

The spillover effect: Good teaching doesn't stop at the classroom door

November 26 2015, by Dustin Wunderlich

Effective teachers don't just impact their own students' achievement, they can significantly improve the performance of their fellow teachers' students.

That new research finding by Min Sun of University of Washington College of Education has important implications for national efforts to ensure poverty-impacted and [minority children](#) aren't taught by a greater proportion of less experienced [teachers](#).

The positive spillover effect of effective teachers was quantified by Sun and her colleagues in a recent paper presented to the Association for Public Policy Analysis & Management, "Building Teacher Teams: Evidence of positive spillovers from more effective colleagues."

"Student learning is not a function of just one teacher but of the combined effort of many teachers," Sun said, and introducing more effective peers into a teacher group helps drive improvement for all [students](#).

Sun and her colleagues looked at more than a decade of data covering math teachers in grades 3 to 8 who can be linked to their students' standardized test scores in the Miami-Dade County Public Schools. They found that if a student has a new peer teacher at the same grade level who is approximately one [standard deviation](#) more effective than his or her own teacher, that student would have a 1.9 to 2.8 percent of a standard deviation increase in math test scores. This spillover effect is 23

to 29 percent of the student's own teacher's effect on his or her achievement gains.

Borrowing estimates from other recent research about the long-term impacts of teachers, Sun said having a peer teacher one standard deviation more effective than a student's own teacher for just one year would increase this student's likelihood of going to college by approximately .25 percentage points. Put another way, the financial value to this student would be approximately \$10,000 in additional lifetime earnings.

Moreover, the research team found that spillover effects are asymmetrical.

"Although teachers benefit from a relatively effective peer, their students are not meaningfully disadvantaged by the presence of relatively ineffective peer," Sun said.

Sun believes the study's findings could help states and local school districts respond to the U.S. Department of Education's 2014 call for them to develop strategies to increase the equitable distribution of teacher quality across schools.

"There is a broad consensus about the need of high-quality teachers for all students, especially underserved learners," Sun said. "We believe this work sheds light on some promises of the 50-state Teacher Equity Strategies that policymakers can better design teacher incentives or assignment programs to magnify effective teachers' contribution to the whole teacher team's performance."

Sun said the new study suggests that one promising strategy for building teaching teams in a way that maximizing all students' learning would be to pair ineffective teachers with more effective colleagues.

Sun and her colleagues are continuing their research on spillover effects, with a goal of further estimating the long-term effects of having effective peer teachers beyond the first year of the new teachers entering a team. She also plans to examine how school collaborative practices and culture impact spillover effects.

Provided by University of Washington

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