Assessment to action: New thinking from India

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Abstract

In countries such as India, impressive progress has been made in schooling. More than 95 per cent of children are now enrolled in school. But when we look at children's learning, the situation is far from satisfactory. Available evidence suggests that in Grade 5, only about half of all enrolled children can read or do arithmetic expected at Grade 2 level. Faced with this crisis, how can assessment lead to effective instruction? ASER (Annual Status of Education Report) uses simple tools to assess the current level of children's ability to read and to do arithmetic. Using this assessment, children are grouped for instruction by level rather than by grade. Appropriate methods and materials are used for each group to help children begin from where they are today and move to where they need to be. The 'teaching-at-the-right-level' approach has been found to be effective in many settings in India for building basic skills quickly. This 'new thinking' from India can provide large-scale solutions for the learning crisis faced in many parts of the developing world.

In India, impressive strides have been made over the last 25 years in providing schooling opportunities for all children. Even ten years ago, the progress towards universal enrolment was palpable. There were government primary schools in almost every habitation in the country and all available statistics for children in the elementary school age indicated that more than 90 per cent of children were already enrolled in school. For a country as thickly populated and diverse as India, this is no mean feat.

As the challenge of 'schooling for all' was being met, there was a sense from parents and teachers, planners, policy-makers and practitioners, that what was happening in the schools was not satisfactory. A large fraction of India's children who are in school today have parents who have either not had much schooling or are not literate. While such parents understand what it means to send a child to school, they often do not know what it means to support a child's learning. Many assumptions underlie how our education system works. There has been a widespread belief that schooling will lead to learning and that more years of schooling is associated with students being able to do more. As far as education is concerned, parents, like governments, have been input focused and expenditure driven; both have believed that being able to spend more on education will solve most of the problems that children face. At least in developing countries, the fact that we may have to look more closely at the relationship between schooling and learning is only a very recent realisation.

Birth of a new approach

In 2005, in India, there was a new government in place at the federal level. A two per cent education levy had been collected from the general population to support universalisation of elementary education. In the public announcements of the new government, there seemed to be an interest in 'translating outlays into outcomes'. Thanks to a combination of all these, 2005 seemed like a good time to take stock of how far we had come with schooling, and explore what needed to be done with children's learning.

From 1996 onwards, Pratham had been working closely with children in low-income communities.[1] On the ground too, we could see that almost all children were enrolled in school. And those who were not knew that they ought to be in school. However, most children from families that lived in slums or in villages seemed to need a lot of help coping with school work. Parents and teachers found it easier to support a child who makes good progress. For those who did not make the expected progress, whether they were left out (out of school) or left behind (in school), it was not clear what could be done. In Pratham we started with basic reading and arithmetic, and found that these two gave children, even as old as ten, a good foundation to build on and a confidence that allowed them to propel themselves forward in the education system (Banerji, Chavan & Rane, 2004).

If the goal is not only to have every child in school, but also every child learning well, what needs to be done? The first step should be a status report on where India was on schooling and learning. While there were plenty of data available on schooling in 2005, there was little information easily available for learning in primary grades. It was in this context that the idea for doing an Annual Status of Education Report (ASER) was born (Banerji, 2013).

What is ASER?

At its core, ASER is a simple exercise; a set of very basic reading tasks (recognise letters, common everyday words, a four-sentence simple paragraph of text at Grade 1 level, and an eight- to ten-line 'story' of text at Grade 2 level) and arithmetic tasks (recognise one- and two-digit numbers, a two-digit numerical subtraction problem with borrowing, a division task where three digits are to be divided by a one-digit number). These tasks are given to sampled children from age 5 to age 16. For every rural district in India, 30 villages are randomly picked from the census village list. In each village, 20 households are randomly sampled. All children in the age group 5 to 16 are assessed one-on-one on the ASER tasks described earlier. In each district, a local organisation or institution carries out this exercise. Each year the activities related to ASER start in August and the report is released in January of the following year. Every year on average ASER reaches close to 650 000 children in more than 16 000 villages across the country (Banerji, Bhattacharjea & Wadhwa, 2013).

The first ASER report was released in January 2006. It reported the status of schooling and learning for almost every rural district in India. The estimates for enrolment were very similar to the official figures. However, the estimates of children's level of reading and arithmetic were a huge shock to us and to many more in the country. The report said that about half of all Indian children who have spent five years in school still could not read at a Grade 2 level. The arithmetic figures were similarly worrying. The reactions to these findings varied from the education establishment raising questions about the methodology to those who were convinced that it was time India moved from focusing on inputs to being much more outcome oriented (Banerji & Chavan, 2014).

[1] Pratham is a non-government organisation working in children's education and youth skilling in India. The mission is 'every child in school and learning well'. Pratham has activities in 21 states in India. ASER Centre — the group that leads the Annual Status of Education Report, or ASER survey — is the autonomous research and evaluation arm of Pratham. See www.pratham.org and www.asercentre.org for more details.

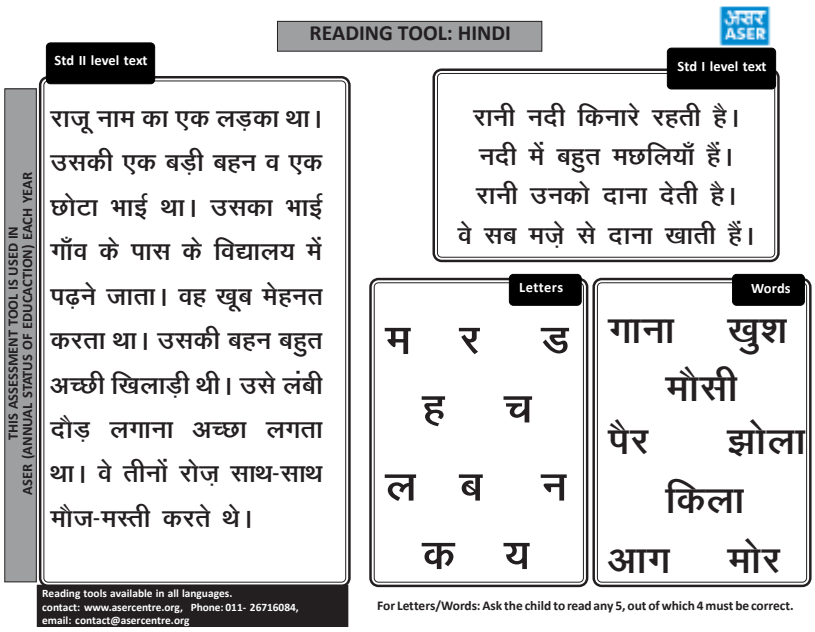

Figure 1 ASER testing tool

Figure 2 Children's progress sheet

Every subsequent report reinforced these findings. Not only was the basic learning level of children in India low but it was also 'stuck' (Pritchett & Beatty, 2012) until 2010, after which there are signs of a downward decline. Further, the learning trajectories were flat suggesting that if children did not learn basic skills in the early grades, they were unlikely to gain them later.

Over the decade, other studies using different instruments and methods, including the government's own periodic student achievement surveys, pointed to unsatisfactory levels of basic reading and arithmetic. Looking at trends over time using the cross-sectional data from every year, it is possible to follow the learning levels of cohorts as they move through the education system.[2] The data suggest that the experience of each subsequent cohort is worse than that of the previous cohort — meaning that the reading levels in Grade 5 today are lower than they were in Grade 5 five or six years ago. India does not have any data other than ASER that look at basic learning levels on a nationwide scale, or annually or for a broad age range of children starting as early as age five.

The worrying results from ASER have led to a lot of discussion in India and abroad about children's learning and how it can be measured. The ASER approach has also been scrutinised closely (ACER, 2014). Typically, large-scale assessments, especially the international measurements of student achievement, have originated in countries where education systems are 'settled' — all children are in school and all schools are on official lists. Further, in many developed countries, the gaps are low between the curricular expectations, teachers' ability to deliver what is expected, children's performance and parents' capacity to understand what their children should be gaining in primary grades. Thus, in such countries, pen-and-paper tests based on grade-level expectations make sense even in primary school.

Right from inception, the design and architecture of ASER has been very different from the usual large-scale assessments that are done in countries around the world. ASER takes into account specific characteristics of the Indian context. The foundations of ASER are built on these realities. Here are some features that makes ASER different:[3]

- Where: In India, children go to many kinds of schools. There are government schools. There are also a wide variety of private schools, including low-cost schools, religious schools and non-formal schools. Not all of these are on official school lists. Further, attendance varies considerably across regions and types of families. In some states in India, daily attendance can be higher than 90 per cent, but there are also states where on average, only five or six out of every ten enrolled children are attending school on a given day. In this context, to get a representative sample of children for any assessment, there is no choice but to go to the household. Thus ASER goes to the child's home and uses sampling at the household level to generate estimates of learning.
- What: Many children who are currently in school in India are far below their grade level. Even after several years of schooling, a large proportion of children may not have acquired foundational skills like reading, number knowledge or ability to undertake basic operations. Without acquiring these skills, children are unlikely to develop higher skills. Thus ASER decided to focus on a few basic skills for all children rather than on subject outcomes for each grade. The data from ASER indicate that even at higher grades, there are children who need help on basics.
- How: If reading is likely to be a problem in primary school, then reading skills need to be assessed. The easiest way to assess reading is to work with children one-on-one. Children who cannot read naturally cannot deal with written words and therefore cannot do pen-and-paper tests. If such children are made to do pen-and-paper tests, we cannot find out what to help them with.
- Whom: The majority of parents, especially mothers, of children who are currently in school, have themselves had little education or are not very literate. They understand the importance of 'schooling' but are often not confident about how to support their children's 'learning'. In such a situation, it is very important to de-mystify learning and to work towards taking parents along. While the assessment is going on in the community or in the household, it is very common that parents for the first time begin to understand what it is that their children ought to be picking up in school.

[2] These are artificial cohorts based on repeated cross-sections.

[3] Other than the points highlighted here, there are three other features of ASER that were designed keeping Indian conditions in mind. First, planning for elementary education in India is done at the district level. Hence data for learning need to be available at the district level. To be useful in the planning process, ASER estimates are generated at the district level (and then are aggregated to the state and national level). Second, India is a big country. To capture and sustain national attention and to represent all children, nation-wide coverage is needed. This is one of the reasons that ASER is done in every rural district across India. Third, to bring about a significant change in national priorities and mindsets, frequent and timely, current and reliable data are needed on children's learning. ASER has been done annually for 10 years. Each ASER report is released like clockwork in mid-January and figures are available for the current year — that is, the year in which the data are collected.

- Why: The simplicity of the ASER tool and the ASER assessment process is very useful in engaging a wide range of people in understanding where children are and in thinking about how to support them to make progress. At a micro level, parents' involvement is essential for children's progress in learning. At a macro level, widespread and large-scale participation and engagement by citizens is essential for changing policy and practice. In every district, a local organisation carried out the survey effort. The success of 'schooling' can be attributed to the fact parents and governments all understood the critical importance of children going to school. Each in their own way worked to make the goal of universal schooling happen. In India and in many other countries, we are at that point where the common understanding in society about 'what learning looks like' and 'how to improve it' needs to be built.

From assessment to action

One of the key features of the ASER tool is how easily it helps people see the problem and enables them to plan action.[4] Here is how this happens. Imagine a village in India. Let us say we want to find out the status of schooling and learning of children in this village. Armed with the ASER tool, and helped by the villagers, we go to every house in the village and talk to the children and the families and request every child to spend a little bit of time with us doing the reading and the arithmetic tasks. (This can also be done in the school.) At the end of a few days, we put together the village report card. Let us say the exercise shows that there are 200 children of elementary school age in the village — all of whom are enrolled in the one government school in the village. So as far as schooling is concerned, everyone is in school. Now what about learning? The report card shows us the status for all children. For example, we find that 75 children are in Grades 3, 4 and 5 — 25 in each grade. The report of their reading results show a wide variation across grades and within grades.

Typically schools are organised by age and grade. (In this table you can see the grade-wise reading levels in each row). In India, the usual way to teach is for the grade-level teacher to use the prescribed grade-level textbook and teach from it. So if we look at Grade 3, we can see that only two children are actually reading at the Grade 2 level and a three children are at Grade 1 level. Out of 25 children, about 15 are still either only at 'letter level' or below. Teaching these children from the Grade 3 textbook is not effective or useful. They need to have activities and materials at their level to help them to grow. In fact, teaching the curriculum instead of teaching children usually means that many children get left behind even at a young age.

So what is to be done? Looking at the table again, we can think of another way to structure the teaching–learning activities for a few hours in these grades. Instead of teaching by grade and dealing with the wide range of levels in each grade, we can group children by levels (in the context of the table look at the columns). We now have five groups, with between 10 and 20 children in each group. If we had three teachers teaching one grade each in Grades 3, 4 and 5, now we can have them make three groups of children by level and teach them accordingly. (A possible grouping is suggested in the table.) There are some activities that all children do together such as listening to a story that is being read aloud and discussions around the story. Then within each group, using appropriate activities and materials, children work with their instructor. As a child makes progress, he or she can move into the next group. When sufficient children have moved, the groups and the instructors can be revised. Similar groupings can be made for arithmetic.

[4] ASER tools are used in many circumstances. What is described here is one version of the action that is generated by the assessment.

Table 1 Example report card: Children by grade and reading level

	Beginner	Can read letters but not words	Can read words but not sentences	Can read sentences at Grade 1 level but cannot as yet deal with a 'story'	Can read a story at Grade 2 level	Total
Grade 3	8	7	5	3	2	25
Grade 4	5	6	8	3	3	25
Grade 5	3	4	6	6	6	25
Total	16	17	19	12	11	75
Possible groups	33		19	23		75

Across many districts and states in India, schools and villages in India reorganise themselves for a few hours during the normal school day to carry out the teaching-at-the-right-level model. Two hours a day teaching in this way helps to accelerate children's basic reading and arithmetic skills and gets them ready quite soon to deal with the usual curriculum and textbooks for their grade.[5]

The use of the simple ASER tool in this context helps not only to bring out and de-mystify the problem but also helps to design the pathway to a solution. Given the reality of children's learning levels in India, the huge backlog of basic skills in primary school and the way that teaching and learning is usually organised, moving in this way from assessment to action seems do-able by teachers and by community members. This 'frugal innovation' does not need many additional resources; it needs a reorganisation of time and existing resources. However what it does need is an understanding of the core problem and a strong commitment to seeking solutions.[6]

Such work that starts with the ASER assessment provides an excellent practical illustration of what 'new thinking' about assessment can lead to. The ASER instruments are designed to establish clearly where individuals are in their reading. We then use this assessment information to target teaching and learning at an appropriate level (rather than on age or grade level) and continue to use different versions of the ASER tool to monitor the progress that individual children and groups of children make and to evaluate the effectiveness of this assessment to action model.

Concluding thoughts

As interest in children's learning and measuring outcomes increases locally and globally, more countries will have to undertake 'new thinking'. They will have to make sure that the assessments that are coming into place have taken into account the needs of their children, and that the processes that will ensue are within the capabilities of local people to understand and to do. In countries where the culture of measurement — especially of measuring outcomes — is weak, designing, implementing and providing feedback may take time. Hence it is essential that each step is taken well and each step builds on the learnings of the previous step. Children's learning is an issue of national importance and therefore all assessment that is carried out must lead to concrete action.

[5] This method, sometimes called 'teaching at the right level', is used wherever Pratham works directly with schools and communities. (In the 2013–15 period, Pratham worked in this way in 10 000 schools across India.) Such methods are also used when Pratham and state governments work together collaboratively in partnership programs. (In the 2014–15 school year, more than 5 million children were reached in such partnership programs.) See Pratham (2015). Pratham's direct work with communities and schools as well as partnership programs with governments have been evaluated using randomised control trials and found to be effective at improving basic reading and arithmetic. See Poverty Action Lab (2014).

[6] For examples of specific cases where the district administration in a state in India adopted the 'teaching-at-the-right-level' model, see Banerji (2014) and Pratham Education Foundation (2013).

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