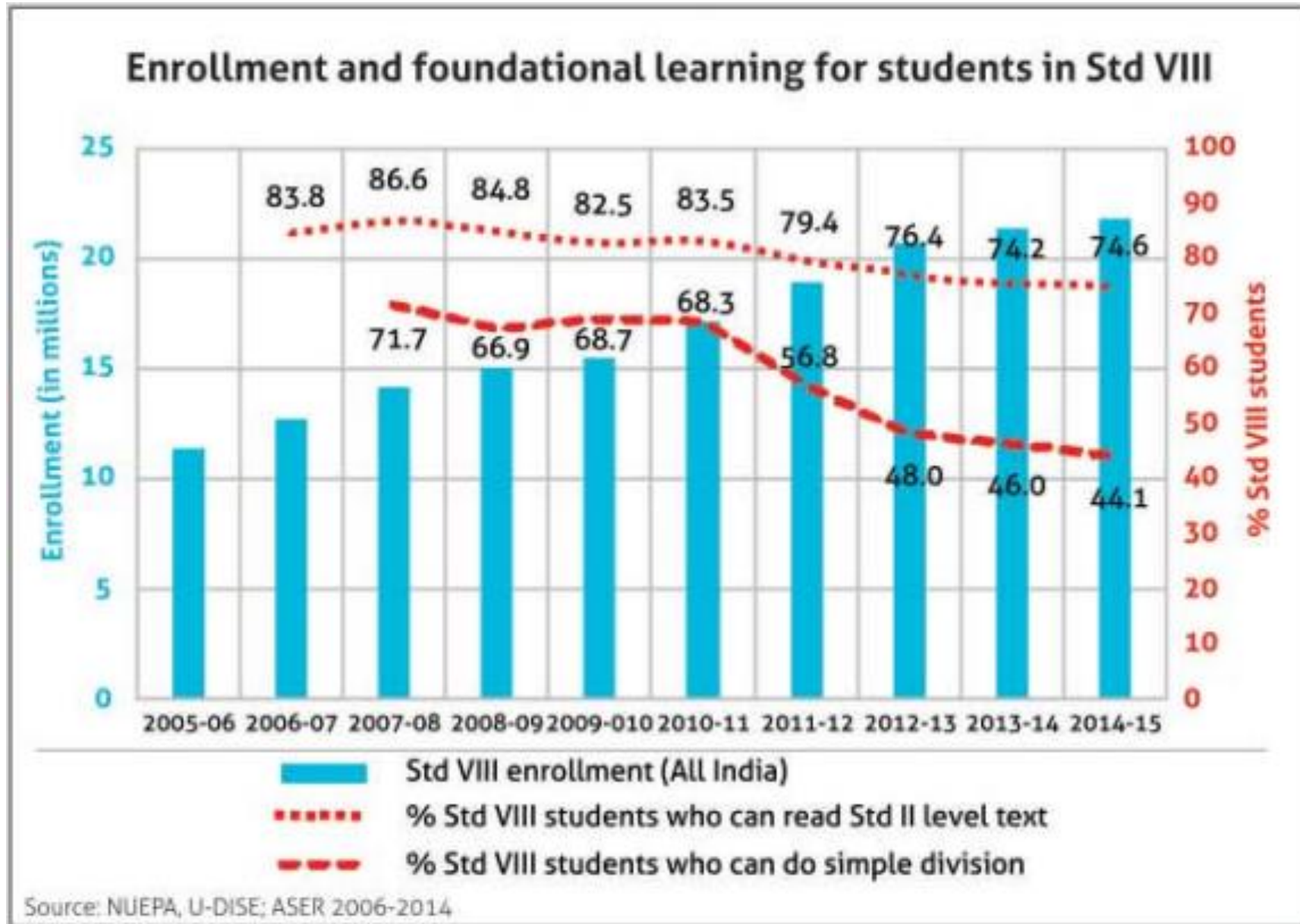# Study on access, transition and learning in secondary education

Main findings from a two-block study in Hardoi (Uttar Pradesh) and Sambalpur (Odisha)

New Delhi
25 January, 2018

Enrollment and foundational learning for students in Std VIII

Source: NUEPA, U-DISE; ASER 2006-2014

Objectives

- To understand:
    1. Patterns in school provisioning, particularly at elementary and post-elementary stage
    2. Student learning outcomes at the end of elementary school (Std VIII)
    3. Transition into secondary school
    4. Student learning at the beginning of secondary school (Std IX)

- Study designed as a block-level census in two rural blocks each of Hardoi district, Uttar Pradesh and Sambalpur district, Odisha
    o Bawan and Sursa blocks covered in Hardoi district, Uttar Pradesh
    o Rairakhol and Naktideul blocks covered in Sambalpur district, Odisha

Patterns in school provisioning, particularly at elementary and post-elementary stage	Assessing student learning outcomes at the end of elementary school (Std VIII)	Transition to secondary school and assessing student learning at the beginning of secondary (Std IX)
Phase 1: Mapping of educational institutions	**Phase 2:** School survey and baseline learning assessments	**Phase 3:** End line student tracking and learning assessments
• GPS mapping of all educational institutions (schools, colleges, tuition centres and vocational institutes) in rural villages of sampled blocks. • Basic information collected on highest and lowest grade offered, school type. • **June – July 2014**	• Schools mapped in phase 1 and offering Std VIII selected for phase 2 survey. • School survey done over two days and data collected on facilities, student enrolment and attendance etc. • Baseline learning assessments conducted for all Std VIII students present in schools in Language (Hindi/Odia), English and Math • **October 2014 – February 2015**	• (Std VIII) students from phase 2 tracked to record enrolment status and HH information. • End line learning assessments in Language (Hindi/Odia), English and Math administered to gauge change over time. • Assessments conducted at the community level, on school holidays. • **October 2015 – February 2016**

Data collection and sample

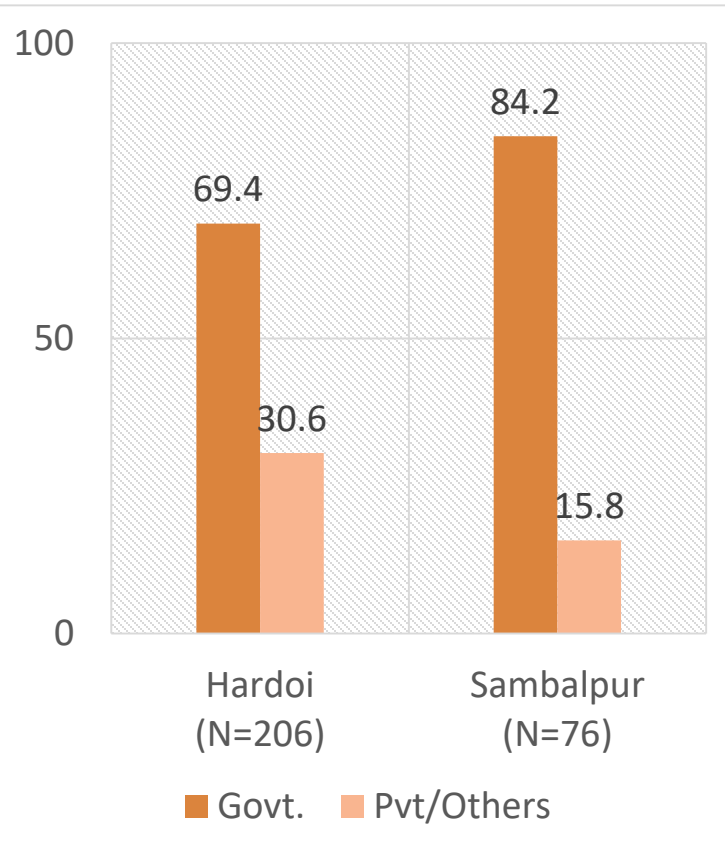| Study sites	Phase 1: GPS Mapping	Phase 2: Baseline school survey		Phase 3: End line survey		No. of children tested in baseline and end line assessments:	
	No. of villages surveyed	No. of schools surveyed at baseline	No. of children enrolled in Grade 8	Total children tracked	% children tracked as a proportion of children enrolled in grade 8	Language	Arithmetic
Total	592	282	11,264	9,868	87.6	3,123	3,713
Hardoi	207	206	9,187	7,939	86.4	1,932	2,467
Sambalpur	385	76	2,077	1,929	92.9	1,191	1,246

FINDINGS

Background: Elementary schools and Std VIII students surveyed at baseline

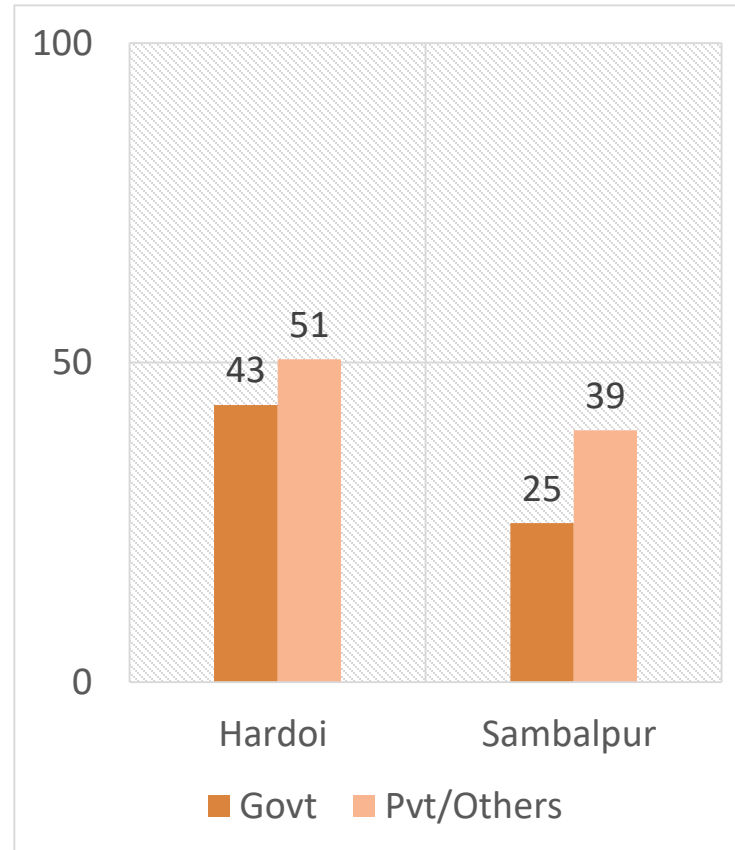More government schools (with Std VIII) were surveyed in both locations.

In both locations, surveyed private schools had relatively higher enrollments in Std VIII than government schools.

High student absenteeism, particularly in Hardoi, with less than 30% of enrolled Std VIII children present on both days of baseline survey.
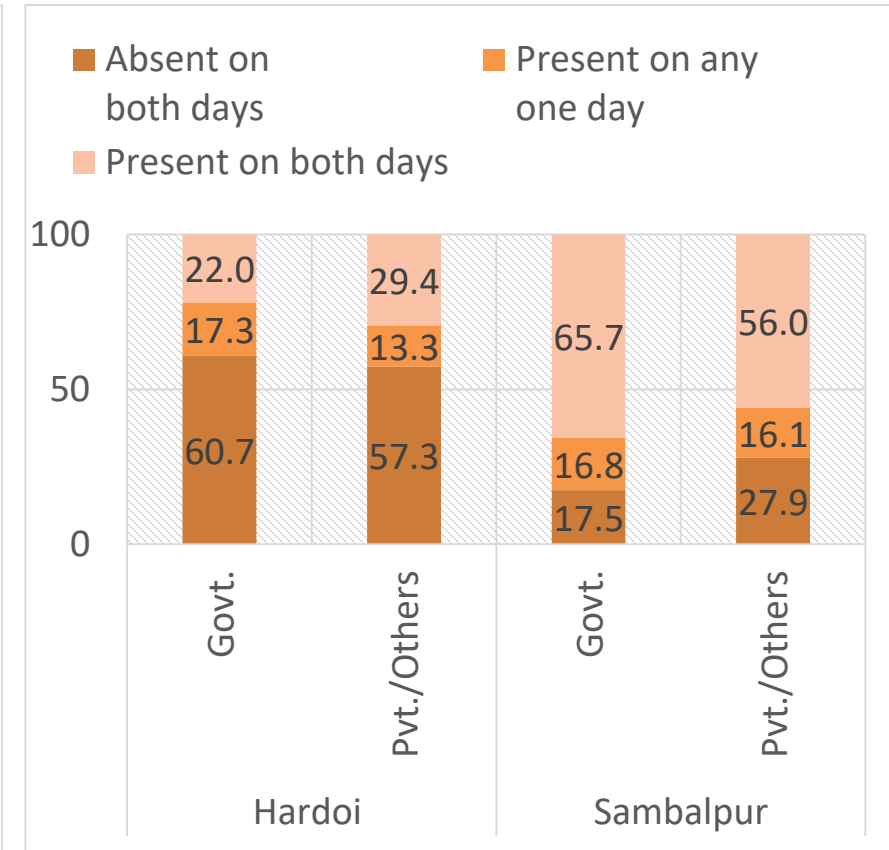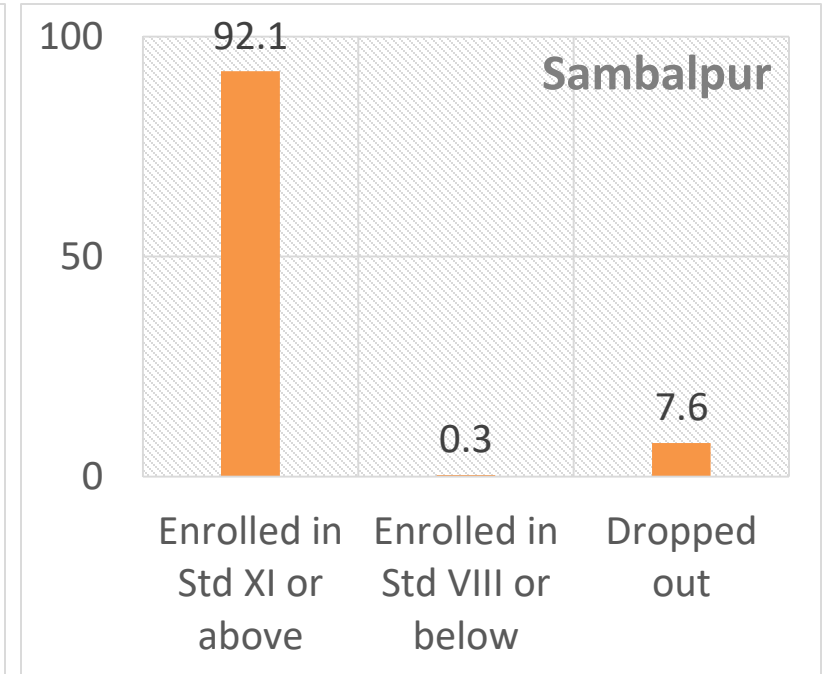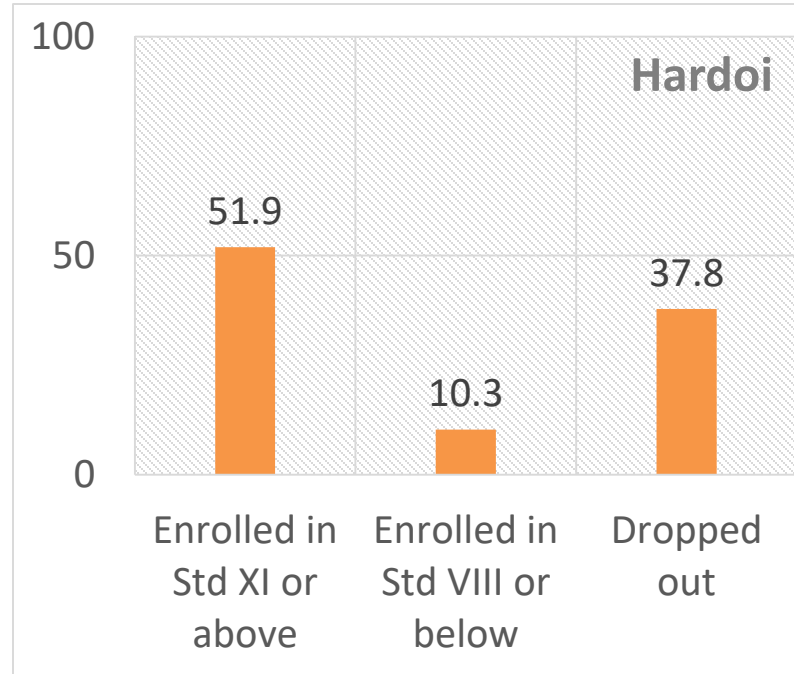
Schools (with Std VIII) surveyed (%)

- Hardoi (N=206): Govt. 69.4, Pvt/Others 30.6
- Sambalpur (N=76): Govt. 84.2, Pvt/Others 15.8

Legend: Govt. / Pvt/Others

Average enrollment in Std VIII

- Hardoi: Govt 43, Pvt/Others 51
- Sambalpur: Govt 25, Pvt/Others 39

Legend: Govt / Pvt/Others

% Std VIII students present

Legend: Absent on both days / Present on any one day / Present on both days

Hardoi Govt.: 60.7, 17.3, 22.0
Hardoi Pvt./Others: 57.3, 13.3, 29.4
Sambalpur Govt.: 17.5, 16.8, 65.7
Sambalpur Pvt./Others: 27.9, 16.1, 56.0

Major variations in post-Std VIIII transition trends between locations

All children
- Enrolled in Std XI or above: 60.0
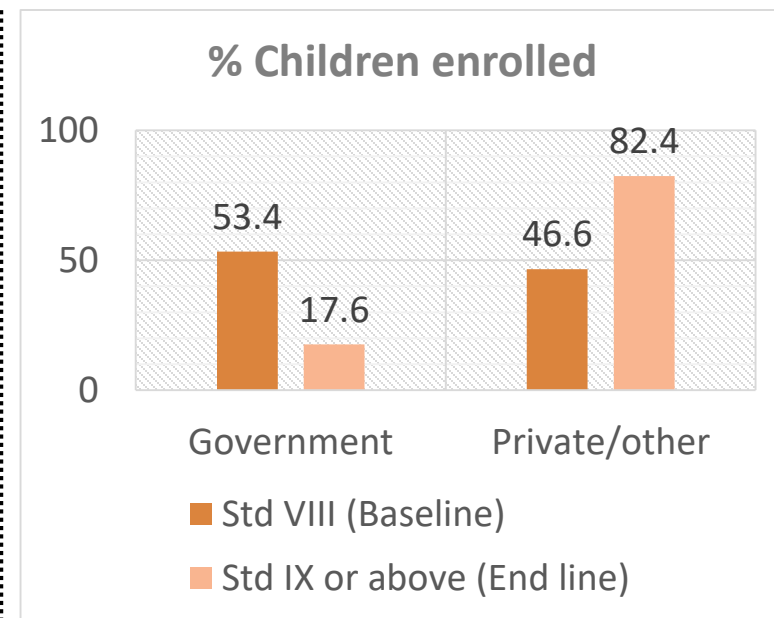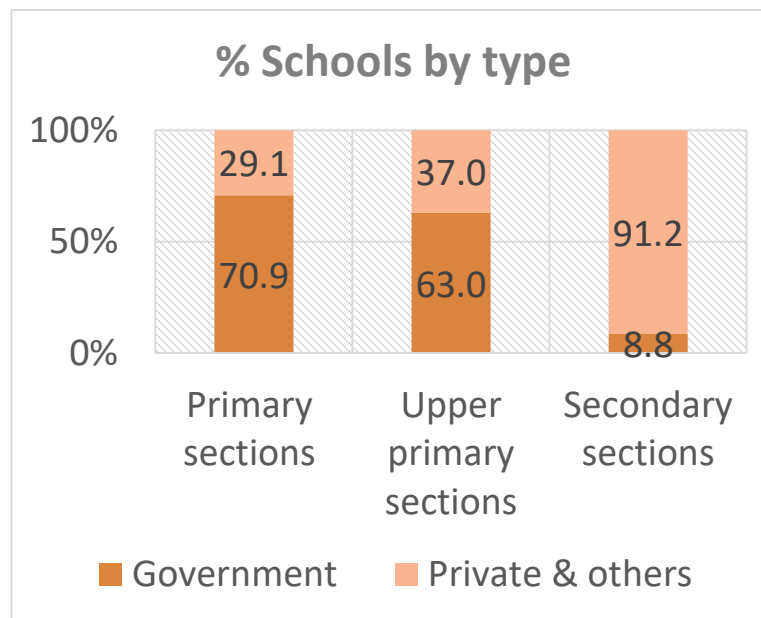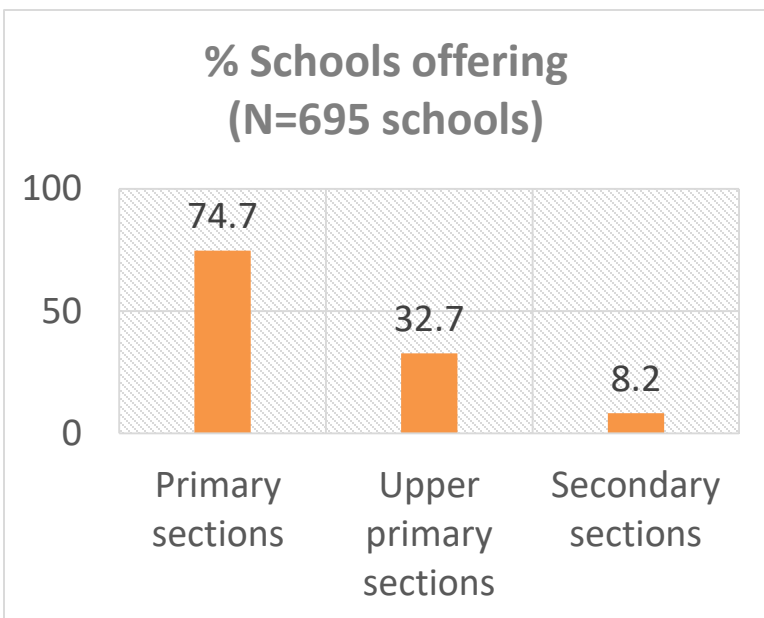- Enrolled in Std VIII or below: 8.3
- Dropped out: 31.8

Hardoi
- Enrolled in Std XI or above: 51.9
- Enrolled in Std VIII or below: 10.3
- Dropped out: 37.8

Sambalpur
- Enrolled in Std XI or above: 92.1
- Enrolled in Std VIII or below: 0.3
- Dropped out: 7.6
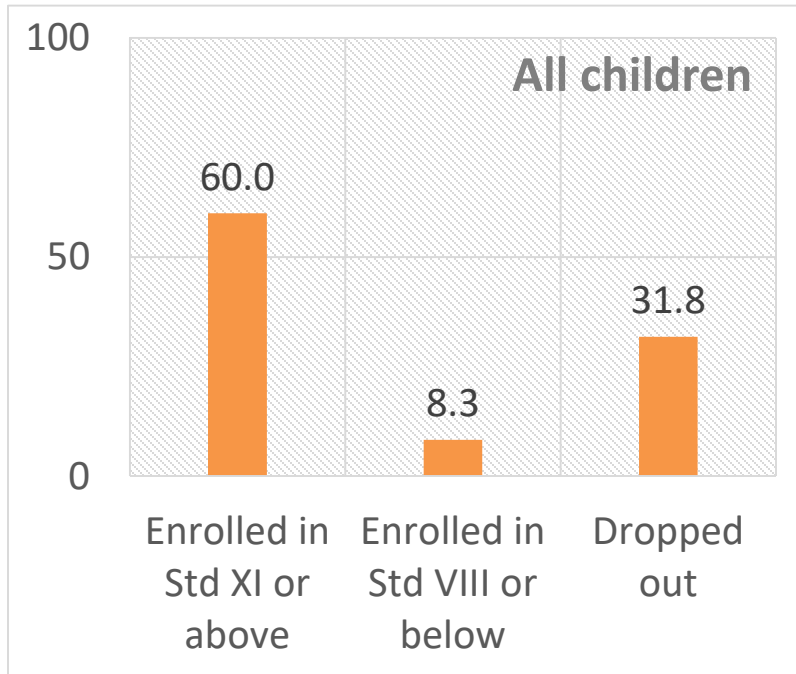
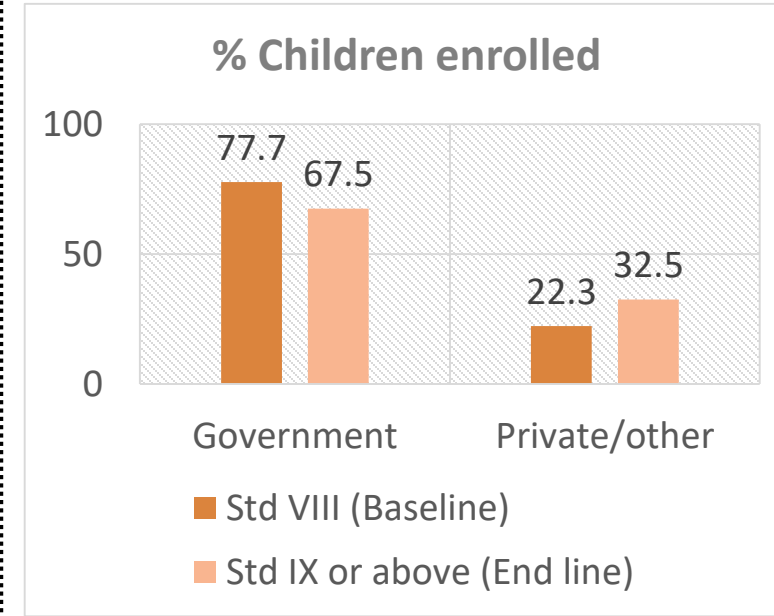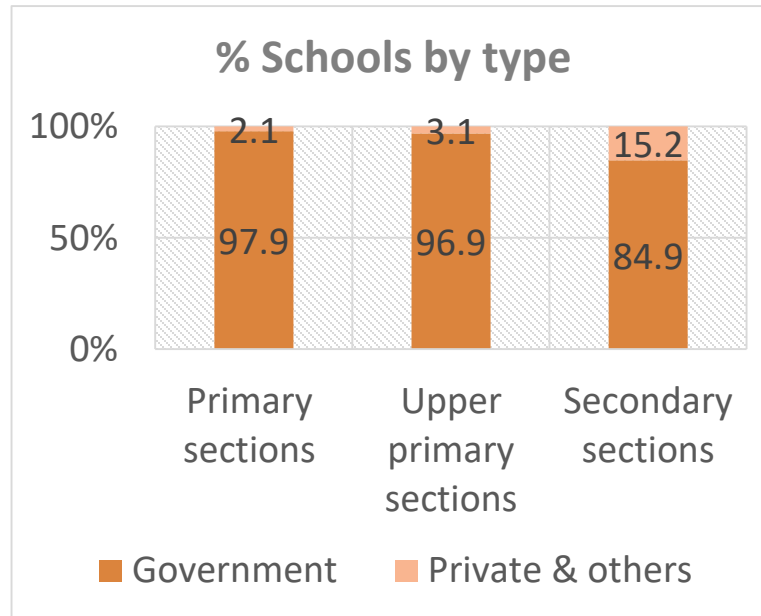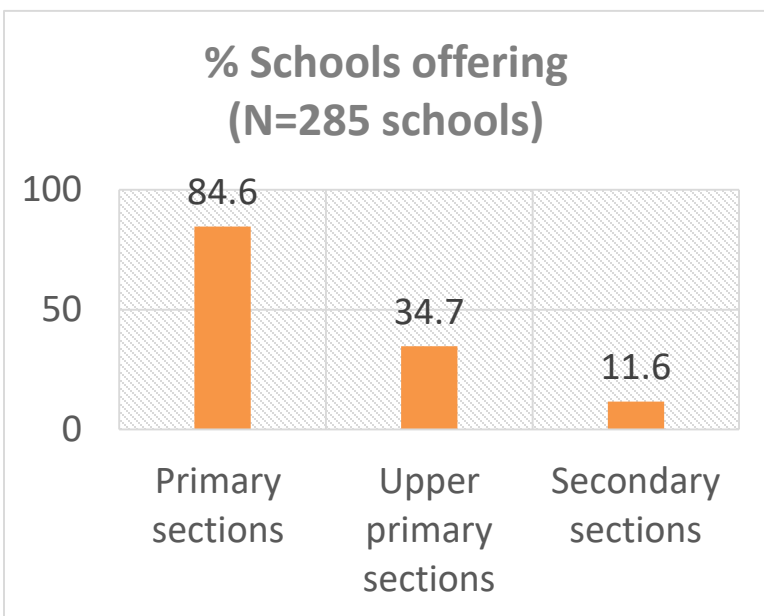- In Hardoi, close to 40% children dropped out after Std VIII (in Year 2). This proportion is less than 10% in Sambalpur.

- Progress is not necessarily linear, that is from Std VIII to Std IX. Unexpected transitions more visible among the cohort in Hardoi (10.3%). Transition in Sambalpur on the other hand is higher and in the expected direction - over 90% children transition to secondary school after Std VIII.

School transition post Std VIII mirrors provisioning trends in secondary

HARDOI

% Schools offering (N=695 schools)

	%
Primary sections	74.7
Upper primary sections	32.7
Secondary sections	8.2

% Schools by type

	Government	Private & others
Primary sections	70.9	29.1
Upper primary sections	63.0	37.0
Secondary sections	8.8	91.2

% Children enrolled

	Std VIII (Baseline)	Std IX or above (End line)
Government	53.4	17.6
Private/other	46.6	82.4

SAMBALPUR

% Schools offering (N=285 schools)

	%
Primary sections	84.6
Upper primary sections	34.7
Secondary sections	11.6

% Schools by type

	Government	Private & others
Primary sections	97.9	2.1
Upper primary sections	96.9	3.1
Secondary sections	84.9	15.2

% Children enrolled

|	Std VIII (Baseline)	Std IX or above (End line)
Government	77.7	67.5
Private/other	22.3	32.5

Learning levels in secondary grades fall short of curriculum expectations

In language (Hindi/Odia), written assessments tested children's proficiency on reading comprehension tasks, simple vocabulary and grammar.

In arithmetic, written assessments included questions on numeric operation, word problems, fractions and decimals, geometry and mensuration.

Learning assessment tools created after extensive textbook review and multiple rounds of pilot. Included tasks from Std IV to Std VIII level.

Mean percentage scores in language written assessment for children in secondary grades at end line
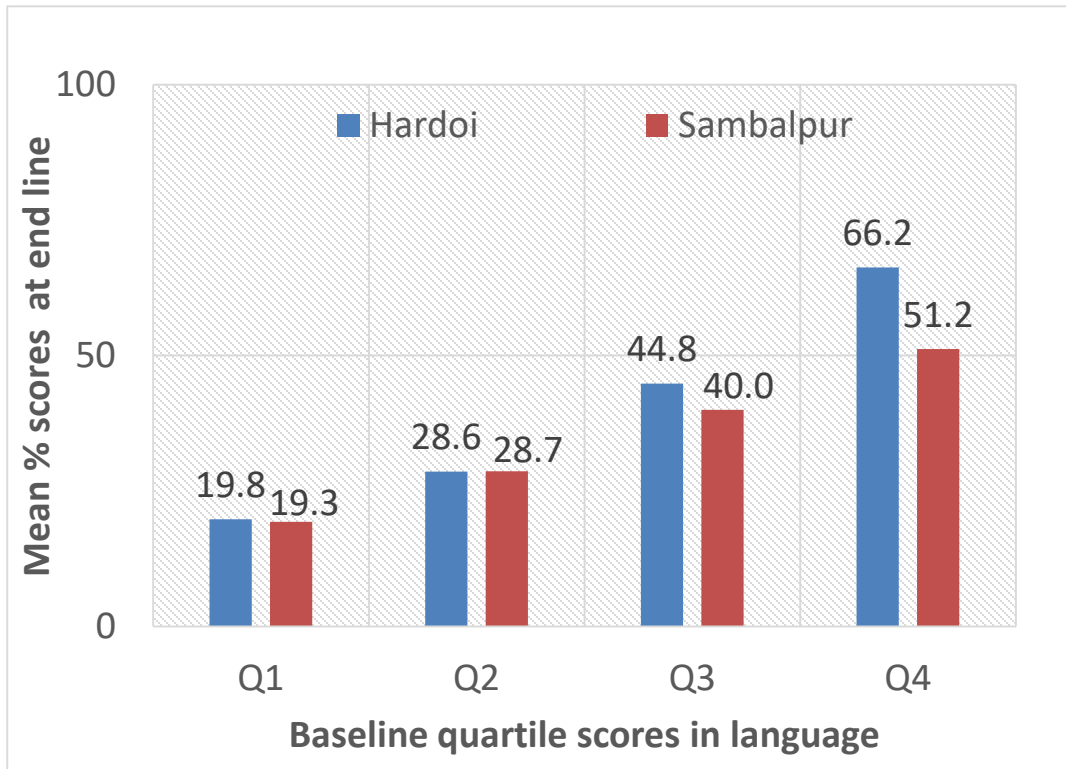
	Hardoi		Sambalpur	
	Baseline	End line	Baseline	End line
Score	32.2	39.4	34.0	36.2
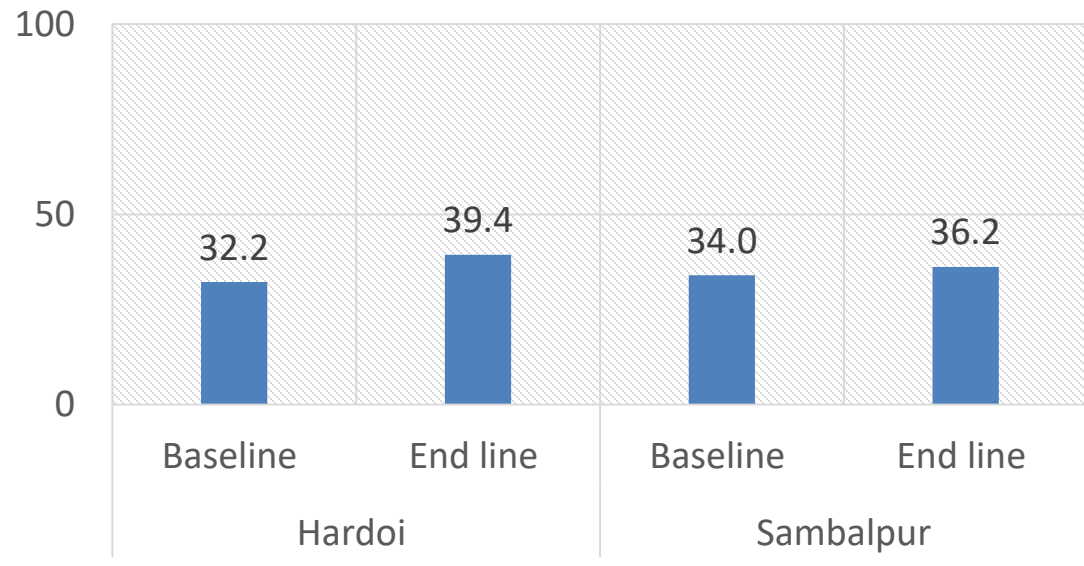
Mean percentage scores in arithmetic written assessment for children in secondary grades at end line

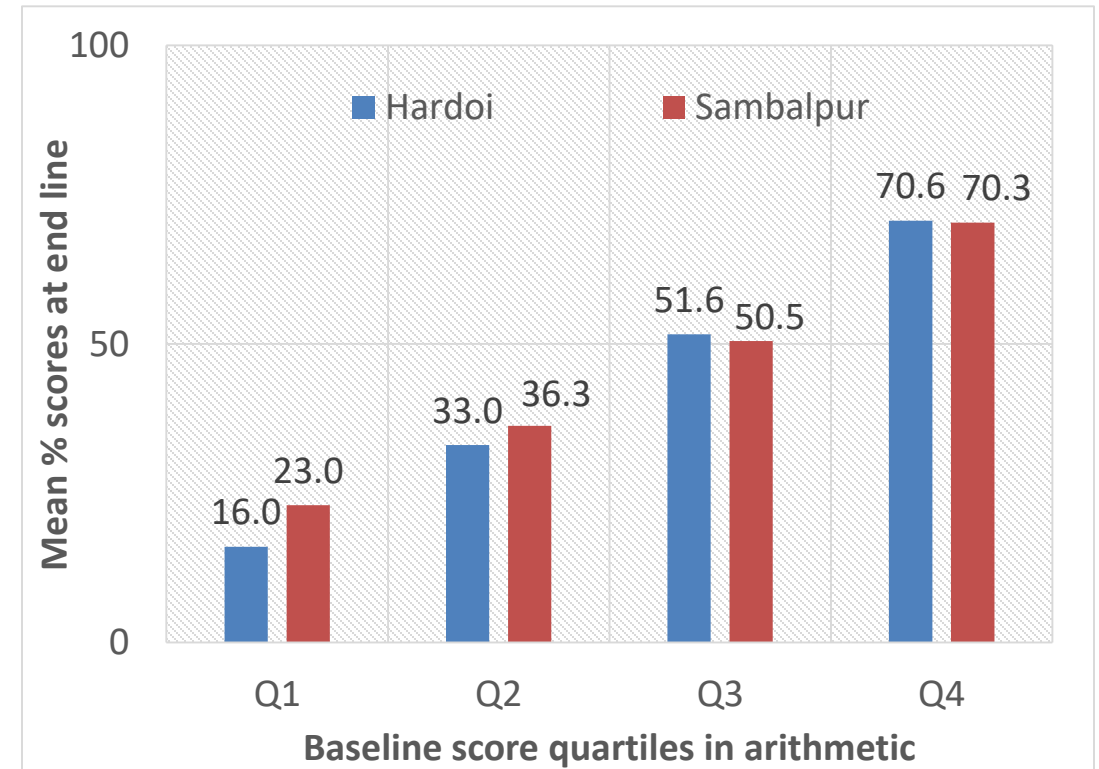|	Hardoi		Sambapur	
	Baseline	Endline	Baseline	Endline
Score	38.6	42.3	54.3	54.1
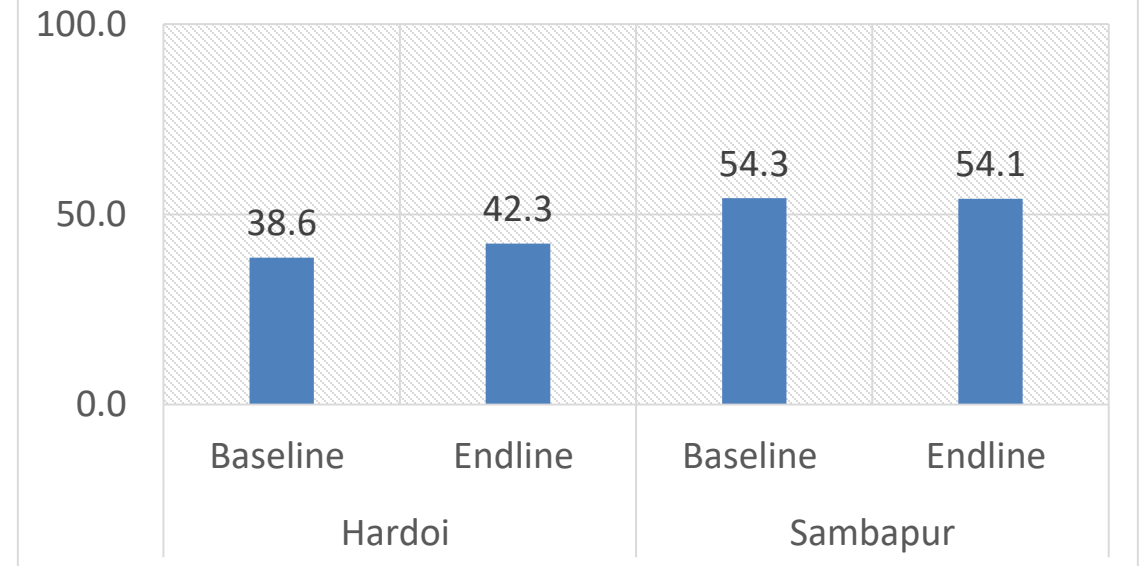
Students in secondary grades do not have similar levels of learning

In both locations and in both tests, there are major variations in student learning levels in secondary grades. Such diversity of learning levels in classrooms is bound to make the teaching-learning processes much more challenging for teachers and schools.

LANGUAGE WRITTEN TEST

ARITHMETIC WRITTEN TEST

Q 1. नन्ना को ''नख़रैलू'' नाम किसने दिया?

a) माँ ने ☐
b) जयन्त फूफ़ा ने ☐
c) नानाजी ने ☐
d) अशोक चाचा ने ☐
e) उत्तर पता नहीं ☐

Q 7. नन्ना ने चाट के लिए मना किया था पर उसने आइसक्रीम की माँग क्यों की?

a) क्योंकि नन्ना को चाट से ज़्यादा आइसक्रीम पसंद थी। ☐
b) क्योंकि नन्ना को सबक मिला कि सब चीज़ें माँगने से ही मिलती हैं। ☐
c) क्योंकि सब चाट खा रहे थे और नन्ना सबसे अलग चीज़ खाना चाहता था। ☐
d) क्योंकि नन्ना को एहसास हो गया था कि कोई उसकी खुशामद नहीं करेगा। ☐
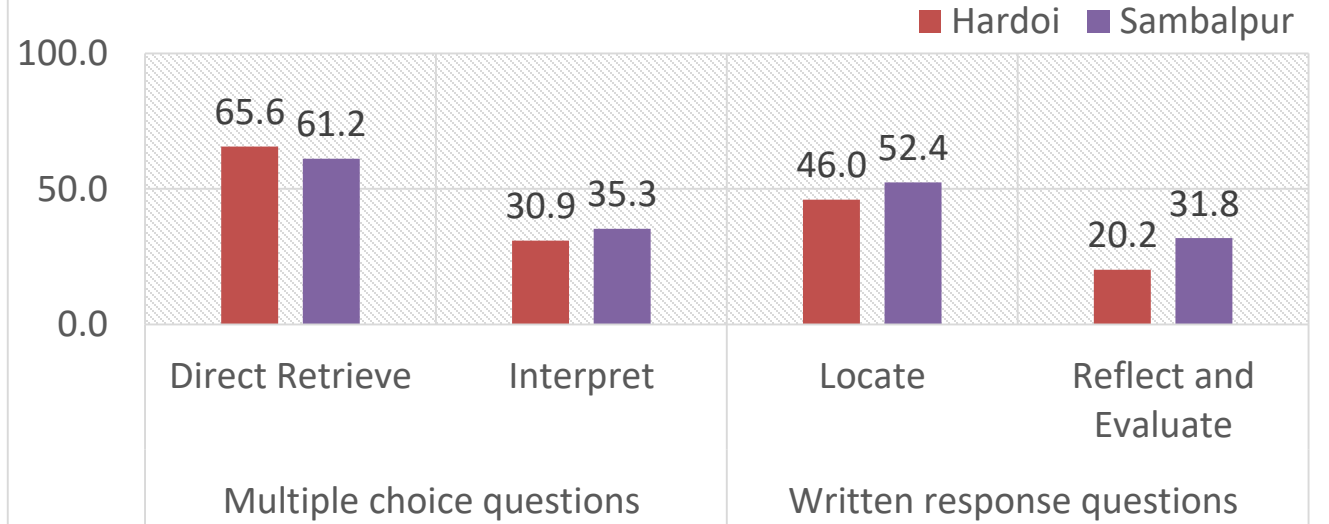e) उत्तर पता नहीं ☐

Q 3. नन्ना नख़रे नहीं करना चाहता था फिर भी हमेशा नख़रे करता था। यह बात कहानी के किस वाक्य से साबित होती है? वह वाक्य कहानी में से खोजकर लिखें।

उत्तर ....

Q 8. क्या पिकनिक पर नन्ना के साथ जो हुआ वह सही हुआ? हाँ या नहीं और क्यों?

उत्तर ....

At end line, % children in secondary grades who could correctly answer

Legend: ■ Hardoi ■ Sambalpur

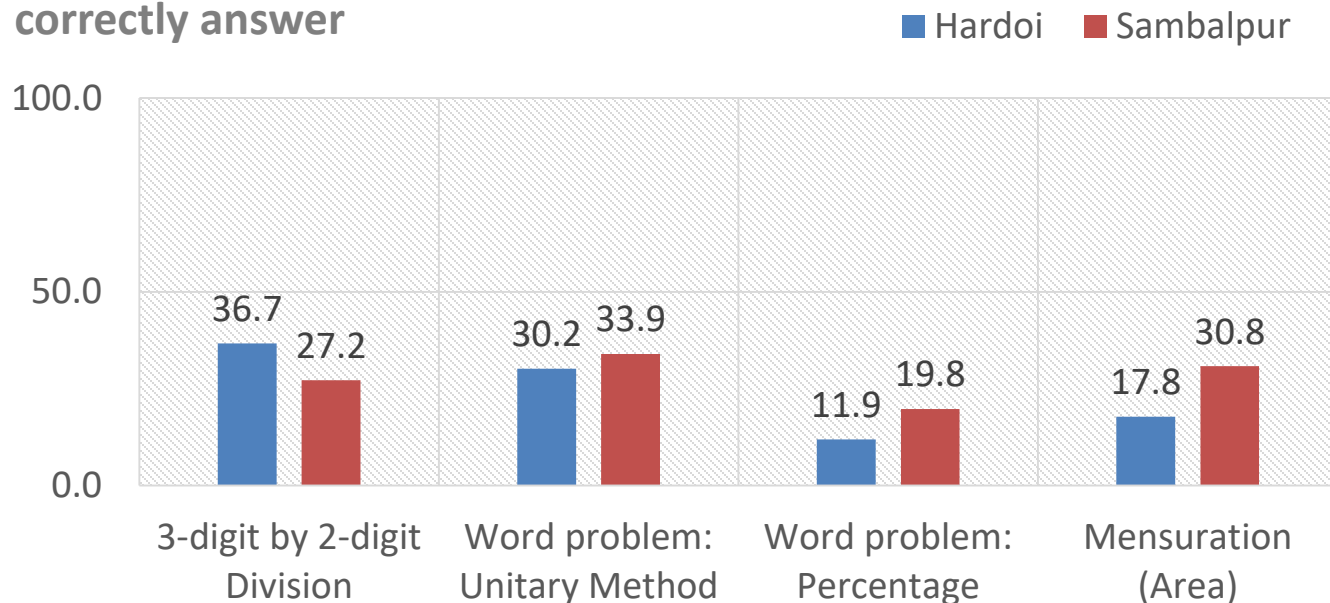|	Multiple choice questions		Written response questions	
	Direct Retrieve	Interpret	Locate	Reflect and Evaluate
Hardoi	65.6	30.9	46.0	20.2
Sambalpur	61.2	35.3	52.4	31.8

- Despite testing concepts from two to three grades below, students have very low levels of learning in language tests.
- Ability to answer comprehension questions (multiple choice and written) that require interpretive thinking is lacking. These skills are important for students in higher grades and life.
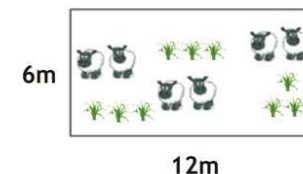
- Children's ability in solving key arithmetic questions is low despite eight years in school.
- About 6 in every 10 students in Hardoi and Sambalpur respectively **could not** solve a simple 3 by 2-digit division.
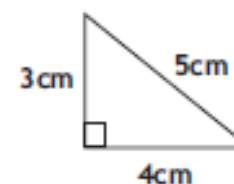
At end line, % children in secondary grades who could correctly answer

Legend: ■ Hardoi ■ Sambalpur

Category	Hardoi	Sambalpur
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

Q17. राजू के पास एक खेत है, जहाँ उसकी भेड़ चरती है। नीचे दिया गया चित्र राजू के खेत की लंबाई (Length) और चौड़ाई (Breadth) को दर्शाता है।

6m

12m

Q15. ଦିଆଯାଇଥିବା ତ୍ରିଭୁଜର (Triangle) ବାହାର ଲମ୍ବ ଅନୁସାରେ (Length of sides) ବର୍ଗୀକୃତ କର। ଉଚିତ୍ ଉତ୍ତର ପାଖରେ (✔) ଟିକ୍ ଚିହ୍ନ ଦିଅ।

3cm 5cm 4cm

i.) ସମବାହୁ ତ୍ରିଭୁଜ (Equilateral Triangle) ☐

ii.) ସମଦ୍ୱିବାହୁ ତ୍ରିଭୁଜ (Isosceles triangle) ☐

iii.) ବିଷମବାହୁ ତ୍ରିଭୁଜ (Scalene triangle) ☐

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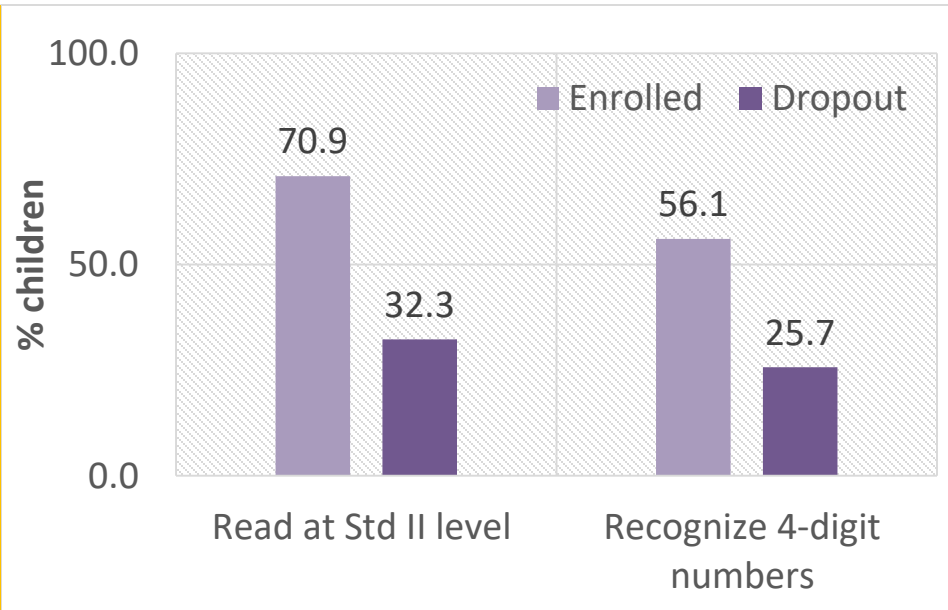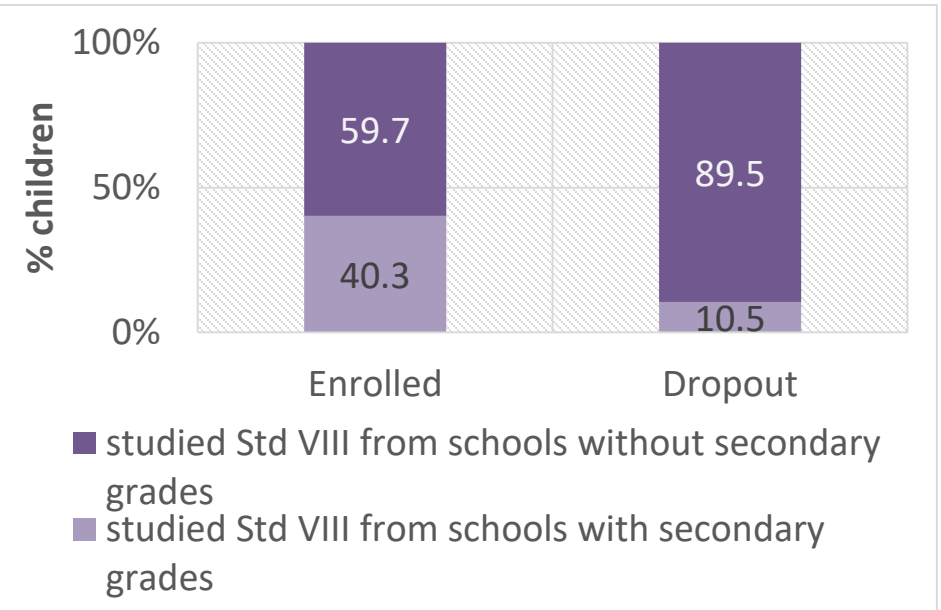
g)

20) 9 5 0

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

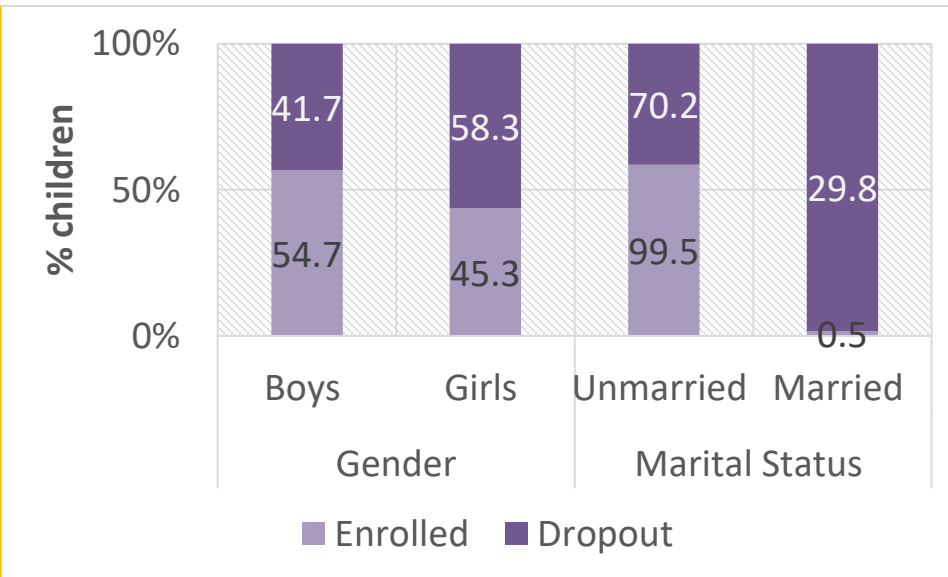# What factors affect school continuation after Std VIII?
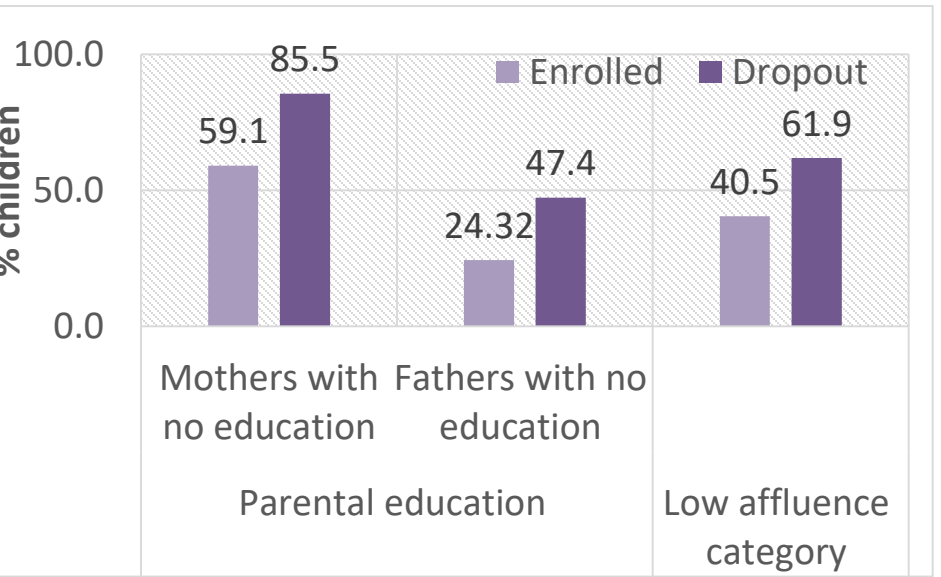

BASELINE LEARNING OUTCOMES

% children

- Enrolled
- Dropout

	Read at Std II level	Recognize 4-digit numbers
Enrolled	70.9	56.1
Dropout	32.3	25.7

GRADES OFFERED IN SCHOOLS

% children

	Enrolled	Dropout
studied Std VIII from schools without secondary grades	59.7	89.5
studied Std VIII from schools with secondary	40.3	10.5

GENDER & MARITAL STATUS

% children

	Boys	Girls	Unmarried	Married
Dropout	41.7	58.3	70.2	29.8
Enrolled	54.7	45.3	99.5	0.5

Gender — Marital Status

- Enrolled
- Dropout

PARENTAL EDUCATION & HH AFFLUENCE

% children

- Enrolled
- Dropout

	Mothers with no education	Fathers with no education	Low affluence category
Enrolled	59.1	24.32	40.5
Dropout	85.5	47.4	61.9

Parental education — Low affluence category

Summary of findings

- Much of the government school provisioning in surveyed blocks is concentrated at primary and upper-primary levels. At the **secondary school stage, private provisioning increases substantially** in both locations. **Trends in Hardoi are particularly startling** with over-dependence on private secondary schools.

- Considerable **student absenteeism** witnessed in **Std VIII** classrooms during baseline survey, although with **major differences between the study sites**. Regular attendance is one of the many requirements for ensuring continuous teaching-learning.

- Much higher proportions of students in Hardoi dropped out in study compared to Sambalpur. Several factors like prior learning levels, number of grades offered in school, gender, marital status, parental education and household affluence influence children's school continuation post Std VIII.

- Learning levels at the end of elementary school (Std VIII) are below expected levels. Students entering secondary schools have low levels of learning in language and arithmetic concepts taught in primary and upper primary grades. Important to ensure that students are proficient in these skills given the demands of curriculum in high school.

Implications of findings and recommendations

- If the Rashtriya Madhyamik Shiksha Abhiyaan (2009) goal of achieving universal access to secondary education is to be met, school provisioning at the secondary stage should be increased
  - This has clear implications for access to post-elementary education for children from disadvantaged backgrounds. Our data indicates that children from schools providing continuous education in both elementary and secondary grades, were less likely to drop out.

- Findings confirm that all factors being equal, children's prior learning levels are an important predictor of their continuation into secondary as well as later learning outcomes
  - It is therefore imperative that efforts to improve children's learning levels begin much earlier in their educational trajectories in order to, both improve transition from elementary to secondary education as well as ensure minimum levels of ability in language and arithmetic.

Study on access, transition and learning in secondary education