

# Studies Link Teacher Absences to Lower Student Scores

By [Bess Keller](#)

When the superintendent of a suburban Dallas school district faced a budget shortfall last year, he floated the idea of rewarding individual teachers for excellent attendance and schools for strong student achievement.

If the plan worked, argued Larry Lewis, the superintendent of the 5,800-student Lancaster Independent School District, the school incentives would boost learning and the teacher incentives would save money—more than \$200,000 in pay for substitute teachers.

But new research is suggesting that teacher absences affect not only a district's finances, as Mr. Lewis lamented, but the achievement of its students, too.

“What we are finding is what common sense would expect: that the more teachers are out before the test, the less well students perform,” said Raegen T. Miller, the lead author of a recent paper on the subject produced by a group of researchers at Harvard University's graduate school of education.

The notion that students don't learn as much when their regular teachers are absent doesn't strain credulity. But until the work by the Harvard group and researchers at Duke University, a causal connection between teacher absences and student achievement has largely been lacking in the research literature, said Mr. Miller, who is now a researcher at the University of Washington's Center for Reinventing Public Education.

## **Newfound Attention**

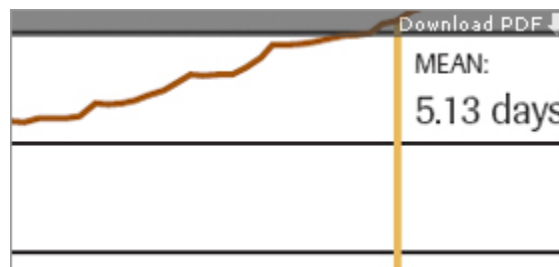
The research comes as a host of school districts, like Mr. Lewis', are taking a fresh look at teacher absences.

Interest in the potential cost savings surfaces periodically, and the difficulty of finding substitutes also pushes administrators to address the problem. But a newer strand in the notice being taken relates more closely to the recent research.

Some of those responsible for school systems serving large numbers of poor or minority children, where teacher-absence rates are generally higher on average than in other districts, worry about the toll of absences on student learning. As a result, administrators in districts including Boston, Chicago, Lowell, Mass., and Syracuse, N.Y., have started tracking and scrutinizing school-by-school numbers.

## Average Days Absent

Researchers studying the impact of teacher absences on student achievement found that the average number of sick and personal days taken by 2,594 teachers from 75 schools in an unidentified urban district varied markedly by school, ranging from about 2.5 days annually to nearly eight days per year.



SOURCE: Raegen T. Miller, Richard J. Murnane, and John B. Willett

In [the Harvard study](#), economist Richard J. Murnane and statistician John B. Willett, both of Harvard, joined Mr. Miller in examining more than 2,500 teachers over three school years, starting in 2002, in an unidentified urban district in the North.

For the section of their research relating absences to student achievement, the researchers focused on 285 4th grade teachers and the results that their students got on state tests in mathematics taken annually in May.

Statistically taking into account the effects on student achievement that might be produced by various characteristics of the teachers, students, and schools—including teachers' levels of skill and effort—the researchers found a small but significant negative impact on student math scores attributable to teacher absences alone.

Mr. Miller likened the effect of each 10 days of a teacher's absence to the difference for a student of having a first-year teacher as opposed to a second-year teacher. Teacher effectiveness in raising test scores has often been shown to rise steeply

during teachers' first one to three years of experience and then flatten around the ninth or 10th year of experience.

### **'Discretionary Days'**

For calculating learning impact, the Harvard group counted only the absences that occurred before the tests were taken and that teachers reported as being due to short-term illness or personal necessity. Some of those days, the researchers reasoned, were treated as "discretionary" days off.

They give as evidence, for example, that teacher sick days occurred on a day adjacent to a weekend or a holiday 52.3 percent of the time, compared with 45.7 percent of the time on the other days, which usually fell midweek.

"Conversations with school principals revealed that many teachers viewed such absences as an entitlement that they could use to fit their preferences," the researchers say in a working paper.

Overall, the district in the study averaged 10 absences of any kind per teacher during a standard 180-day school year, Mr. Miller said.

In addition to the math effect, the researchers also detected an effect for students' scores in English language arts, but it was smaller and more variable.

Researchers chalked up the difference in math scores partly to a new elementary math curriculum that might be hard to use well without the extensive professional development that the district was providing at the time.

"The effect is that the gap in instructional quality in mathematics when a 4th grade teacher was replaced by a substitute teacher was particularly large," the researchers said in a working paper published last summer by the National Bureau of Economic Research, in Cambridge, Mass. Versions of the paper will appear in peer-reviewed journals later this year.

### **'Worth Worrying About'**

In [the Duke University study](#), which used 10 years of data on North Carolina's teachers and their students, teachers' absences also were associated with lower student achievement in the elementary grades, though the effect was even smaller.

Researchers Charles T. Clotfelter, Helen F. Ladd, and Jacob L. Vigdor calculated that for every 10 days of teacher absence, a student's reading and math test scores in 4th and 5th grade declined by about one-fifth the advantage of having a first- rather than a second-year teacher.

They found, further, that schools with high proportions of poor children suffered more from teacher absences. For instance, the poorest 25 percent of schools averaged almost one more sick day per teacher than the richest 25 percent. And schools with persistently high rates of teacher sick and personal days were more likely to serve low-income than high-income students.

The researchers argue that the absences are, in their words, "worth worrying about." That's in part, they say, because substitutes cost schools money, and hiring them takes up administrators' time. But it is also because the schools that face the greatest challenges in raising student test scores are also those most likely to have their scores depressed by teacher absences.

Finally, the authors say, the problem is important because something can be done about it. For example, they contend, teachers will cut back on illegitimate sick and personal days if districts thoughtfully change the consequences of using and not using them.

"The real story [of the new research] is trying to bring teacher absences back onto the table a little bit," said Mr. Miller, a former high school teacher who was once the president of the teachers' union in Palo Alto, Calif. "With the link to student achievement, especially for principals and school district leaders, who are kind of on the hot seat, [reducing absences] might be ... something to talk about."

### **Caution Urged**

Perhaps not, given the small size of the effects uncovered, countered Rob Weil, a deputy director of educational issues at the American Federation of Teachers.

"We should be careful about overemphasizing these results," he said. "I'm concerned they are implying something that may not be true: that teachers are taking more days off than they are allowed."

He cautioned against reducing the number of sick and personal days teachers can take without salary penalties, saying that was a good way to add to the stress of teachers' jobs and encourage them to come to the classroom sick.

"We really need to get into this [issue] deeper, find out why it's happening, and directly address that, rather than take away the legitimate rights of teachers," Mr. Weil said.

The Harvard researchers also point out that the number of absences typical for each of the district's nearly 80 elementary schools varies beyond what other school characteristics would suggest.

Districtwide, the average number of sick and personal days teachers took off was 5.3, according to the researchers. But at three schools, the days off exceeded seven, and in four schools, it was under three.

The differences may well have to do with the individual cultures of schools, they surmised.

In some schools, teachers may strenuously avoid taking days off when they are not sick or do not have another valid reason, while in others the teachers feel such absences are tolerated.

In addition, the Harvard study found that teachers in schools with larger enrollments tended to take more sick and personal days than those in smaller schools.

The researchers also found that teachers past probationary status took 3.7 more days than other teachers, once the data were adjusted to account for other teacher characteristics, such as gender (female teachers tend to take off more days than male). And they found that teacher absences tended to be higher in schools with higher rates of student absences.