

# A study of access, transition and learning in secondary schools

## Research and policy brief



### About the study

This two-year study on children's access, learning and transition to secondary education (2014-2016) aimed to provide an in-depth understanding of factors that influence children's transition from elementary to secondary school. Three interrelated issues were investigated: (i) availability of schools at the elementary and post-elementary stage; (ii) student learning outcomes at the end of elementary school (Std VIII) and one year later (Std IX), and (iii) patterns of transition into secondary schooling. The study was conceptualised by ASER Centre and funded by the Kusuma Trust UK.

### Study design

This study was designed as a block-level census of Std VIII children in two rural blocks each of HarDOI district, Uttar Pradesh and Sambalpur district, Odisha (4 blocks in total). A total of 11,264 Std VIII children were identified in these blocks. Data collection was conducted in three phases. In the first phase, all educational and vocational centres located in selected blocks were mapped. In the second phase, a school-based survey and baseline learning assessments of Std VIII students were conducted. In the third phase, conducted one year later, these students were tracked to record their enrollment status, collect household information and administer an end line learning assessment.

### **This summary presents key findings from the study and their policy implications.**

This block-level study tracked Std VIII students during the transition from elementary to secondary school and provides an analysis of the challenges they face. Findings from this study have policy and practice implications for both elementary and secondary schooling if the target of universal secondary school enrollment in the Rastriya Madhyamik Shiksha Abhiyaan (2009) is to be achieved.

## Major findings

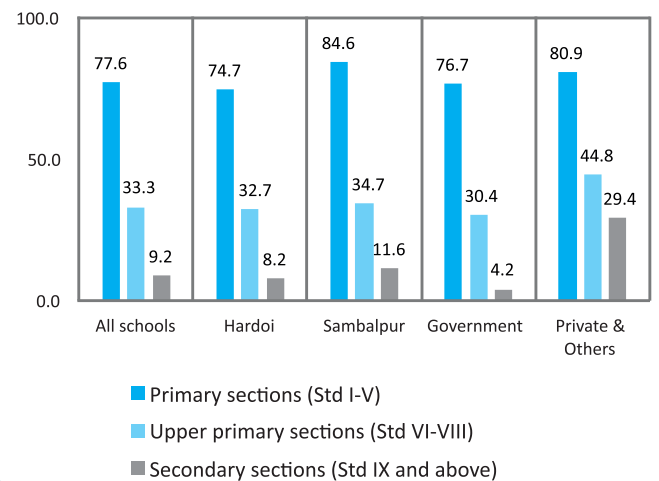
### 1. School provisioning declines considerably at the secondary level, particularly government schools.

Despite the policy commitment to universalise access to secondary education under the Rashtriya Madhyamik Shiksha Abhiyaan by 2017, data from this study reveals that across these 4 blocks, school provisioning reduces sharply as children proceed to higher grades (Figure 1).

Overall, less than 10% of 980 schools offered secondary grades (Std IX and above). This proportion was seven times higher in private schools (29.4%) than in government schools (4.2%).

In contrast, upper primary grades were offered by roughly 33% of all schools. In both locations, at least 75% of both government and private schools offered lower primary grades.

Figure 1: Schools offering education in different grades, by location and type (%)

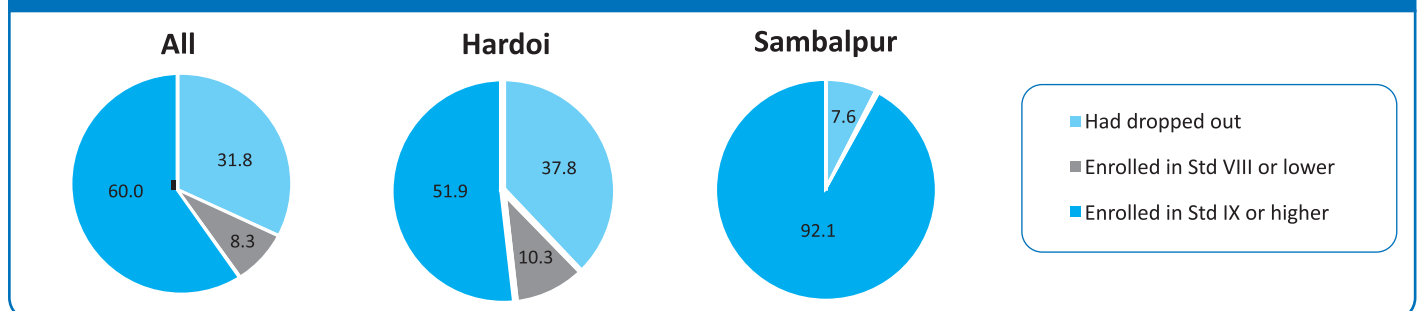


### 2. About three in every ten sampled children dropped out after elementary school (Std VIII). Those who remained in school did not always progress to Std IX.

At baseline (2014), 11,264 students recorded as enrolled in Std VIII in the selected blocks were included in this study.<sup>1</sup> One year later, a third of the children had dropped out of school, and not all who remained enrolled were in Std IX (Figure 2). However, there are stark differences across the two locations.

- In Hardoi, nearly 40% of Std VIII children had discontinued schooling in the second year of the study. Less than half made the expected transition into Std IX, while another 10% either remained in the same grade as the year before or went into a lower grade.
- In Sambalpur, on the other hand, only 8% children in Std VIII dropped out in the subsequent year and over 90% of all children made the expected transition to Std IX.

Figure 2: End line enrolment status of Std VIII students by location



<sup>1</sup> At end line (2015), 87% of these children could be tracked. This proportion is higher in the selected blocks of Sambalpur (93%) compared to Hardoi (86%).

The imbalance in school provisioning is also reflected in the types of schools attended by children who progressed to secondary grades (Table 1).

- In the surveyed blocks of Sambalpur, which had relatively greater government provisioning at the secondary school stage, over two-thirds of the cohort continued in government secondary schools at end line.
- In Hardoi on the other hand, where post-elementary government school provisioning reduces drastically, enrollment in private schools increased from less than half the sample at baseline to over 80% a year later.

**Table 1: Baseline and end line school type for children progressing to secondary grades at end line**

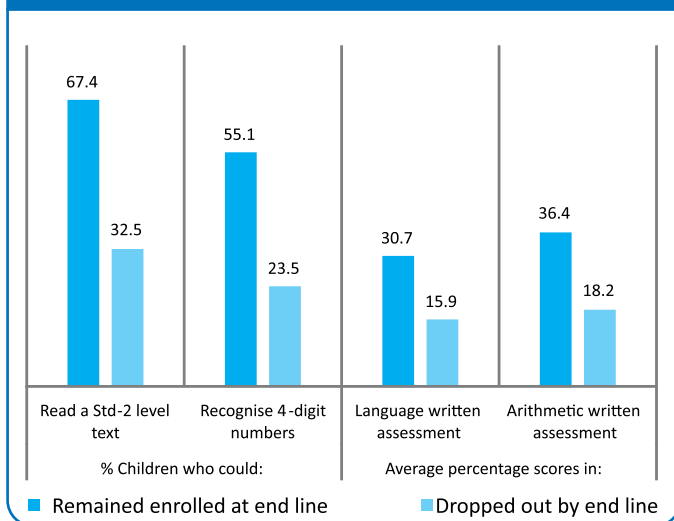
Location	Of children transitioning to secondary grades at end line:			
	School type in Std VIII: % students enrolled in:		School type in secondary school: % students enrolled in:	
	Government schools	Private/other schools	Government schools	Private/other schools
Hardoi	53.5	46.5	17.6	82.4
Sambalpur	77.8	22.3	67.5	32.5

### 3. Prior student learning outcomes are a good predictor of continuation of schooling.

The baseline assessment was conducted when all children were enrolled in Std VIII and the end line assessment was conducted one calendar year later. In both assessments, children were administered one-on-one oral tests as well as group-based, pen-paper written tests in three subjects: 1) language (Hindi or Odia), 2) English and 3) arithmetic. While the oral assessments tested foundation skills in reading and numeracy, the pen-paper written assessments tested children's grasp of selected competencies taught in elementary grades, ranging in difficulty levels from Std IV to Std VII. The written assessments in language included questions on reading comprehension, writing and vocabulary, while the arithmetic assessment included questions on numeric and word problems, fractions and decimals, geometry and mensuration.

Std VIII children who had dropped out a year later had very poor learning outcomes in both the foundational and written learning assessments compared to students who remained enrolled (Figure 3). Multivariate regression analysis confirms that children with better learning levels in Std VIII were less likely to drop out one year later. This data provides strong evidence that focusing on children's learning levels earlier rather than later can help ensure higher transition rates from elementary to secondary schooling.

**Figure 3: Baseline learning levels by end line enrollment status**



Additionally, school continuation rates are also influenced by children's individual, household and baseline school characteristics (Table 2).

**Gender:** Overall, more girls dropped out in the second year of the study (37%) compared to boys (26%). In Hardoi, 6 in 10 children who dropped out were girls while in Sambalpur, a higher proportion of boys than girls discontinued schooling.

**Marital status:** Despite their young age, nearly 10% of children were reported to be married during end line data collection; most of these were in Hardoi and girls in the surveyed blocks. Marital status is inversely related to enrollment status at end line: while almost all children who continued their schooling remained unmarried, about a third and a fifth of all dropouts in Hardoi and Sambalpur respectively were reported to be married.

**Household characteristics:** In both locations of the study, over 50% children who dropped out were from Scheduled Caste families and poorer households. Children who dropped out were also more likely to have mothers and fathers who had never been to school, compared to peers who were enrolled at end line.

**School characteristics:** The availability of continuous grades in schools emerges as an important influence on transition. A higher proportion of dropouts in both locations studied Std VIII in schools which did not offer secondary grades.

**Table 2: Children's individual, household and baseline school characteristics by end line enrolment status**

% children who:	Hardoi		Sambalpur	
	Enrolled	Dropout	Enrolled	Dropout
Were girls	42.8	58.9	51.9	45.9
Were boys	57.2	41.1	48.1	54.1
Were married	0.6	30.3	0.2	19.2
Were from Unreserved Category (General)	23.4	11.8	6.6	2.7
Were from Schedule Caste (SC)	34.3	52.0	33.8	54.8
Were from Other Backward Caste (OBC)	42.3	36.3	48.7	32.2
Were from least affluent households (Bottom 25%)	36.1	60.9	51.8	81.5
Were from most affluent households (Highest 25%)	43.5	21.0	26.9	9.6
Mother never attended school	65.4	86.1	42.7	75.4
Father never attended school	58.7	86.7	77.8	86.3
Studied Std VIII in schools which offered secondary grades	33.9	10.7	71.4	27.0
Studied Std VIII in schools which did not offer secondary grades	66.1	89.3	28.6	63.0

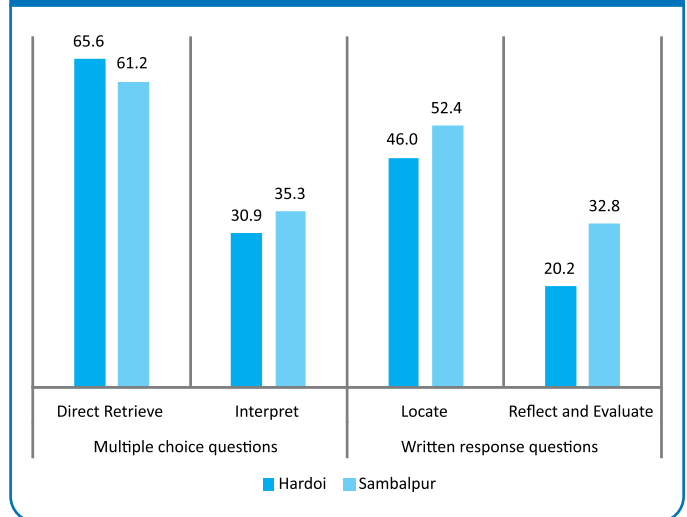


#### 4. Children entering secondary grades in these locations lack critical abilities in language and arithmetic necessary to engage successfully with the secondary school curriculum.

Despite eight years in school, children progressing to secondary grades do not have mastery over language and arithmetic concepts taught in elementary grades and are poorly equipped to meet the demands of a secondary curriculum that only increases in difficulty (Figure 4).

For example, in the reading comprehension task in the language written assessment, children were required to read a fictional text and thereafter answer questions based on it. These were both objective, multiple-choice questions as well as those requiring written responses.

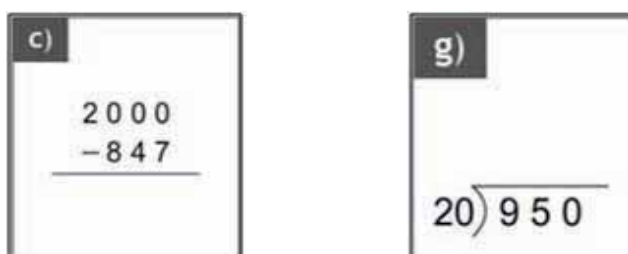
Figure 4: % correct end line responses in select reading comprehension questions from the language written assessment



More children could correctly answer the simpler 'direct retrieve' or 'locate' type of questions in which they were only required to locate the answer already provided in the text, rather than those requiring either interpretive or reflective thinking. However, children in Sambalpur did better on these higher-level comprehension questions than their peers in Hardoi.

Similarly, in the arithmetic written assessment (Figure 5), children's ability to solve numeric and word problems using basic arithmetic operations was extremely poor. At end line, of those who had progressed to secondary grades, just over a third of children in Sambalpur and even fewer in Hardoi could correctly solve a 4-digit by 3-digit subtraction. The 3-digit by 2-digit division could be correctly solved by less than 30 percent of children in secondary grades in Sambalpur, whereas for Hardoi it is better at 36% (Table 3). Children's lack of mastery of division problems in numeric format is equally visible in the poor results on word problems testing this competency.

Figure 5: Select questions from the arithmetic written assessment



Q5. एक किसान एक क्यारी में 6 पौधे लगाता है। 138 पौधे लगाने के लिए उसे कितनी क्यारियाँ बनानी पड़ेंगी?

Q19. गणित की परीक्षा के कुल अंक 120 हैं। अगर इस परीक्षा में सुनील 40% अंक प्राप्त करता है तो बताओ उस गणित की परीक्षा में कितने अंक मिले?



**Table 3: % Correct responses in select questions from the arithmetic written assessment at end line**

Task	% Correct responses at end line:	
	Hardoi	Sambalpur
Numeric sum: 4-digit by 3-digit Subtraction	31.3	36.7
Numeric sum: 3-digit by 2-digit Division	36.7	27.2
Word problem: Unitary Method	30.2	33.9
Word problem: Percentage	11.9	19.8
Mensuration (Area)	17.8	30.8
Geometry: Classification of triangle based on length of the side	27.2	47.7

## Key recommendations

### 1. The goal of universal access to secondary education requires a rapid increase in the provisioning of government schools offering secondary grades.

A key objective of the Rashtriya Madhyamik Shiksha Abhiyaan (2009) is to achieve universal access to secondary education by 2017. However, data from this study shows that school provisioning reduces drastically at the secondary stage, particularly among government schools. This has clear implications for access to post elementary education for children from disadvantaged backgrounds. This data also indicates that children from schools providing both elementary and secondary grades were less likely to drop out.

### 2. At the end of the elementary stage, children are poorly equipped to handle the secondary school curriculum. Targeted remedial action is urgently required.

Evidence from this study strongly suggests that children's prior learning outcomes are a good predictor of their continuation into secondary school. At baseline, all children in the study were enrolled in Std VIII; by end line, close to a third had dropped out of school. These trends are particularly worrying for Hardoi where close to 4 in

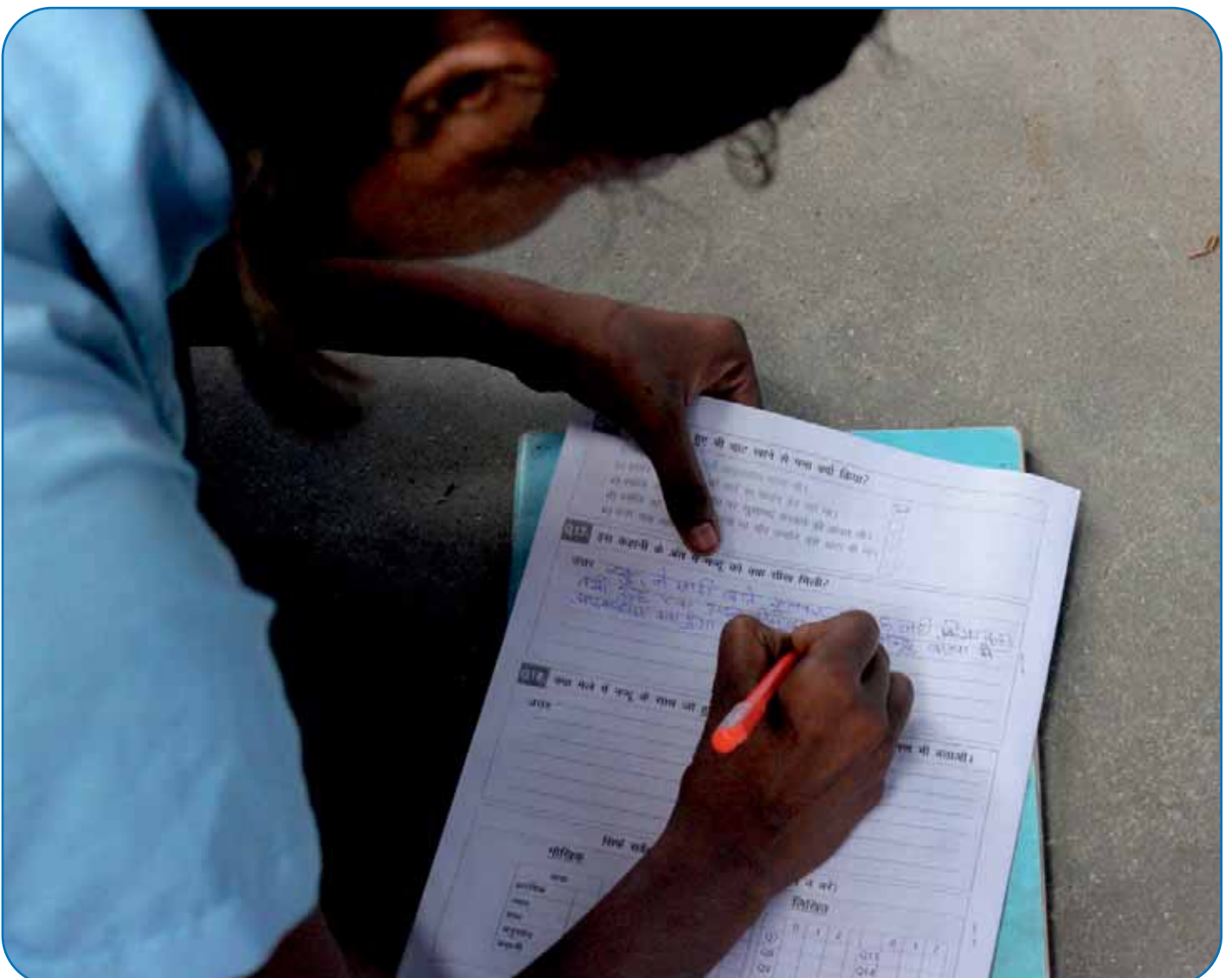


10 children discontinued schooling by end line. Girls and children who were married were also more likely to drop out.

Multivariate regression analysis confirms that children's prior learning levels significantly predict their continuation into secondary grades. In other words, children with poor learning outcomes are more likely to drop out after elementary school. It is therefore imperative that efforts to increase transition into secondary schools begin earlier, at the primary and upper primary stage, with a focus on providing remedial education to the most vulnerable students – those who have low learning levels, who come from poorer households and those with parents who are not educated.

This study also shows that children entering secondary grades have major learning deficits. This situation will not only hinder students' ability to transact curricula of far greater difficulty than the concepts tested in this study, but also seriously overburden secondary schools that must deal with the cumulative burden of children's learning deficits.

Several Joint Review Mission reports of the Rashtriya Madhyamik Shiksha Abhiyaan have emphasised the critical importance of focussing on student learning outcomes, both prior to and during secondary school, in order to improve retention in school. The achievement of equity and quality secondary education will thus require concerted efforts to ensure that these issues are urgently addressed.







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