The Challenge

The learning gap in India is alarming. Almost half of Grade 5 students are unable to read a Grade 2 text and do a Grade 2 subtraction. In 2009, Educational Initiatives (EI) launched Mindspark, a project to introduce technology in classroom learning methods. Based on the ‘Intelligent Tutoring System’, the initiative was rolled out in government and private schools, helping students hone their literacy and numeracy skills, and helping teachers access comprehensive analyses. In 2011, EI started its Mindspark Centres for students from low-income communities. These work as a form of remedial education, outside of school hours, and adapt content to vernacular needs (mainly Hindi and Gujarati). Currently, there are four such centres in Delhi, India, placed in the centre of low-income communities for easy accessibility. The platform presents students with problems and interactive games that sense their levels of competence in real time and adjusts itself to current needs. Every student has a log-in, so as to maintain continuity of experience and capture data for further analysis. The centres run batches of 1.5 hours, with 15-20 students per batch.

The Impact

The Mindspark classroom initiative has reached out to more than 100,000 students. A study by IDInsight concluded that the individual student gains in maths via Mindspark were statistically significant and practically meaningful. The Mindspark Centres have directly reached out to more than 5,000 students in the last four years. A recent study conducted by J-PAL has found the programme to be impressively impactful (details below). The vision of the programme is to help every child bridge the achievement gap. In the near future, Mindspark plans to roll out its product to low-income schools in urban slum areas and semi-urban areas and advocate for technology to be integrated into the formal schooling system.

Research

The most recent evaluation was conducted by Karthik Muralidharan and team of J-PAL. A randomised control trial was done across three Mindspark Centres on 620 students from low-income communities, half of whom were assigned to the treatment group, and the remaining to the control. Most students were between Grades 6 and 9. Lasting four months, the study reported that the treatment group had improved 2.85 times that of control group in Hindi proficiency; and 2.35 times in maths. The final report is yet to be published.

Another pre-post impact analysis on around 35 students over 6 months shows improvement worth the effect size of 1.04 in maths and 1.23 in Hindi (an effect size of over 1 is considered ‘very high’ improvement). Indeed one of the reasons why Mindspark Centres were launched as independent remedial projects was that the team could have direct access to students and parents, and could introduce tweaks to assess what learning methods work best.

Future research needs will pertain to further understanding of how learning of languages and maths occurs in children, and how teaching methods can address these needs.

Stakeholders

The Mindspark Centres were launched with an initial grant from Central Square Foundation. Later, donors such as the Tech Mahindra Foundation and Porticus have funded the project. Recently, Mindspark won a grant by USAID to roll out to 15,000 students in two years. This will be done in collaboration with ground-level implementation partners such as Pratham, Educate Girls and others, possibly in states of Rajasthan, Uttar Pradesh and Delhi, including semi-urban areas.

One key barrier to scaling up is the perception among donors that learning is associated with physical infrastructure such as buildings and desks rather than other scientific methods. To take this project to scale, teachers will need to be on board and not feel threatened by technology interventions. They will also need to be trained to use the platform effectively.

About

This is a series of case studies produced by HEART for the UK Department for International Development. Programme experts were consulted in the process. Any views and opinions do not necessarily reflect those of DFID or HEART.