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BRAZIL: Can Providing Teachers with Feedback and Coaching Improve Learning?

Improving the classroom effectiveness of teachers is a key part of improving student learning. How to get this right is a core challenge for education systems. Teacher quality varies widely and teachers may not know the best teaching practices and how to keep students on task and engaged with the material. Especially in low-income countries or regions, teachers may not have the resources, knowledge or motivation to teach effectively. Governments and development partners invest heavily in teacher training. Evidence on which approaches raise student learning is crucial for education progress.

In Brazil, policymakers from the Ceará state government worked with the World Bank and the Brazilian non-governmental Lemann Foundation to design a program to improve secondary school teacher effectiveness. The program provided feedback to teachers on their classroom practices and gave them access to expert educational coaching through pedagogical coordinators who were trained via one-on-one sessions delivered via Skype. With support from the World Bank's Strategic Impact Evaluation Fund, the World Bank team incorporated an impact evaluation into the program to test the effectiveness of the approach. The evaluation found that over the course of the year, teachers' classroom practices improved, teaching time increased, students were more engaged, and students' standardized test scores improved. Based on the results, the Ceará government made the program's curriculum and technology available to municipal schools in 2017.

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Context

The amount of time teachers spend actually teaching while in the classroom can vary widely. A 2015 World Bank report* on teaching in six countries in Latin America and the Caribbean found that on average, teachers lose the equivalent of one day of school per week because they fail to make full use of class time for instruction. They spend a quarter or more of class time on administrative duties, such as cleaning the blackboard or taking attendance, and are absent about 10 percent of the time. Even when they are teaching, teachers rely on the "chalk and talk" method—lecturing to students while writing the information on the blackboard—and often fail to keep students engaged.

To address these challenges, a federal government policy in 2013 mandated that schools free up about a third of teacher working hours for in-school teacher collaboration and development programs. In 2014, the Ceará education secretariat, located in the country's northeast and one of Brazil's most populous and poorest states, worked with SIEF researchers to develop and test a training program for secondary schools. The program was implemented with support from the Lemann Foundation, a non-profit focused on education. Coaches focused on strengthening the capacity of the schools' pedagogical coordinators, who are responsible for providing individual feedback to teachers and promoting teacher collaboration and best teaching practices within schools. However, surveys before the program revealed that pedagogical coordinators rarely observed teachers in the classroom.

*Bruns, Barbara; Luque, Javier. 2015. Great Teachers: How to Raise Student Learning in Latin America and the Caribbean. Washington, DC: World Bank.

The program had two main elements. First, schools received benchmarked performance feedback based on an initial round of classroom observations at the end of the 2014 school year. The data was gathered using the Stallings "classroom snapshot" method. The results were shared through school-specific bulletins that provided easy-to-compare data on things like the share of class time teachers used for instruction, pedagogical techniques, classroom materials used most frequently, and the share of class time students were engaged. Teachers weren't identified by name, only by the hour, grade and subject taught, and these results were benchmarked against the top-performing school in their district, and against the averages for Ceará state, for Brazil and Stallings good practice benchmarks.

> "In developing countries, teacher quality can matter even more than in wealthier countries. But most education systems do not attract applicants with strong backgrounds."
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> From the World Development Report 2018, *LEARNING to Realize Education's Promise*

Second, the pedagogical coordinators participated in three face-to-face one-day training sessions with the coaching team on key strategies for increasing instruction time and keeping students engaged. Over the year, each pedagogical coordinator also had at least two private sessions with an assigned coach via Skype. Coordinators also had access to a private website with support materials for lesson planning and for sharing videos of themselves providing feedback to their teachers, so the coaches could make suggestions. Coordinators and all teachers in the treatment schools also received *Aula Nota 10*, the Portuguese translation of *Teach Like a Champion*, a book on effective teaching by Doug Lemov, an educator from the United States. Finally, teachers and their coordinators had access to online videos filmed in Brazilian classrooms that illustrated examples from the book.

Evaluation

The program was evaluated through a randomized control trial. Of Ceará's 573 secondary schools, 292 were randomly selected to participate in the program, with 156 treatment and 136 control schools. Baseline classroom observations were conducted over five weeks in November and December 2014, which corresponded to the end of the school year in Brazil. Endline classroom observations were conducted in November 2015, at the end of the 2015 school year. All classroom observation visits, which used the Stallings methods to collect data, were not announced in advance.

An advantage of the Stallings method is that it requires relatively little training to use and generates comparable data across different subjects, languages, types of school and country contexts. Using an electronic tablet, observers code what the teacher is doing, what materials she or he is using, and what students are doing at 10 equally-spaced intervals in each class.

School system supervisors and pedagogical coordinators from the treatment schools were trained to use Stallings to collect the classroom data. Supervisors and coordinators didn't observe classrooms in their own districts.To prevent contamination, they were sent to other schools to collect the data, and coordinators from the control schools were not involved in the observations. Student learning results were measured on two different tests—the Ceará state achievement test and the national high school exit exam.

Brazil's education at a glance:

Brazilian 15-year-olds lag almost three years behind their OECD peers in math and more than four years behind peers in top-scoring countries like Singapore, China and Japan.

From "*Through the Looking Glass: Can Classsroom Observation and Coaching Improve Teacher Performance in Brazil*"

This policy note is based on "*Through the Looking Glass: Can Classsroom Observation and Coaching Improve Teacher Performance in Brazil*," Barbara Bruns, Leandro Costa, Nina Cunha, Education Global Practice Group, July 2017, World Bank Policy Research Working Paper 8156.

Results

By the end of the school year, teachers in the program schools spent almost 10 percent more of their time in the classroom teaching; they achieved this by reducing time spent on classroom management and time out of the classroom.

Teacher instruction time in schools that received the program increased to 76 percent of class time, as compared with 70 percent in control schools. This increase translated into an additional 59 more hours per year, or an additional two weeks of schooling per year. The reason for the change was that teachers spent much less time on classroom management and off-task. For example, the amount of time on classroom management, such as taking attendance, grading papers and disciplining students, dropped to 18 percent of class time in schools that received the program, compared with 21 percent of class time in schools that didn't receive the program. Teachers' time off-task, such as being out of the classroom or chatting with visitors, dropped to 5.8 percent of classroom time compared with 8.4 percent in schools that didn't receive the program. There also was a decline in the share of class time that teachers were out of the room. In treatment schools, this fell to three percent, compared with five percent in the control schools. All the results were statistically significant.

In schools where teachers received the mentoring and feedback, they were better able to keep students engaged in classroom activities.

Progress in this area was modest, but teachers that received the feedback and coaching support were able to reduce the share of time a large group of six or more students were visibly off-task—talking, texting, day dreaming or otherwise not paying attention—to 16 percent, compared with 19 percent in control schools, a statistically significant change. But teachers in program schools made little headway in keeping the entire class engaged. Indeed, schools on average had the entire class engaged just 20 percent of class time, meaning that there are almost always one or more students "tuned out" in Ceará classrooms.

Teachers in the program were more likely to use interactive teaching methods, but they still spent the bulk of their time lecturing from the blackboard.

Both the coaching program and the book that teachers received, *Teach Like a Champion*, (*Aula Nota 10* in Portuguese) stressed the importance of using questions as a method for stimulating class discussion and as a way to measure students' understanding of the material. Use of these techniques by teachers in the program accounted for 10.5 percent of class time by the end of the school year, compared with 8.4 percent in control schools. However, lecturing in front of a blackboard

remained the dominant teaching mode—used 38 percent of the time on average in treatment schools, as compared to 34 percent in control schools. In all the cases, the differences between the treatment and control groups after the program were statistically significant.

The program led to an increase in math and Portuguese test results, with the strongest impacts seen in the classrooms where teachers initially had the lowest times on instruction.

Students in schools that received the program scored four points higher in math and two points higher in Portuguese on the Ceará state assessment, SPAECE, which translates into 0.08 and 0.05 standard deviations, respectively. On the national high school graduation test, ENEM, students in schools in the program scored four points higher in math and five points higher in Portuguese, translating into standard deviations of 0.04 and 0.06, respectively. Program impacts were strongest in the classrooms that were weakest at the start of the program. In the bottom 25 percent of classrooms—defined as classrooms in which teachers spent the largest time on classroom management rather than on instruction—student test scores on the Ceará state exams were eight points higher in math and five points higher in Portuguese (0.17 and 0.12 standard deviations, respectively)—and on the national exam they were 14 points higher in both math and Portuguese, (0.14 and 0.15 standard deviations, respectively) when compared with the control schools. A key goal of the program was to reduce the large variation in teacher performance within schools by helping weaker teachers to improve. It was hypothesized that exposing gaps in classroom practice between the best and worst teachers in the school would create motivation to improve, and the pedagogical coordinators and coaches would provide support. These results indicated that the program succeeded at this.

EDUCATION

Conclusion

Improving the effectiveness of teachers in service is one of the biggest challenges school systems face. Developing countries spend huge amounts on teacher training each year and while very few programs are rigorously evaluated, there is little evidence of impact on teachers' skills. Brazil—as one of the lowest-scoring countries on the 2015 PISA exam—has large challenges in education, but this impact evaluation showed that real progress is possible, even in a single school year. It also showed that there are cost effective ways to approach teacher training and improve student learning. The teacher feedback and coaching program cost $2.40 per student, less than one percent of Ceará's annual spending per secondary student. The research also shows the value of using standardized classroom observations to measure *how* changes in teacher practice produce improvements in student learning.

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