

Progress through primary school in rural India: Evidence from a longitudinal study

Suman Bhattacharjea, Director, ASER Centre, New Delhi. sbhattacharjea@gmail.com

Wilima Wadhwa, Director, ASER Centre, New Delhi. wilima.wadhwa@gmail.com

Purnima Ramanujan, Senior Research Associate, ASER Centre, New Delhi.

purnima.ramanujan@asercentre.org

**UKFIET International Conference on Education and Development – Education
& Development Post 2015: Reflecting, Reviewing, Revisioning.
Oxford, 10 – 12 September 2013**

Sub-theme: Evidence and knowledge

Abstract:

In 2012, more than 96% of all children age 6-14 in rural India were enrolled in school. This figure has been well over 90% for close to a decade. India is thus well on its way to achieving the MDG goals for education. However, enrolment in school does not automatically translate into regular attendance; and neither enrolment nor attendance ensures that children acquire even basic abilities in reading and mathematics. A growing body of research in India shows that while children may be in school, they are not learning; and that improved provisioning and infrastructure does not contribute to better learning outcomes.

This paper will summarize emerging findings and conclusions from an ongoing longitudinal study of primary school children. The original study tracked about 30,000 Grade 2 and Grade 4 students over a period of 18 months (2009-2011). It assessed gains in student learning over this period and related these to household, classroom, school, and teacher related factors. In a subsequent stage, a subset of these students has been tracked for an additional 2.5 years. This paper will present preliminary findings for this subset of children who have now been tracked for 4 years. It will analyse learning trajectories and patterns of transition as children move from early primary to upper primary classes, and relate these to the larger (classroom, school and home) context in which these children live. The paper will focus on key issues requiring attention from policy makers if learning, rather than schooling, is to be guaranteed to all children.

Introduction

During the last decade India has made enormous progress towards universalizing access to elementary education. According to all available statistics, today over 96% of children in the elementary school age group (6-14 years) are enrolled in school. This is an impressive achievement given the size and diversity of the country. Substantial progress has been made with respect to provisioning in terms of buildings, classrooms, teachers, textbooks and other facilities. However, a growing body of evidence points to the conclusion that children are far below the standards established by both the Indian curriculum framework and international benchmarks in terms of learning outcomes.

Data from the Annual Status of Education Report (ASER), a national survey that annually assesses basic reading and arithmetic skills of about 600,000 children in the 5-16 age group across all rural districts of India, show that in every state, children in primary school are struggling even with basic reading and arithmetic.¹ Nationally, about half of all children in grade 5 are unable to read a grade 2 level text; outcomes in arithmetic are even poorer. Despite substantial increases in budgetary allocations to the elementary education sector, this situation has not improved over the eight year period for which ASER data is available. Findings from other large scale assessments, including those conducted by the Government of India, utilize different tools and methodologies, but also suggest that children are not at the level expected of them by the curriculum.² Not surprisingly, then, the results achieved by the two Indian states that participated in the 2009 round of PISA put them almost at the bottom of the ranking of 74 participating countries – ahead only of Kyrgyzstan.

On April 1 2010 the Right of Children to Free and Compulsory Education Act (hereafter RTE) became law in India. The new law makes it the responsibility of the state to ensure that every child in the age group 6-14 in India receives eight years of education. The spirit of RTE clearly intends 'education' to go beyond access and guarantee *learning* for all. However, what the law actually specifies are the inputs that should be present in schools (in the form of buildings, facilities, teachers, etc.) rather than the outcomes that children should be guaranteed (in the form of specific learning benchmarks). It thus makes a series of assumptions about how the inputs it mandates will translate into processes in schools and outcomes for children. These assumptions are based on how schools should, in theory, be organised and function rather than on the realities of children, classrooms and schools in India today.

¹Pratham, *Annual Status of Education Report 2005-2012*. Available at www.asercentre.org.

²For example: Educational Initiatives, *Municipal School Benchmarking Study 2007*, available at: http://www.ei-india.com/wp-content/uploads/EI_WP_Series_6_-_Municipal_School_Benchmarking_Study.pdf. Limited data from the National Council for Educational Research and Training's periodic National Achievement Surveys are available in the public domain; a summary from the most recent grade 5 assessment is available at <http://www.ssatcfund.org/LinkClick.aspx?fileticket=9EVS6D4hOG0%3D&tabid=2478>

In this paper we use evidence from several sources to argue that some key assumptions underlying RTE are not valid in the context of schools in rural India today, and will not help to move the country further along the path towards ensuring access to quality education for all children. Moving from guaranteeing access to ensuring that all children learn requires going beyond the provision of inputs to rethinking how resources can best be organised within schools in order to facilitate learning.

First, RTE's focus on ensuring that all children are in school translates into a directive that all children should be *enrolled*. In India, enrolment figures for the 6-14 age group have been in excess of 90% for many years now. But unlike in western countries, enrolment is a highly misleading indicator of children's actual exposure to school. An examination of children's attendance provides far more accurate information about children's actual participation in school and can provide important insights into where educational policy should focus in order to ensure that all children learn.

Once in school, what is the content that children should be expected to learn? RTE has little to say about children's learning outcomes; however it does require teachers to complete the curriculum of the grade they are teaching. Clearly, then, it is assumed that all children are at a level of mastery where they are able to keep up with the content prescribed for the grade in which they are enrolled, such that when teachers have finished the syllabus, presumably children have mastered its contents. We present evidence from several sources to show that this is very far from being the case in rural India today. Large proportions of children are two or more grade levels behind where the curriculum expects them to be able to be. Ensuring that children learn therefore requires either that the curriculum be redesigned in line with children's actual abilities, or that remedial programs be instituted on massive scale to enable children to catch up.

Finally, we examine the assumption that children in school today are enrolled in the age-appropriate grade. The elementary education system and RTE both assume that children enter school at a certain age and advance a year at a time through the system, such that children enter grade 1 at age 5 or 6 and complete eight years of schooling at age 13 or 14. In fact, large proportions of children in school today are overage for the grade they are enrolled in. We provide evidence to show that overage children attend school less often and learn less than their peers. While RTE requires all states to provide age-grade mainstreaming support for the small proportion of children still out of school, reality on the ground shows that if schools are to be organized by age and grade, then age-grade mainstreaming is needed on a massive scale for children already in school.

We focus these analyses on students in grade 4 in government schools.³ In the Indian elementary education structure grade 4 is usually the penultimate year of primary school

³ Enrolment in private schools is growing rapidly in India. However, in 2012, 67% of children age 6-14 were still attending government schools (ASER 2012).

(grades 1-5), which is followed by upper primary school (grades 6-8).⁴ Transitioning from grade 5 to grade 6 often requires children to change schools and travel longer distances to school.⁵ Before the introduction of the RTE, grade 5 was also the grade in which students were required to pass an examination in order to be promoted to grade 6. Additionally, it was often the level of schooling at which girls, by now at the age where they were approaching puberty, would be taken out of school. For all of these reasons grade 5 has historically seen the highest dropout rates of any grade in the primary school years.⁶

A focus on grade 4 thus enables us to examine what children have learned during their first three years in school and also what happens to them as they reach the stage of transitioning from primary to upper primary school. These analyses are of crucial importance if RTE is to achieve its goal of guaranteeing eight years of grade-appropriate learning to all children.

Data sources

The analyses presented in this paper draw on three data sources.

First, the Annual Status of Education Report (ASER), facilitated every year since 2005 by the non government organization Pratham,⁷ provides annual cross sectional data on schooling status and basic learning outcomes for children in the age group 5-16 in rural India. ASER provides the only annual large-scale measurement of children's learning available in India today. Unlike other learning assessments in India and elsewhere, ASER is household-rather than school-based, in order to reach children in different kinds of schools as well as those not currently attending school. A common set of tools and procedures are used to administer a reading assessment whose highest level of difficulty consists of asking a child to read a short text at grade 2 level of difficulty.⁸ The most difficult question in the arithmetic assessment involves asking the child to solve a three digit by one digit division problem, commonly taught in grade 3 or 4. Assessments are administered one on one with each child, and the same tools are used with all children in the 5-16 age group regardless of grade or schooling status.⁹

⁴ In some states primary school comprises grades 1-4.

⁵ Government of India policy states that a primary school must be available within 1 Km and an upper primary school within 3 Km of every habitation.

⁶ The grade 5 dropout rate has been estimated at 20.4%. See Mehta, Arun (2007).

⁷ Established in 1996, Pratham is a non profit organization working in the field of education. Pratham implements a variety of interventions in villages and urban slums across India, in line with its mission of "every child in school and learning well".

⁸ Texts are prepared in 16 regional languages, including English.

⁹ ASER reports for 2005-12 are available at www.asercentre.org

Second, the Inside Primary Schools (IPS) data set contains a rich range of data from a longitudinal study conducted by ASER Centre¹⁰ of close to 30,000 grade 2 and grade 4 students who were randomly sampled from 900 government primary schools located in 5 major Indian states (Andhra Pradesh, Assam, Himachal Pradesh, Jharkhand and Rajasthan). This study tracked sampled students over the course of about fifteen months (2009-2010) in order to answer two basic questions. First, what is the “value added” in terms of learning that children acquire during a year in school? And second, what school, classroom and household factors are associated with better or worse learning outcomes? In addition to a baseline and endline learning assessment in language and mathematics,¹¹ the study included three visits to each sampled child, during which extensive information was collected on their schools, classrooms, teachers and households. A first set of findings from this study was published in 2011.¹²

Third, a subset of students in the IPS sample was tracked for two additional years beyond the end of the original study. All sampled students in Ajmer district (Rajasthan) and Medak district (Andhra Pradesh) were tracked in early 2012, about eighteen months after the original endline assessment; and again one year later, in early 2013. Details about children’s schooling status were recorded in both follow up visits, and the 2013 visit also included a third round of learning assessments in language and mathematics. Overall, 90% of the sub-sample was located in the most recent (2013) visit and of the children located, about 94% were administered the new assessment. This data set thus captures progress made by 1,072 individual children in reading and arithmetic over a period of three and a half years, from grade 2 to 5 for about half the sample and from grade 4 to 7 for the other half.

Assumption 1: Enrolment figures reflect children’s participation in school

Teachers and students must be physically present in school in order for the curriculum to be transacted and for “learning” (however defined) to occur. While there has been considerable debate over teacher absenteeism in recent years,¹³ the much more serious problem of student absenteeism has received far less attention.

¹⁰ ASER Centre is the autonomous research and assessment unit of Pratham. The IPS study was supported by UNICEF and UNESCO.

¹¹These were not grade level assessments, since prior experience has shown that few children are at grade level in terms of mastery. The assessments tested a range of competencies that children would have been expected to master in prior grades. For example, the language assessment for grade 4 tested the child’s ability to read grade 3 level text; to comprehend simple text, to correctly write dictated words, and to write answers to fact retrieval questions based on a text.

¹²Bhattacharjea S, Wadhwa W, Banerji R (2011), Inside Primary Schools: A study of teaching and learning in rural India. New Delhi: ASER Centre. Available at www.asercentre.org

¹³ For example, a study conducted by Kremer et al (2005) found that 25% of primary school teachers were absent and about 50% were actually teaching during unannounced visits to a nationally representative sample of government primary schools. More recent studies have been conducted by the Government of India among others (see Footnote 14 below).

International and national policy documents use different measures of enrolment as the standard indicators of children’s access to schooling. RTE also emphasizes enrolment, requiring states to ensure that every child in the 6-14 age group be enrolled in school. This may make sense in OECD countries, where children who are enrolled in school do in fact attend school regularly. But this is not the case in India and in many developing countries. Being enrolled in school means only that the relevant information about a child has been recorded in the school register. It has little bearing on how often that child is actually present in school.

The government of India routinely tracks and releases enrolment statistics at district, state and national level. From these and other statistics such as those produced by ASER, we know that more than 96% of children age 6-14 are currently enrolled in school; and that enrolment has been more than 90% for close to a decade. Although individual schools maintain child-wise attendance records, these data are neither routinely scrutinized nor systematically aggregated.

Every year, the ASER survey includes a visit to the largest government primary school in each sampled village. During this visit, class-wise enrolment and attendance figures are recorded. Data for 2012 reveal that nationally, 71% of all children enrolled in primary schools (grade 1-5) were present in school on the day of the survey. Across states this proportion varies substantially, from 94% in Kerala to 50% in Bihar.

Data from a single day in the year provides a first estimate of the magnitude of the problem, but is insufficient to draw conclusions about attendance patterns among children. The IPS study recorded the attendance of each sampled child individually on each of three visits to their schools over a period of fifteen months. Among the grade 4 children sampled, less than half were found present in school on all three visits; attendance among grade 2 students was substantially poorer (Table 1).¹⁴ Not reflected in the table is the fact that these numbers also vary enormously from state to state.

Table 1. Attendance of sampled children in the IPS study over 3 visits, 2009-10

Grade	N	Attendance (%)				Total
		Not present on any visit	Present on one visit	Present on two visits	Present on all 3 visits	
Grade 2	15,001	5.4	19.7	33.4	41.5	100
Grade 4	14,342	2.3	12.7	31.9	53.1	100

Source: Inside Primary Schools

¹⁴ A study conducted by Government of India estimated that during 2006-7 the overall average attendance of children in primary school (grade 1-5) was 69%, substantially worse than average teacher attendance during the same period. This study also showed that attendance rates improved between grade 1 and grade 4 but that there was considerable variation across states. A summary of the study is available at <http://www.educationforallinindia.com/study-on-students-attendance.pdf>

Attempts to relate children's enrolment status to their learning outcomes thus confront the problem of substantial variation in the actual exposure to school that individual children have received. The following sections of this paper will show that analysis of attendance data can provide important information about the characteristics of children who attend school regularly versus those who do not. With the goal of universal primary school enrolment very close to being met, translating enrolment into attendance and attendance into learning are the challenges that lie ahead. Regular collection and analysis of data on children's attendance is a vital next step.

Assumption 2: Children in school are at grade-appropriate levels of learning

A basic assumption underpinning the education system in India, as elsewhere in the world, is that children in a given grade have mastered the content transacted in lower grades: for example that a child in grade 3 has understood the content taught in grades 1 and 2. Thus the curriculum for each grade builds on that of previous years, and textbooks gain rapidly in complexity in terms of concepts as well as language.

This assumption is reflected in a number of provisions of the RTE Act, which spells out the roles and responsibilities of teachers in some detail. Among a series of clauses pertaining to teachers' duties, it explicitly requires teachers to *complete the entire curriculum within the specified time*, presumably meaning the academic year (RTE Act, Clause 24 (1) (c)). The following clause requires teachers to *assess the learning ability of each child and accordingly supplement additional instructions, if any, as required*. As we shall see in this section, bringing children from where they are currently up to grade level is not a matter of providing supplemental help to a small number of children to enable them to catch up. In fact, very few children in school are at grade level and most are two or more years behind where the curriculum expects them to be.

In India, as elsewhere, the curriculum for each grade is transmitted to teachers and children via textbooks. All teaching-learning is anchored by the textbook, which is very often the only reading material available in students' homes.¹⁵ Policy makers, administrators, and teachers themselves routinely view "completing the textbook" as teachers' primary task. The underlying assumption is that children are at the level required by their textbooks and that if they are unable to keep up, it is their own or their families' fault.¹⁶

¹⁵ Textbooks are supplied free of charge to all students in government school. In the IPS study, most of the close to 30,000 children sampled had no other literacy material at home other than school textbooks.

¹⁶ In an anonymous questionnaire administered to about 2,000 teachers as part of the IPS study, more than half of responding teachers felt that lack of parental help was the most important reason for children's inadequate learning. An even higher proportion disagreed completely with the statement "The school doesn't provide support to children who aren't learning well".

However, there is by now a substantial body of evidence about what children in each grade can and cannot do. ASER data for 2005 to 2012 shows that in every state in the country, children are several grade levels behind where the textbook expects them to be in terms of their ability to read. For example, in 2012, less than a third of students in grade 3 in government schools were able to read text at grade 1 level of difficulty, and barely 40% of students in grade 5 were able to read text at grade 2 level of difficulty.¹⁷ These proportions have worsened steadily over the period 2009-12 (Table 2).

Table 2. Reading levels of children in government schools, All India, 2009-2012

Year	2009	2010	2011	2012
Grade 3 students who could read a grade 1 level text (%)	43.8	42.5	35.2	32.4
Grade 5 students who could read a grade 2 level text (%)	50.3	50.7	43.8	41.7

Source: Annual Status of Education Report 2009-2012

Although the language assessments used in the IPS study included several other domains in addition to reading, they contained some questions that are similar to the ASER reading questions. For example, students in the IPS grade 4 sample were asked to read a grade 3 level passage whereas in ASER, the highest level tested comprises a grade 2 level passage. A comparison of data from IPS and ASER for Andhra Pradesh and Rajasthan, the two states common to all three data sets used for this paper, show that despite differences in sampling and tools, results across these two data sources are broadly consistent. Although these two states are quite different in terms of what children can do, in both states, a substantial majority of children are at least two grade levels behind where they are expected to be in terms of reading ability (Table 3).

Table 3. Reading ability among children studying in grades 4 and 5 in government schools in Andhra Pradesh and Rajasthan, 2009 and 2010

State	% children who could read fluently at grade 2 level (ASER)		% children who could read fluently at grade 3 level (IPS)	
	2009 Grade 4 students	2010 Grade 5 students	2009 Grade 4 students (Baseline)	2010 Grade 5 students (Endline)
AP	38.7	57.0	29.6	35.5
RJ	19.9	44.2	16.5	20.4

Source: Pratham, Annual Status of Education Report 2009 and 2010; ASER Centre, Inside Primary Schools (2011)

The ability to read is fundamental to making progress in school. The consequences of being unable to read become more serious as children progress to higher grades, and textbooks

¹⁷ Texts were prepared on the basis of an analysis of grade 1 and 2 textbooks in all states.

become increasingly complex. India has an automatic promotion policy that enables children to progress from one grade to the next regardless of their mastery of content.¹⁸ Given systems to identify children who need additional support, those who are falling behind could perhaps access the additional help they need. But in the absence of such systems, what happens to individual children as they continue to be promoted to higher grades? Longitudinal data from the IPS study and its follow up provide some answers.

In the context of poor attendance and poor learning outcomes, it is not clear whether children whose attendance is poor learn less, or whether children who are not learning attend school less often. For the IPS sample, we do not know whether children who were unable to read in 2009 had attended school less often over the preceding three years than children who could read. What the IPS data do show is that grade 4 children who were able to read grade 3 level text in 2009 attended school more often during the subsequent year than those who were not readers (Table 4).¹⁹ It may be that household characteristics drive both reading ability and attendance, such that children from more affluent homes and/or with more educated parents learn to read faster and attend school more regularly. But it is likely that even limited success in school encourages children to attend more often, whereas the experience of being completely unable to follow the textbook acts as a discouragement.

Table 4. Relationship between baseline reading level and subsequent attendance in school

Grade 4 children who were:	Completely unable to read grade 3 level text in baseline	Able to read grade 3 level text, haltingly or fluently, in baseline	Total
Not present on any visit	44.9	55.1	100
Present on one visit	35.9	64.1	100
Present on two visits	32.9	67.1	100
Present on all 3 visits	26.7	73.3	100
All children	31.5	68.5	100

Source: Inside Primary Schools (full sample)

How did these children’s reading ability develop between grade 4 and grade 5? Among the full IPS sample of more than 10,000 grade 4 children, more than a third of those children who had been completely unable to read grade 3 level text in 2009 were still unable to do so a year later (Table 5). Overall, 10% of children in grade 5 were completely unable to read a text at a level of difficulty two grades below.

¹⁸ Until 2010 this policy was in effect until grade 5; the RTE Act, implemented in 2010, has extended the automatic promotion policy through grade 8.

¹⁹ All sampled children were assessed, whether or not they attended school on the day of the visit. Children absent from school were tracked to their homes.

Table 5. Progress in reading ability from grade 4 to grade 5

Reading ability	N	%
Children who were completely unable to read grade 3 level text in baseline (grade 4) or endline (grade 5)	1089	10.9
Children who were completely unable to read grade 3 level text in baseline (grade 4) but could do so in endline (grade 5)	2052	20.5
Children who could read grade 3 level text in baseline (grade 4), haltingly or fluently	6874	68.6
All children	10015	100

Source: Inside Primary Schools (full sample)

By early 2013, the children originally sampled from grade 4 should have been in grade 7. The follow up tracking of a subset of the IPS sample shows that of the 566 children who were located, 93% were still enrolled in school. However, the proportion of children who had dropped out of school was more than twice as high among children who had been non-readers (i.e., completely unable to read a grade 3 level text) in 2009, than among those who had been able to read (Table 6). Of the group of children who were non readers in 2009, fully 10% were no longer in school, as compared to 5% of those who had been able to read. The higher dropout rate was in evidence even among the children in this sample who had learned to read in the interval between baseline and endline.

Table 6. Relationship between reading ability and schooling status

Reading ability (2009)	N	Schooling status (2013)		
		Enrolled	Dropped out	Total
Completely unable to read grade 3 level text during grade 4 assessment in 2009	242	90.5	9.5	100
Able to read grade 3 level text during grade 4 assessment in 2009, haltingly or fluently	324	95.4	4.6	100
Total	566	93.3	6.7	100

Source: ASER Centre, Inside Primary Schools (2011) and follow up sample

What about those children who continued in school?

In 2013, the third learning assessment tested these children's ability to read at grade 5 level – two years lower than the grade in which they were now enrolled. A clear progression is visible in the proportions of children who were able to read this text (Table 7). Children who had been readers in grade 4 were best able to negotiate the new reading assessment. But 40% of those who had been at least two years behind when they were in grade 5 continued to be two or more years behind in grade 7.

Table 7. Progress in reading ability from grade 4 to grade 7

Children who were:	N	Ability to read grade 5 level text in grade 7 (2013)		
		Completely unable to read	Able to read, fluently or haltingly	Total
Completely unable to read grade 3 level text in either grade 4 (2009) or grade 5 (2010)	55	40.0	60.0	100
Completely unable to read grade 3 level text in grade 4 (2009), but able to do so in grade 5 (2010)	155	15.5	84.5	100
Able to read grade 3 level text in grade 4, haltingly or fluently	304	5.6	94.4	100
All children	514	12.3	87.7	100

Source: Inside Primary Schools (follow up sample)

Finally, we look at how children’s ability to read is related to their academic progress in school, specifically in the two subjects that are the building blocks for all academic work - language and mathematics. Not surprisingly, children’s reading ability is clearly related to their score in the language assessments, even though these tested several competencies in addition to reading – such as listening comprehension, vocabulary, and writing. While the mean language score improves over the three year period for most children, there is a substantial percentage point gap between those who could read grade 3 level text in grade 4, those who were able to read this text a year later in grade 5, and those who were unable to read at this level even in grade 5 (Table 8). Moreover, the achievement gap does not decrease over the three year period covered by the assessments.

Interestingly, the relationship between reading ability and learning outcomes in math shows the same general pattern (Table 9). Here the achievement gap between groups is lower in the simpler assessment used for the first two assessment rounds, when students were in grade 4 and 5 respectively. By grade 7, however, the differences across groups in mean score on the math assessment is equivalent to those observed in the language assessment, probably reflecting the more intensive use of language in higher grades, even for math teaching learning.

It is worth underscoring that the content tested in the third assessment round was based on the textbooks for grades 5 and 6, meaning that even among children who were able to read, learning outcomes were well below grade level. More worryingly, these trends make it clear just how unlikely it is that the children who have fallen behind will be able to catch up even with their peers during the year of elementary school remaining, much less achieve grade level mastery in either language or mathematics. Most of them will probably complete the eight years of education mandated by RTE. But few if any of them will have acquired the corresponding skills and competencies.

Table 8. Progress in mean language score from grade 4 to grade 7, by ability to read

Children who were:	N	% Mean language score, grade4 (2009)	% Mean language score, grade5 (2010)	% Mean language score, grade7 (2013)
Unable to read grade 3 level text in either baseline (grade 4) or endline (grade 5)	55	15.8	12.6	32.7
Unable to read grade 3 level text in baseline (grade 4) but could do so in endline (grade 5)	155	14.8	38.5	50.2
Able to read grade 3 level text in baseline (grade 4)	304	41.1	52.2	65.1

Source: Inside Primary Schools (follow up sample)

Table 9. Progress in mean math score from grade 4 to grade 7, by ability to read

Children who were:	N	% Mean math score, grade 4 (2009)	% Mean math score, grade 5 (2010)	% Mean math score, grade 7 (2013)
Unable to read grade 3 level text in either baseline (grade 4) or endline (grade 5)	53	28.8	30.1	34.2
Unable to read grade 3 level text in baseline (grade 4) but could do so in endline (grade 5)	143	34.9	49.7	50.0
Able to read grade 3 level text in baseline (grade 4)	298	50.8	62.3	64.4

Source: Inside Primary Schools (follow up sample)

To summarize, the data presented in this section has highlighted several patterns related to attendance and learning in and beyond grade 4. We used longitudinal data to show that there is a clear relationship between attendance and reading ability. We showed that most children lag at least two years behind grade level in terms of their ability to read; and that children who are unable to read were twice as likely to drop out of school after grade 5. We highlighted the fact that children who do not acquire grade-appropriate reading skills fall behind in learning achievement, not only in language but also in mathematics. Finally, we presented evidence to show that children who lag behind are unable to catch up even to the level of their peers, much less to grade level. The proportions of children who are lagging behind are very substantial. Without immediate, focused intervention, large numbers of children will complete their eight years of mandatory schooling with enormous learning deficits.

Assumption 3: Children in school are enrolled in the age-appropriate grade

In India, as in other countries, children are expected to enter primary school at age 5 or 6 (depending on the state) and progress through school a year at a time, such that in grade 4 they are 8 or 9 years old; in grade 6 they are 10 or 11 years old; and by the end of the elementary stage in grade 8 they are 13 or 14 years old. The RTE Act reflects this assumption when it specifies that the state shall provide children *who are currently out of school* with special remedial assistance to enable them to enroll in the grade appropriate to their age.²⁰

In practice, children in India do not necessarily begin grade 1 at the appropriate age, nor do they progress neatly up the ladder one year at a time. At the all India level, the age band in each class is substantial. ASER data shows that large proportions of children currently in school are overage even in grade 1. In 2012, only half of all children enrolled in grade 4 in government schools were 8 or 9 years old (Table 10).

The age-grade distribution varies substantially across states. Southern states tend to have much tighter age bands in each grade than do northern states. For example, in Andhra Pradesh in the south of India, more than 80% of grade 4 children in the IPS sample were 8 or 9 years old, versus less than 60% in Rajasthan. In Rajasthan as in some other states in the north of the country, it is not uncommon to find children who are 13, 14, or 15 years old in primary school. These children are physically and emotionally at a very different stage of development than most of the children in their classrooms.

Table 10. Age distribution of children in grade 4 in government schools

Source	Region	Year	Age (%)											Total
			5	6	7	8	9	10	11	12	13	14	15	
ASER	All India	2012	4.9		14.8	35.0	31.5	5.8	5.3	2.8			100	
IPS	AP	2009	1.4		15.9	65.9	13.4	3.4			100			
IPS	RJ	2009	4.0		20.2	38.5	21.4	9.3		6.7		100		

Source: Pratham, Annual Status of Education Report 2012; ASER Centre, Inside Primary Schools (2011)

This situation has major implications for both students and teachers. Anyone who has spent time in government schools in rural India can attest to the sight of a group of children who are clearly physically much bigger than their peers, sitting right at the back of the

²⁰ Clause 4 of the RTE Act states: "Where a child above six years of age has not been admitted to any school or though admitted, could not complete his or her elementary education, then, he or she shall be admitted in a class appropriate to his or her age; Provided further that where a child is directly admitted in a class appropriate to his or her age, then, he or she shall, in order to be at par with others, have a right to receive special training, in such manner, and within such time-limits, as may be prescribed."

classroom, participating very little in class activities and typically ignored by their teachers. The effects of this situation on these children’s self-esteem and aspirations can only be guessed at, but what the IPS data do show is a clear relationship between children’s age and their attendance in school. Among the grade 4 sample, overage children attended school far less often than others (Table 11).

Table 11. Relationship between age and attendance among grade 4 students

Grade 4 children who were:	Age category		
	9 years and below	10 years and above	All children
Not present on any visit	55.9	44.1	100
Present on one visit	58.2	41.8	100
Present on two visits	61.4	38.6	100
Present on all 3 visits	73.6	26.4	100
All children	65.7	34.3	100

Source: Inside Primary Schools (full sample)

From the point of view of teachers, teaching a group of children who are relatively homogenous requires less skill than teaching a group that is quite varied. The previous section of this paper discussed the fact that children in a single grade range in ability level from close to grade level competency to several years behind. In this section we have presented evidence to show that children in each grade also vary substantially in age. To complicate the classroom situation further, both ASER and IPS data demonstrate that the majority of primary school classrooms in rural India are multigrade, with two or more grades grouped together with a single teacher. In ASER 2012, across rural India, more than half of all grade 4 classrooms were multigrade. Even with just two grades grouped together, teachers are routinely required to teach in situations where there could easily be a gap of four to five years in both age and learning levels between students in a single group.

Most teacher training programs in India assume that teachers will engage with groups of students who are largely homogenous in terms of age and ability. Given that teachers do not have the skills to deal with multi grade, multi level groups, how does this situation affect children’s learning?

The IPS data suggests that even in the context of extremely low learning achievement overall, overage children do substantially worse than others. For example, in the IPS baseline assessment of grade 4 children, there is a ten percentage point difference between children who were overage and other children in terms of their ability to read grade 3 level text (Table 12). Whether this difference stems from lower attendance among older children or from some form of systematic discrimination in school is not clear.

Table 12. Relationship between age and ability to read among grade 4 students

Age category	N	% grade 4 children who were:		
		Unable to read grade 3 level text	Able to read grade 3 level text	Total
9 years old or less	6,412	28.0	72.0	100
More than 9 years old	3,362	37.3	62.7	100
Total	9,774	31.2	68.8	100

Source: Inside Primary Schools (full sample)

ASER 2012 shows that across India, almost half of children in grade 4 in government schools are more than 9 years old. Most grades in primary school have significant proportions of overage children. The evidence presented in this paper has shown that older children attend school less often and learn less than others. Yet education policy in India continues to be based on the assumption that children in school are in the grade appropriate to their age, and that remedial help is needed only to enable the small proportion of children still out of school to enroll in school in the appropriate grade. With such wide age bands in every grade, however, remedial programs need to be instituted not for exceptional cases but for the majority of children in school today.

Concluding thoughts

The Right to Education Act is now more than three years old. The dream is that RTE will enable every child in India to go to school regularly, learn well consistently, and complete at least eight years of schooling successfully. The objective is achievable – but only if education policies are based on ground realities.

This paper has shown that those ground realities are complex, and often have little in common with traditional assumptions about schools and schooling. In rural India in grade 4, about half of all children are overage for their class. Few are at grade level in terms of learning, and most are two or more grades behind. About a third attend school regularly. Many are first generation school goers, and have limited access to academic support outside school.

RTE offers very little that will help states, schools and teachers to focus on these challenges. The law focuses on enrolment but does not mention the issue of poor attendance. It requires age-grade mainstreaming for out of school children, without recognizing the fact that most children currently in school are neither at the age nor at the level of mastery appropriate for their grade. It specifies pupil-teacher ratios with which schools must comply, but does not recognize the fact that in most primary schools in India it is the complex, multigrade nature of classrooms, rather than the number of students, that leads to difficulties in teaching and learning. It states that teachers must complete the curriculum, but ignores the fact that the textbooks are far too difficult for most children to handle. And it

abolishes examinations in elementary school, which means that children can now complete eight years of schooling without acquiring even basic reading and arithmetic skills.

Fortunately, there are signs that some state governments are beginning to recognize and act on the issue of poor learning outcomes. A growing number of states are conducting their own assessments of basic learning outcomes. Some, such as Bihar, have set clear learning goals for each grade and reorganized schools so that children are grouped by ability level, rather than age or grade, for part of each day. Methods are available to tackle the enormous learning deficits that are visible among children in school across rural India today. But a necessary first step is to base plans and policies on ground realities.

References

Bhattacharjea Suman, Wadhwa Wilima, Banerji Rukmini (2011). Inside Primary Schools: A study of teaching and learning in rural India. New Delhi: ASER Centre. Available at www.asercentre.org

Kremer Michael, Muralidharan Karthik, Chaudhury Nazmul, Hammer Jeffrey S., Rogers Halsey (2005). *Teacher absence in India: A snapshot*. Journal of the European Economic Association, 3(2–3):658–667

Educational Consultants India Limited, Government of India (n.d). Study of Students' Attendance in Primary & Upper Primary Schools. Summary available at www.educationforallinindia.com/study-on-students-attendance.pdf

Educational Initiatives (2007). Municipal School Benchmarking Study. Available at: [www.ei-india.com/wp-content/uploads/EI_WP_Series_6 -
Municipal School Benchmarking Study.pdf](http://www.ei-india.com/wp-content/uploads/EI_WP_Series_6_-_Municipal_School_Benchmarking_Study.pdf)

Government of India. Right of Children to Free and Compulsory Education Act. New Delhi: Gazette of India, August 27 2009

Mehta, Arun (2007). Student Flow at the Primary Level. New Delhi: National University of Educational Planning and Administration. Available at <http://dise.in/Downloads/Reports&Studies/Studentflow.pdf>

National Council for Educational Research and Training (n.d.). What do they know? A summary of India's National Achievement Survey, Class V, Cycle 3, 2010/11. Available at www.ssatcfund.org/LinkClick.aspx?fileticket=9EVS6D4hOGO%3D&tabid=2478

Pratham, Annual Status of Education Report 2005-2012. Available at www.asercentre.org