Sending Text Messages to Parents to Improve Student Achievement in Middle and High Schools in the United States

Researchers:

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Sector(s): Education

Location: United States of America

Sample: 1,137 parents of students in 22 middle and high schools

Target group: Parents

Outcome of interest: Student learning

Intervention type: Information Nudges and reminders

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Improving student achievement among middle and high school students continues to be a priority in education policy. While leveraging parents has the potential to increase student performance, programs that do so are often costly to implement or they target younger children. Researchers sent parents information about their child's absences, missed assignments and grades via automated text message to assess the impact of providing information to parents on student achievement. A randomized evaluation of the text alert program showed that the intervention reduced course failures, increased class attendance and improved in-class exam scores. The effects are larger for students with below-average GPAs and students in high school, and positive effects persist into the second year of the intervention for these groups. Results suggest low-cost parent engagement interventions can have an impact on student achievement.

Policy issue

Improving student achievement among middle and high schoolers continues to be a priority in education policy. And while parents can play an important role their children's achievement, they tend to overestimate their student's grades and underestimate their child's missed assignments. Providing parents with accurate information about their student's efforts may improve parental monitoring and in turn improve students' efforts and achievement.

Previous interventions targeting middle and high school students' academic achievement have been time-intensive and expensive. Education interventions that have employed low-cost technologies generally focused on young children or the high school to college transition. The current study employs low-cost text messaging to provide parents information on their adolescent's attendance, grades, and missing assignments to improve students' academic achievement.

Context of the evaluation

The evaluation took place in 22 middle and high schools in Kanawha County Schools, West Virginia, the largest school district in the state. The district predominantly serves children from low income backgrounds (79 percent receive free or reduced priced lunch compared to 71 percent statewide). In the school year prior to the intervention (2014-2015), 44 percent of students scored

proficient-or-better in reading and 29 percent scored proficient-or-better in math. State level scores were similar with 45 percent of students proficient-or-better in reading and 27 percent proficient in math.[1]



A teacher calling on students raising their hands in a classroom.

Photo: Shutterstock.com

Details of the intervention

The researchers conducted a randomized evaluation to assess the impact of providing information to parents on their child's missing assignments, class absences, and grades on middle and high school students' achievement in a large school district in West Virginia. The intervention tested three types of parent alerts: missed assignments (weekly alert), class attendance (weekly alert), and low class average (monthly alert).

Researchers randomly selected grade levels at the 22 study schools to receive the intervention. Parents and guardians of 1,137 students agreed to participate in the study, and they either were sent or were not sent the weekly and monthly text alerts, depending on whether their child's school and grade level had been randomly assigned to the treatment or control group. Researchers also randomized which parent or guardian received the text-message alerts.

Partnering with a learning management system provider, researchers pulled information from the district's online teacher gradebook platform on missed assignments by class, class percent grade, and student attendance by class. This level of attendance reporting is particularly important because there is evidence to suggest that students are more likely to miss an individual class than miss a full day.[2] The gradebook information was linked to parent contact information to provide text message alerts on student performance.

Researchers measured the impact of parent text alerts on number of classes failed, total classes attended, student retention, and math and reading standardized test scores using district administrative data. Additional behavioral outcomes (suspension rates, class-level attendance) and assignment-level outcomes (missed assignments, assignment scores, class test scores) were measured from the gradebook application data.

Results and policy lessons

Results from the randomized evaluation show that being assigned to receive the intervention reduced course failures, increased class attendance and improved in-class exam scores, but not standardized test scores.

Primary Academic Outcomes

- **Class failures.**Text alerts reduced average number of courses failed. Students assigned to the treatment group failed an average of 0.71 classes, compared to a control group average of 0.97 classes failed per student (a reduction of 27 percent).
- **Classes attended.**Students assigned to the treatment group attended an average of 312 classes, compared to a control group average of 278 classes (an increase of 12 percent).
- **Retention.**98 percent of students assigned to the treatment group took at least one course in the district in the second semester, compared to 97 percent of students assigned to the control group (an increase of 1 percent).
- **Standardized test scores.**There were no statistically significant effects on standardized math or reading test scores. One explanation is that students may not have seen the exams as high stakes and may have believed the exams would not have any implications for their grades or likelihood of graduating.
- **Parent Beliefs.**The researchers hypothesized that the intervention could improve the accuracy of parents' beliefs about their child's academic behaviors and performance. Parents who received the text messages shifted their beliefs about missing assignments, from believing their child had no missing assignments to believing their child did have some missing assignments. Despite this shift, there was no significant effect on the accuracy of their beliefs about missing assignments. However, there is improvement in parents' accurate reporting of their child's math grades.

Researchers were interested in understanding whether the intervention was more effective for students with below average GPAs and whether there was a different effect for middle versus high school students. They found that the effects are larger for students with below-average GPAs and for students in high school.

Below Average GPA

Intervention effects for students with below average GPAs are significantly larger for several academic outcomes. Students with below average GPAs failed fewer classes (0.9 fewer classes), missed fewer assignments (25 percent or 5 percentage points fewer assignments missed) and saw improvement in GPA (0.24 point increase) compared to students with below average GPAs in the control group.

High School vs Middle School

Intervention effects were greater for high school than for middle school students across several outcomes. Compared to high school students in the control group, high school students in the treatment group failed 0.7 fewer classes and had 26 percent fewer missed assignments. Among middle school students, these differences were not statistically significant. One explanation may be that middle school students already had better grades than the high school students and therefore their parents received fewer alerts.

The intervention appears to improve students' academic achievement by strengthening parents' understanding of their child's performance and increasing parental monitoring. The text message alerts are low cost, and when combined with a unified gradebook or grade entry system can be an efficient and effective way to leverage parents to support students' academic

achievement.

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1. West Virginia Department of Education

2. Whitney, C. and J. Liu, “What We're Missing: A Descriptive Analysis of Part-DayAbsenteeism in Secondary School," AERA Open, 2017, 3 (2), 1-17.