

A Very Mean (but Maybe Brilliant) Way to Pay Teachers

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A Freakonomics author and a 'Genius Grant' winner suggest that giving teachers bonuses, then threatening to yank them away, might be the key to classroom success



(Reuters)

One of the great, early insights from the field of behavioral economics was that when it comes to handling money, most people are driven much more by fear than they are by greed. The concept is called "loss aversion." Faced with a financial choice -- say, whether to sell a stock or hold onto it -- the majority of us are more likely to worry about blundering away what we already have than get excited about the prospect of adding to our bank accounts. We simply feel the sting of losing a buck more strongly than we do the joy of making one.

In a [new working paper](#), a group of high-profile academics have taken that well-worn principle and applied it to one of the most contentious topics in school reform: teacher pay. The study, by *Freakonomics* co-author and University of Chicago professor Steven Levitt, Harvard professor and MacArthur "Genius Grant" winner Roland Fryer, Chicago's John List, and University of California -- San Diego's Sally Sadoff, suggests that if you give educators something to lose, they just might perform better in the classroom.

Sound a bit harsh? Perhaps. But if this theory is right, it could also be a major breakthrough.

THE POWER OF THREATS

Thanks to education reformers such as former D.C. schools chancellor Michelle Rhee, many of us are now familiar with the idea of merit pay -- the notion that teachers' earnings should be tied to their students' success. Unions have pushed back hard against the idea. In terms of public policy, it often translates into handing out year-end bonuses to instructors who get the best results, with the hope that the promise of a larger paycheck will motivate them to work harder when they're up in front of the chalkboard.

But Levitt, Fryer and Co. argue that there's a serious problem with merit pay. So far, they say, there's been scant evidence that it actually works. Studies of teacher incentive programs in Tennessee and New York City failed to find any signs that they improved student learning. In the New York experiment, which Harvard's Fryer conducted, the impact may have even been detrimental.

Enter loss aversion. The authors theorized that instead of offering a lump-sum bonus to teachers come summertime, it might be more effective to give instructors money upfront, then warn them that they would have to pay it back if their students didn't hit the proper benchmarks. Rather than tap into teachers' ambition, they'd tap into their anxiety.

To test their idea, the authors designed an experiment for the 2010-2011 school year involving 150 K-8 teachers from Chicago Heights, a low-income community in Illinois. The instructors were randomly assigned to a control group or one of two main bunches, which I'll shorthand as the "winners" and the "losers." The winners agreed to work under a traditional year-end bonus structure, where they could make up to \$8,000 extra based on their students' standardized test scores. The losers were given \$4,000 off the bat and informed that if their students' turned in below-average results, they'd have to pay a portion of it back commensurate with just how poor their scores were. On the flip side, an above-average performance could earn them additional bonus money, up to the full \$8,000.

The authors then divided the winners and losers again so that some teachers would be rewarded based on their results as teams of two, and others would be rewarded based on their results as individuals.

Come vacation time, the losers had won. In math, paying teachers a year-end bonus had no statistically significant effect. When teachers had money to lose, though, their students over performed. The impact was large -- the equivalent of improving a teacher's skills by one full standard deviation -- and the pattern held whether teachers were compensated as a team or as individuals. The authors' data on reading scores turned out to be shakier, since most students ultimately had more than one instructor working with them on language skills, but it indicated a similar trend.

In short, they found that merit pay can work. You just have to be tricky, and a little bit mean, with how you implement it.

A BAD IDEA, OR JUST A MEAN ONE?

This is ultimately just one experiment, and it certainly won't put the arguments about teacher pay to rest. From the perspective of a teacher's union, it's easy to see how this would make the concept even more unpalatable -- who wants to subject themselves to the stress of seeing their bonus stripped away? And as Jonah Lehrer has written, there's evidence that loss aversion may actually lead some people to choke under pressure.

But it's worth dwelling on a broader point here. The heart of the education reform movement is the idea that we should use economic incentives to improve the quality of our teachers and our schools. But accomplishing that means we have to know what the right incentives are. People aren't necessarily the rational, profit-maximizing machines that many economists imagine, and dangling more money in front of their eyes won't always encourage them to do their best work.

That's why papers like this one are important. This is the second recent study Levitt, List, and Sadoff have written exploring the ways behavioral economics, and loss aversion in particular, might help us build better classrooms (my colleague Derek Thompson wrote about the last one). If it holds up to future scrutiny, and is indeed the first evidence that pay-for-performance can work, it'll be a major milestone. But hopefully researchers will continue to follow their lead regardless so we can eventually figure out just what works best when it comes to educating our kids.

Jordan Weissmann is a former senior associate editor at *The Atlantic*.