Who is learning to read? A preliminary exploration

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Four years of ASER data provide a wealth of possibilities for exploring trends in children’s educational status over time. One fact that emerges in any such exploration is that in a country as large and varied as India, every state has a unique story to tell.

The Sarva Shiksha Abhiyan framework on quality issues in primary education cites the 1992 National Policy on Education: "...irrespective of caste, creed, location or sex, all children must be given access to education of comparable standards". We can use ASER data to analyze what progress has been made on a very basic task -- teaching primary school children to read.

This question has an overall "quality" dimension (are there changes in overall reading levels among children in government primary schools?) and an "equity" dimension (are all children learning to read, or only some?).

This preliminary analysis looks at Std II text readers in Std 3-5 in government schools across the country. ASER classifies children as Std II text readers if they can read a text whose level of difficulty is equivalent to that of the Std 2 textbook in use in the state.

ASER data reveal that at the national level, the percentage of children in Std 3-5 in government schools who are Std II text readers has hardly changed in the last three years: 35% in 2006, 37% in 2007, and 36% in 2008 (inset graph on Chart 1). However, these aggregate figures mask substantial differences between groups of students:

- Children whose mothers did not attend school achieve a far lower level of reading proficiency than children whose mothers did attend school.
- Within the category of children whose mothers did not attend school, girls achieve consistently less than boys.

These findings are based on the hypothesis that if we divide the total student population into distinct subgroups, each subgroup should - in a perfectly equitable, even if flawed, learning situation - be represented among Std II text readers in the same proportion as their representation in the population as a whole. To use an example, if 30 out of every 100 students enrolled are girls whose mothers are uneducated, then the same proportion (30 out of every 100, or 30%) of all Std II text readers should also be girls whose mothers are uneducated. And if these two percentages are the same, the ratio between them gives us 0.3/0.3 = 1. By the same logic, in a perfectly equitable learning situation, every other group of students (girls with educated mothers, boys with uneducated mothers, boys with educated mothers) would also be represented among Std II text readers in the same proportion as their representation in the total population of students, giving us a ratio of 1. Therefore, if we were to plot the proportion of Std II text readers to total enrollment for each of these four groups of students, a perfectly equitable learning situation would show all four plotted points coinciding at 1.00.

As Chart 1 shows, this is far from the case in India. Children whose mothers attended school are substantially overrepresented among Std II text readers in Std 3-5. In 2006, for example, boys whose mothers went to school comprised 21% of total Std 3-5 enrollment but 25% of all Std II text readers, giving us a ratio of 1.17. Similarly girls whose mothers attended school comprised 19% of Std 3-5 enrollment but 22% of all Std II text readers, giving us a ratio of 1.16. Similar ratios are observed for 2007 and 2008.

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If children whose mothers did go to school are overrepresented among Std II text readers, then children whose mothers did not go to school are by definition underrepresented. As Chart 1 shows, in 2006, the ratio of Std II text readers to total population works out to 0.87 for girls and 0.91 for boys.

This situation has shown practically no change over the last three years. Disparities are, if anything, increasing.

Mothers' education is used in this analysis as a proxy for non-school variables that affect children's learning. Children whose mothers did not attend school are more likely to face a range of social and economic constraints on their opportunities to learn. Although school systems cannot affect children's socioeconomic characteristics, they can take these into account in the design of interventions intended to improve learning outcomes. The obvious conclusion is that government primary schools have consistently failed to address the learning needs of disadvantaged students.

Once we look at individual states, however, it turns out that the "story" at the national level hides far more than it reveals.

There are states like Assam and Gujarat, where overall reading levels show a steady decline and differences between groups are growing. Then there is Karnataka, where overall reading levels are increasing - but so are differences between groups (Chart 2). There are also states like Maharashtra (Chart 3), where overall reading levels first improved and then worsened, but differences between groups have declined over the three years (greater equity).
Clearly this preliminary analysis only provides the introduction to the story. As we inch closer to universal primary enrollment, only the hardest to reach children are still out of school. At the same time, the shift from government to private schools is gaining momentum, leaving only those unable to access private schooling within the government system.

Therefore the question of what interventions can best enhance learning for students from disadvantaged backgrounds becomes increasingly important for government departments of education. Many questions could be explored, perhaps the most important of these being:

- Within the primary education sector, what has enabled Madhya Pradesh and Chhattisgarh to achieve such impressive results, and what can be learnt from their experience?
- Beyond the primary education sector, to what extent do women’s literacy programs demonstrate awareness of the clear link between mothers’ education and children’s learning?

More rigorous statistical analysis of ASER data will doubtless add detail and generate many more questions. And an infinity of entirely different stories are waiting to be discovered.