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Abstract Information

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Can Tutoring Improve Student's Performance? Evidence from Experimental and Nonexperimental Designs

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Abstract:

In many developed and developing countries policy makers are devoting an increasing amount of time on the design of incentives and programs aimed at improving student's performance. This paper sets to evaluate the "Entre Jovens" (EF) program, an after school tutoring in numeracy and literacy skills for students in secondary education in Brazilian public schools. Designed and implemented by a Brazilian NGO (Fundação Unibanco), EJ benefited around 10,000 students in over 70 public schools in 2008. The evaluation was conducted in all three different municipalities that hosted the program in 2008, however given program implementation restrictions, a randomized controlled trial could only be conducted in one of the tree sites. In the remaining two locations the counterfactual schools were selected using a matching algorithm based on pre-program historical data on selected outcomes of interest (i.e. test scores, dropout rates and repetition rates, and class size). Students at the schools that received the intervention and those that did not receive the intervention responded both a pre and post numeracy and literacy standardized test, as well as a socio-economic questionnaire. In addition a monitoring system was put in place to record information on the quality of implementation at the school level, as well as to keep detailed track on the students and tutor attendance on the program. The difference in difference estimate of the school level impact suggests a very small and positive effect (0.01 sd), explained by the relatively low take up rate (around 9% to 30% of the students). However, the triple difference estimator shows that students enrolled in the tutoring programs from the intervention schools had a greater gain than those students from the control schools that were also enrolled on after school tutoring (0.2 to 0.5 sd), suggesting the technology and delivery mechanism of this particular intervention also made a difference. Moreover, the estimation of a triple difference estimator using quantile regression shows that while the literacy module of the program had relatively homogenous impact, students from the numeracy module tended to benefit a lot more when their initial performance was already good (beyond the 60th percentile). The study also shows that the compliance with the treatment (measured by attendance) matters, as well as the quality of implementation of the intervention. Last but not least, the impact estimates from the site where an experimental design was implemented were larger and more statistically significant then those obtained from the nonexperimental design locations, the exception was the impact of attendance in which both designs yield a very similar results.
