings consistently reduce chronic absenteeism by 10–15% across these districts, which is just amazing. People are often surprised by how simple it is.

What do these communications look like?

The communications are sent out in hard copy via direct mail. There are experiments showing that digital communications like text messages about absenteeism have no effect, and the reason is that hard-copy items like postcards become social artifacts in the home—people report putting them on the fridge or putting them on

the kitchen counter, and they end up being talked-about objects. They have a social life in the home—a shelf life. Digital communications are great for immediate action, but absenteeism is a behavior that unfolds over time. What we want is to have these communications have durability within the home.

In terms of what you're doing with In Class Today, what do you think the potential impact is? How scalable is this work?

Every absence has its own story. There's not one reason. Maybe a kid doesn't want to go to school. Or it could be a parent works at night. It could be that there's an illness in the family or a sibling is sick or there's residential instability, like they lose their home. For every possible reason, there's a margin—like negotiating with the kid, or the parent working a night shift makes extra plans to get the kid to school, or the sibling is sick and they take extra precaution. We're just drawing parents' attention to the issue and we're also correcting their false beliefs. They don't realize how many days their kid has missed in total or how their kid's absences compare to those of their classmates. But when all of a sudden they realize it, it alarms them. Through finding effective ways to bring parents' attention back to this issue (without taxing teacher or school attention and effort), there are days in every district that easily can be recaptured with low-cost and scalable interventions.

If you think about it, there are 50 million students in this country and even if each of them on average has good attendance of, say, 93%, that's around 600 million days missed per year.

Yeah, that's amazing, right? That's an amazing number. So, on some level, reducing the number of days missed by some significant amount could make a serious dent, and it wouldn't cost the country any more. And one of the things I'm intrigued about with absenteeism is the cost of the kid falling behind—looking at the effort expended to get the kid back up to speed. Also, the consequences of the kid's being further disengaged have a cost to the class. There are these multiplying externalities and growing consequences of chronic absenteeism.

This is really fascinating research. What's the next step in terms of implementing this work in districts?

Over the last couple of years, I have worked with a couple thousand schools and colleges around the United States on research through my lab, the Student Social Support Research and Development Lab (S3 R&D Lab) here at Harvard, and so I have partner districts. But I get districts emailing me saying, "We've heard about this. We read a news story. How can we implement this?" Up until a few years ago, it had been difficult for my research lab and me because I don't have the infrastructure to help districts implement proven interventions that are not ongoing research projects. That's why Johannes

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In Class Today leverages behavioral science research by Todd Rogers and the Student Social Support Research and Development Lab at Harvard University to implement targeted programs that motivate families to reduce school absences. These proven, cost-effective, and easy-to-scale programs have been successful in reducing chronic absenteeism by up to 15% within the first year of implementation.

In Class Today's approach has been tested and proven effective through randomized controlled studies at the Student Social Support R&D Lab. Some examples of results achieved are the following:

- **School District of Philadelphia:** 30,000 students treated, with a 10% reduction in chronic absenteeism within one school year

- **Chicago Public Schools:** 20,000 students treated, with an 11% reduction in chronic absenteeism within one school year

- **Ten districts in San Mateo County, California:** 10,000 students treated, with a 15% reduction in chronic absenteeism within one school year

In Class Today uses student attendance data to communicate with households in order to help students attend school more regularly. These communications don't just mention how many days their child has been absent; they make parents aware of how their child's attendance compares to that of a *typical* classmate and emphasize the importance of school attendance.

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The program is targeted, scalable, and highly cost-effective. This approach is also simple: all the school district needs to do is provide limited student attendance data to In Class Today five to six times throughout the year, and In Class Today does the rest. Proprietary algorithms analyze the data to identify students that are off track; then, personalized attendance reports are created for those students and mailed to their parents/guardians on behalf of the school district.

In Class Today's mission is to reduce absenteeism among at-risk pre-K-12 students by one million days per year.

In Class Today's direct-mail interventions use simple language and contextual information to effectively convey to families the importance of attendance.

In Class Today's work with WPS has made a significant difference to our attendance interventions. Their professionalism and attention to detail make for a very smooth transition between both entities.

In Class Today will adapt to your district's needs, making it a very smooth and effective transaction.

-Dr. Patricia Garcia, Superintendent,
and Robinson Camacho, District Community
Coordinator/Attendance Specialist
Windham Public Schools (CT)
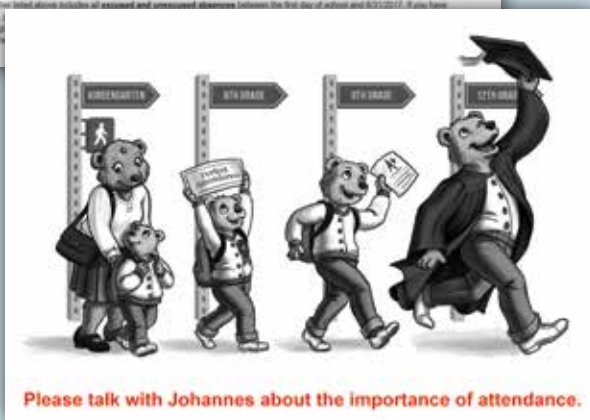
Demarzi and I started In Class Today so that we can achieve scale and improve results for students and schools across the United States. The mission of my lab is to develop evidence-based, easy-to-implement behavioral science and data-informed interventions, but also to scale them. We just want to make sure what works gets implemented.

I'd like to hear about two other initiatives you are working on—Study Supporters and Inviting the Village. Could you tell us about that work?

Those initiatives are also being done out of my S3 R&D Lab, where we're using behavioral science and social research to focus on mobilizing and empowering the social networks that care about the student, kindergarten through college, and develop scalable interventions. Five years ago, I was doing a focus group at a community college with a collaborator and friend of mine, Angela Duckworth. We were asking, "Who is in your world who cares about you and cares if you finish school—if you get your degree?" The students reported, "My grandmother," "My manager at Home Depot," "My girlfriend." Each of them had somebody. What was missing was that all of these people are specifically, intentionally, formally, structurally cut out from any access to these students' educational lives. So, we started this project where we get students to nominate the person who cares about their academic success to be their study supporter.

> # We under-innovate in finding ways of investing in families as assets that can further support our shared goal of helping kids.

What does being a study supporter mean?

So, for example, if you were a study supporter, each week we would reach out to you by text and we might say, "Hey, John, you see Todd at work every day. This week he has a midterm. Ask him what his study plan is and what he's worried about." Then the following week, we'd send you another text letting you know, "Hey, John, ask Todd what his plan is for getting his homework and reading done for the rest of this semester. Ask him what his plan is for making sure he has enough time

to study." The promising initial results have prompted us to develop and test a version of this in the K-12 environment where parents nominate grandparents, coaches, mentors, pastors, etc., to be study supporters for their kids. We give these supporters hard-copy activities to talk to the kid about. We send report cards to the pastor or coach; we send the class schedule, etc. The idea is to turn the social system that cares about the kid into an academic support system. These are all pre-existing resources that are just unleveraged. It's investing in the community around kids and leveraging social capital—and also building social capital.

Are you seeing some early results?

We're getting preliminary results that are really promising, but it's not nearly at the same level of proof as the absenteeism reduction, which we are now on year five of replicating. With this Study Supporters work, we are just in years two or three; in the next year or two, we'll have enough evidence where I'll be ready to say that our job is to find ways to help districts implement it at scale, but we're not there yet. In some settings, the effects are big, and in some the effects aren't, so we are trying to figure out when and why it works—but we'll figure it out. And FERPA (Family Educational Rights and Privacy Act) introduces a bunch of considerations too. Also, there's the question of how families navigate children growing into autonomous adults, and I don't have answers on that. Regardless, if we want kids to reach their potential, these are resources we should find ways to invest in.

Absolutely. Are there any other ideas or applications that you're working on that you can share with us?

There's one that is at the stage where our job now is to find ways to help it scale to districts. It is the idea of texting parents when kids don't turn in their homework, when kids cut class, and when their grade falls below a grade threshold. Again, the motivating insight is that parents wish they knew more about what's going on in school and they mostly don't know much for a variety of reasons, without assigning blame.

Peter Bergman at Columbia Teacher's College first did an experiment in LAUSD (Los Angeles Unified School District) using information from gradebooks and pushing out texts to parents whenever their kid was missing a homework assignment, or their kid's grade fell below passing, or whenever their kid cut a class. It was done over the course of a semester and was found to have massive effects on standardized test scores and GPA. He and I replicated it in Washington, D.C., with

seven thousand families and saw a big effect on reducing course failures and increasing GPA (standardized test results were unavailable). He then replicated it in Grand Rapids, Michigan, and in West Virginia, and I replicated it across the United Kingdom. When we have the infrastructure (when every teacher in a school uses gradebooks), it doesn't impose a burden on teachers; parents act on it; and it helps improve student achievement pretty substantially. One of the coolest findings for me is that when parents receive this information, they act on it, they improve student achievement, and they want more information. This leads to increased parent engagement on top of improved student achievement.

Now the question is, how do you scale it across districts?

It's tough because it requires a lot of pieces falling in line. We need up-to-date cell phone numbers from parents; we need teachers to consistently use the same gradebook, which has to be provided and standardized within the school; and then the gradebook companies need to provide, and the districts need to purchase, the capacity to text out the information, which is low-marginal cost but is just not very widely offered. Once all those pieces fall into place, though, we see unusually easy large gains on student achievement that can be replicated across lots of settings.

Over many decades, we have come to expect schools and school systems to take on more and more duties—with longer days, enrichment in addition to core academics, etc. And, structurally, we haven't figured out a way to integrate parent involvement. So, this is directly helping that.

Absolutely. One of the motivating philosophies of this work is inspired by the work of Karen Mapp at the Harvard Graduate School of Education, who introduced me to the "asset versus deficit" view of families. Right now, it seems that many schools operate from a deficit view, where families are the problem and we have to work around them—expand the school day, expand the school year, provide homework help outside of school. Those things can work, but it has left us in a place where we under-innovate in finding ways of investing in families as assets that can further support our shared goal of helping kids.

What other areas in education are you hoping to apply this kind of work to?

I think there's a lot more work to be done on finding ways to invest in the social network around kids—not the digital network necessarily, but just the actual people who care about students. We as educators and policy makers have spent a lot of time investing in improving pedagogy and the human capital of teachers and institutions; I think we're just scratching the surface on how we invest in the social networks around kids.

There are a bunch of other pieces that I think are exciting, but are just so speculative, they're off on the horizon. One is an offshoot of the absenteeism work we are doing at In Class Today. My co-author in a lot of this work is a statistician at UC Berkeley, Avi Feller. We're working on a machine learning process where we can predict which days a kid will be absent in advance, and from there we're thinking we can do machine and human cooperation where each afternoon we'll give social workers in the district a list of kids who we think are at risk of absence the next day so the social workers can target their time and intervention. But we're probably two years away from something like that. We are thinking that once we have the infrastructure to address absenteeism, this can be an add-on feature.

Another idea that we're thinking about doing is an intervention in the summer and fall where you can induce people to become friends. The *New York Times* has done a version of it recently that has become really popular—37 questions you can ask to fall in love. That's a modified version of a series of questions developed in the 1990s that makes people feel connected. It starts with trivial questions like "Where you are from?" and it wraps up by asking, "When was the last time you cried in public?" People end up feeling really connected. In those studies, people are asking each other these questions in the lab, and at the end of the session they are exchanging phone numbers and saying, "We should hang out." So, we're thinking about doing that within classrooms during transition years—like the fall of ninth grade, when kids feel particularly alienated and isolated—and randomly assigning people to basically become friends; then we'll see what the effects of assigning a particularly strong student to a marginal student are on the marginal student's performance. Again, we are looking at how we can build and expand the social network of students and how we can leverage the power and potential positive impact of social influence in schools.

Final parting question: Do you have any final insights to share with educational leaders?

If we give parents more useful information, they'll use it, they'll improve student achievement, and they'll want more of it. ◆