Improving Learning Outcomes through the Government School System in India

Researchers:

James Berry

Esther Duflo

Shobhini Mukerji

Marc Shotland

Sector(s): Education

Location: Haryana, India

Sample: 400 primary schools and 100 upper primary schools in Mahendragarh and Kurukshetra districts

Target group: Students

Outcome of interest: Student learning

Intervention type: Training

AEA RCT registration number: AEARCTR-0000008

Data: https://doi.org/10.7910/DVN/KLJBHE

Partner organization(s): Pratham, Government of Haryana

Learning levels of primary school children have not kept pace with increased enrollment. Researchers evaluated the impact on student learning outcomes of two programs introduced by the Government of Haryana. While the Continuous and Comprehensive Evaluation (CCE) program did not have any effect on test scores, the Learning Enhancement Program (LEP), which focused on basic literacy and numeracy, significantly improved Hindi test scores, especially for students with initially low learning levels.

Policy issue

Primary school enrollment has increased significantly around the world in recent decades, while learning levels have remained stubbornly low. Even though children are moving up from one grade to the next, few actually master the grade-level competencies expected of them. This could be attributed to a number of factors, including large class sizes, a shortage of qualified teachers, unsuitable pedagogy and curriculum, and pressure on teachers to complete the prescribed syllabus. Targeting lessons to the learning levels of students is one pedagogical approach to addressing the challenge of low learning levels. Teaching at the Right Level (TaRL), which encourages teachers to focus on basic literacy and numeracy by targeting lessons to the actual learning levels of their students rather than focusing on completing a standard curriculum, has been rigorously tested in several contexts and found to be effective when implemented by community volunteers, contract teachers, or by government teachers supported by volunteers during the summer holidays. To date, however, there has been no evidence that this methodology is similarly effective when implemented by government teachers within the formal schooling system.

It is also unclear how TaRL compares to other types of pedagogical changes, such as one introduced by the Government of India, the Continuous and Comprehensive Evaluation (CCE) framework, which focuses on restructuring teaching-learning and testing

practices. The CCE framework replaces “high-stakes” year-end exams with more frequent evaluation of student performance across academic and non-academic dimensions. By monitoring students’ progress at regular intervals, the program is expected to help teachers customize their lessons based on current learning levels. The program is also believed to reduce pressure on students by giving them several opportunities to demonstrate their skills and improve performance. However, there has been no rigorous evaluation of the impact of CCE on student learning outcomes, and it is unclear if this system helps students achieve grade-level competencies.

Context of the evaluation

Under India’s 2009 Right to Education (RtE) Act, every child up to the age of fourteen is guaranteed free and compulsory education, and no child can be held back, expelled, or required to pass a board examination until grade 10. This has in part contributed to primary school enrollment rates of over 95 percent, but few students actually master basic reading and math. A 2012 ASER survey found that only 47 percent of students in grade 5 could read a grade two-level text proficiently, while only about 25 percent of grade 5 students were able to solve questions involving division, a grade 4 level competency. This learning gap in the early years tends to build over time, and as a result 76 percent of grade 8 students read at the grade 2 level.

While learning levels in Haryana, a state in northwest India, are higher than the national average, test scores in Kurukshetra and Mahendragarh, the two districts chosen for the evaluation, were quite low. Prior to the start of the evaluation, almost 84 percent of students in the study sample were unable to read a simple story, and more than 55 percent were unable to recognize two-digit numbers.



Student at work in a classroom in India

Photo credit: Arvind Eyunni, Pratham

Details of the intervention

Researchers partnered with the Government of Haryana and Pratham, India's largest education NGO, to conduct a randomized evaluation of the impact of both CCE and TaRL pedagogies on student achievement in Hindi and math in primary and upper primary schools.

Pratham's Learning Enhancement Program (LEP), based on the idea of TaRL, grouped children according to their initial reading levels, irrespective of grade or age. For one hour during the school day, students were taught Hindi using level-appropriate learning materials and activities

The CCE program involved training government teachers across grades 1 through 8 to regularly assess student performance across a range of competencies and provide frequent feedback on performance.

Four hundred government primary schools across two districts, Mahendragarh and Kurukshetra, were randomly assigned to four groups of 100 schools each during the 2012-13 academic year: (1) CCE only, (2) LEP only, (3) both CCE and LEP, and (4) a comparison group that received neither program . A cohort of around 12,500 students in grades 1-4 were tested in Hindi and math before the programs were implemented (end of the 2011-12 school year) and after one year (end of the 2012-13 school year).

An additional 100 upper primary schools were included in the evaluation to assess the impact of CCE on older students in grade 7. Forty-seven of these schools had the CCE program and the remaining 53 served as the comparison group .

Field-level school monitors were trained to provide academic support to teachers and monitor the implementation of both programs.

Results and policy lessons

Students in CCE schools (primary and upper primary) did no better than students in the comparison group on either oral or written tests for Hindi or math. Being in an LEP school, in contrast, had a large and statistically significant effect on students' Hindi scores. Relative to the comparison group, students in LEP schools scored 0.15 standard deviations higher on the Hindi reading test and 0.135 standard deviations higher on the Hindi written test. The largest gains were concentrated among students who could only recognize letters at baseline. The improvement in both oral and written Hindi was also higher for girls compared to boys. The LEP program, which focused exclusively on Hindi, did not have any effect on math scores, which suggests an absence of learning spillovers across subjects.

The LEP's large effect on students' basic Hindi skills indicates that programs emphasizing TaRL can play a role in improving poor learning outcomes in developing countries and can be successfully integrated into the formal school system. Researchers note that part of the success of the LEP may be attributable to careful monitoring and mentoring support for teachers. The CCE, on the other hand, faced implementation challenges, indicating that the design of the scheme may need to be reviewed and made less complex.