How Messages to Parents Impact Student Performance in Brazil

Researchers:

Eric Bettinger

Nina Cunha

Guilherme Lichand

Ricardo Madeira

Sector(s): Education

Location: Brazil

Sample: 19,300 9th grade students across 287 schools

Target group: Parents Students

Outcome of interest: Enrollment and attendance Student learning

Intervention type: Digital and mobile Information Nudges and reminders

AEA RCT registration number: AEARCTR-0001379

Partner organization(s): Secretaria da Educação do Estado de São Paulo, Movva

Informing parents is one of the most cost-effective ways to boost child performance in school, but why and how does it work?[1] Researchers conducted a randomized evaluation with 9th graders' parents in São Paulo to investigate whether weekly messages giving updates on a child's attendance and effort, or messages emphasizing their importance, better motivated parents. Both types of messages led parents to ask more about school and encourage studying. Children's attendance and learning also improved equally in both groups, showing that simple, importance-focused nudges can be just as effective and cheaper than updates on a specific child's data.

Policy issue

Parents can play a big role in how well children do in school. When schools share updates about attendance and grades, student often improve their educational achievement.[2] But why does communicating with parents work? Is it personalized information that helps parents stay on top of their children's effort in school, or are general reminders about the importance of these habit enough to shift behavior?

This distinction matters. If child-specific information is essential, schools need strong systems to track attendance and grades—something many low-resource settings often lack. But if general reminders are enough to prompt engagement from parents, then schools could adapt these more cost-effective strategies.

Context of the evaluation

In 2015, Brazilian students were falling behind in math. On the international PISA exam, 15-year-olds scored 121 points below the OECD average. That is roughly a two-year lag in math skills. One reason may be that many parents were not involved in their children's education. A national survey found that about 25 percent of parents did not know if their children skipped classes and only half regularly asked about homework. Most school systems also lacked real-time information systems to track students'

attendance or behavior for better communication to parents.

This study took place in São Paulo, Brazil's richest and most populous state. In 2015, its public schools served 5.3 million students in primary and middle school. Despite its resources, the education system has large socioeconomic gaps. Wealthy families typically enroll children in higher-quality private schools, while low-income students go to public schools. In the study sample, roughly 60 percent of parents had not completed high school and more than 50 percent of households earned less than US$900 per month, a typical income for families living in São Paulo's informal settlements. The students in this study faced economic hardship.

Researchers partnered with Movva, an educational technology group. Movva runs Eduq+, a platform that sends messages to help parents stay in their children's education. They work across Latin America and Sub-Saharan Africa.

Photo credit: Shutterstock.com

A woman uses her phone.

Details of the intervention

In partnership with the São Paulo Education Secretariat and Movva, researchers conducted a randomized evaluation to understand how different types of communication can affect parents' beliefs, aspirations, and behavior, as well as students' behavior and educational outcomes.

Researchers randomly assigned 287 schools to one of five subgroups. Within each subgroup, they randomly assigned parents of 9th grade math students to receive weekly text (SMS) communications that varied along five dimensions:

- *Salience* (4,547 students): Parents received messages with statements raising awareness about the importance of school attendance, punctuality, and assignment completion to test the impact of drawing their attention to education.
- *Individual information* (3,501 students): Parents received messages with information about their child's attendance, tardiness, and assignment completion to test the impact of drawing their attention to personalized information about their child.
- *Relative information* (922 students): Parents received messages with information about their child's attendance, tardiness, and assignment completion, framed relative to their peers. This arm tested whether presenting personalized information in a comparative context could help parents better interpret their child's performance and enhance the effectiveness of the individualized information.
- *Parent engagement* (2,466 students): Parents received messages with suggestions of non-curricular activities to do with their children. In other treatment groups, teachers had to input weekly data, which could have unintentionally influence their behavior (e.g., they might feel monitored and change how they teach). This group tested whether simply drawing parents' attention to education—without involving teachers or sharing school data—could improve student outcomes and rule out teacher behavior as a driver of results.
- *Comparison* (7,907): Parents received no messages.

Researchers further randomized parents within the parent engagement group, to receive text messages that varied by frequency, delivery time, and consistency of delivery time. Parents received text messages only if their children's math teachers filled in a web platform with information on attendance, tardiness, and assignment completion that week. The program ran for six months of the academic year, from June to December 2016.

Results and policy lessons

As a result of weekly SMS communication, parents monitored their children's schooling more, which improved student attendance, test scores, and advancement to the next grade level. These results were primarily driven by redirecting parents' attention to student effort in general, as opposed to updating parents on their specific student's effort. Simply capturing parents' attention through nudges can lead to at least as large effects as collecting and sharing specific information on their child, and at a lower cost.

Parental beliefs and engagement: Parents who received information and salience messages were equally more engaged with their children than those who did not receive any message. They were more likely to ask their children about school, encourage studying, and express aspirations for their children to attend college.

Student performance: Students whose parents received either information or salience messages attended on average two to three additional classes over the semester than their peers, representing a 2.1 percentage points increase in attendance from a baseline of 87.5 percent in the comparison group (2.4 percent). Weekly communication also increased students' math GPAs and math test scores by 0.07 standard deviations and 0.10 standard deviations, respectively, equivalent to students finishing the school year one school quarter ahead of the comparison group. Additionally, these students were 3.2 percentage points (3.4 percent) more likely to be promoted to the next grade, compared to approximately 94 percent of students in the comparison group. Students of parents that received messages on how to engage with their child experienced similar improvements, ruling out teacher behavior as a driver of the results.

In short, the students' attendance, learning, and promotion gains are mostly due to the nudge these messages inspire in parents, not the specific child information nor the teacher effort behind information collection. Additionally, children's learning and attendance gains persisted over time, even though, in theory, parents could have stopped reacting to salience messages as they realize the messages are generic.

Message frequency and content: The more often messages were sent, the bigger the impact on students' math and Portuguese GPAs. However, sending more than two messages per week had little additional benefit on attendance. Additionally, students improved learning in multiple subjects only when the messages were not focused solely on math.

Effects by gender: Male students seemed to gain more from the salience and information interventions than female students. Most of the overall gains in attendance, GPA, test scores and grade advancement were driven by gains for male students. Researchers observed that the intervention also had a larger effect on the behavior and aspirations of parents of male students.

Lichand, Guilherme, Nina Cunha, Ricardo A. Madeira, and Eric Bettinger. "When the Effects of Informational Interventions Are Driven by Salience Evidence from School Parents in Brazil." American Economic Journal: Economic Policy (forthcoming).

---

1. Andrab, Tahir et al. "2023 Cost-effective Approaches to Improve Global Learning : What does Recent Evidence Tell Us are Smart Buys for Improving Learning in Low- and Middle-income Countries? (English)." Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/099420106132331608
2. Bergman, 2017; Berlinski et al., 2016; Kraft and Dougherty, 2013; Rogers and Feller, 2016.