Annual Status of Education Report (Rural) 2019

January 14, 2020

'Early Years'

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AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

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'Early Years'

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ASER 2019 'Early Years' – An overview

About ASER

ASER is a nation-wide household survey that provides data on children's schooling and learning for a representative sample of children across rural India. Children in the age group 3 to 16 are surveyed to find out their enrollment status in pre-school or school. Children in the age group 5 to 16 are assessed one-on-one to understand their basic reading and arithmetic abilities. Since 2005, ASER continues to be the only annual source of information about children's foundational skills across the country. ASER reaches almost all rural districts of India and generates district, state, and national estimates of foundational reading and arithmetic abilities of children in the age group 5 to 16.

Starting its second decade of existence in 2016, ASER switched to an alternate-year cycle, where the 'basic' ASER described above is conducted every other year (2016, 2018, and next in 2020). In alternate years, ASER focuses on a different aspect of children's schooling and learning. In 2017, ASER 'Beyond Basics' focused on the abilities, activities, awareness, and aspirations of youth in the 14 to 18 age group across 28 districts in the country. In 2019, ASER aims to shine the spotlight on the early years, reporting on the schooling status as well as on a range of important developmental indicators for young children in the age group 4 to 8 across 26 districts in the country.

What is ASER 2019 'Early Years'?

ASER 'Early Years' reports on the pre-schooling or schooling status of children in the age group 4 to 8 and, in addition, explores their performance on some competencies that international research has identified as important predictors of future success. These competencies have been categorized into four domains: cognitive development, early language, early numeracy, and social and emotional development.

- Cognitive development: Cognitive ability helps build problem-solving, memory, logical reasoning, and creative thinking skills in young children. These skills help children think, explore and make meaning of the world around them. They are fundamental to any kind of learning in school or in life. ASER 2019 tasks for this domain comprise sorting by color, spatial awareness, seriation, pattern recognition, and puzzle.
- Early language: Language is an essential skill for communication, needed to express and communicate thoughts, feelings and needs, as well as to understand and have conversations with others. Language is also the foundation for literacy. The ability to read begins when children learn to connect shapes of written letters with their sounds. Comprehension is essential to make meaning of any communication. ASER 2019 tasks to provide a snapshot of early language acquisition in young children are picture description, listening comprehension, reading (letters, words, a Std I level text), and reading comprehension.
- Early numeracy: Counting, measurement and sense of quantity are essential early numeracy skills. A strong foundation in early numeracy helps not only in school math but also in everyday life. ASER 2019 tasks to provide a snapshot of young children's early numeracy skills are counting of objects and relative comparison of objects; 1-digit oral word addition and subtraction problems; and 1-digit and 2-digit number recognition, relative comparison, and numeric addition and subtraction tasks.
- Social and emotional development: The ability to identify their own as well as others' emotions and perspectives, establish and maintain relationships, and take responsible decisions are important skills for all human beings. Helping young children develop these skills early gives them important tools for the future. ASER 2019 tasks in this domain comprise emotion identification, situation to emotion mapping, and situation reaction test.

ASER 'Early Years' retains the core elements of the ASER architecture: it is a sample-based household survey, conducted by local volunteers, using simple and easy to administer tools and formats. Because this is a new target group for ASER, the survey has been conducted in one rural district per state rather than nationwide. As with every ASER, the overall objective of ASER 'Early Years' is to highlight the kinds of abilities that our young children need to build, to generate evidence on scale on the extent to which they are able to do so, and to develop ways of discussing these issues with people across the country - all of these in order to ultimately to enable evidence to be translated into action.

Why an ASER 'Early Years'?

The early years, defined globally as age 0-8, is known to be the most important stage of development of the human brain. A large body of worldwide research demonstrates that exposure to enabling environments and access to appropriate inputs during this period is fundamental to ensuring that children have a firm foundation on which to build, both in school and in life. Recognizing the importance of the early years, Target 4.2 of the Sustainable Development Goals states, 'by 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.'[1]

India is home to the Integrated Child Development Services (ICDS) programme, which is among the largest and oldest public sector initiatives for early childhood development in the world. More recently, India has developed additional important schemes, policies and frameworks, such as the National Early Childhood Care and Education (NECCE) Policy (2013); the National Early Childhood Care and Education Curriculum Framework (2014); and the draft Framework for Implementation of Samagra Shiksha (Integrated Scheme for School Education),[2] which for the first time brings the pre-primary stage under the same umbrella as all other levels of schooling. Most recently, the draft National Education Policy 2019 underlines the importance of early childhood education and prescribes guidelines for providing pre-primary education.

However, the quality of provision of early childhood education services remains a concern, and little evidence is available on scale with respect to whether young children are being supported to acquire the foundational skills and abilities that are key to subsequent success in school and beyond.

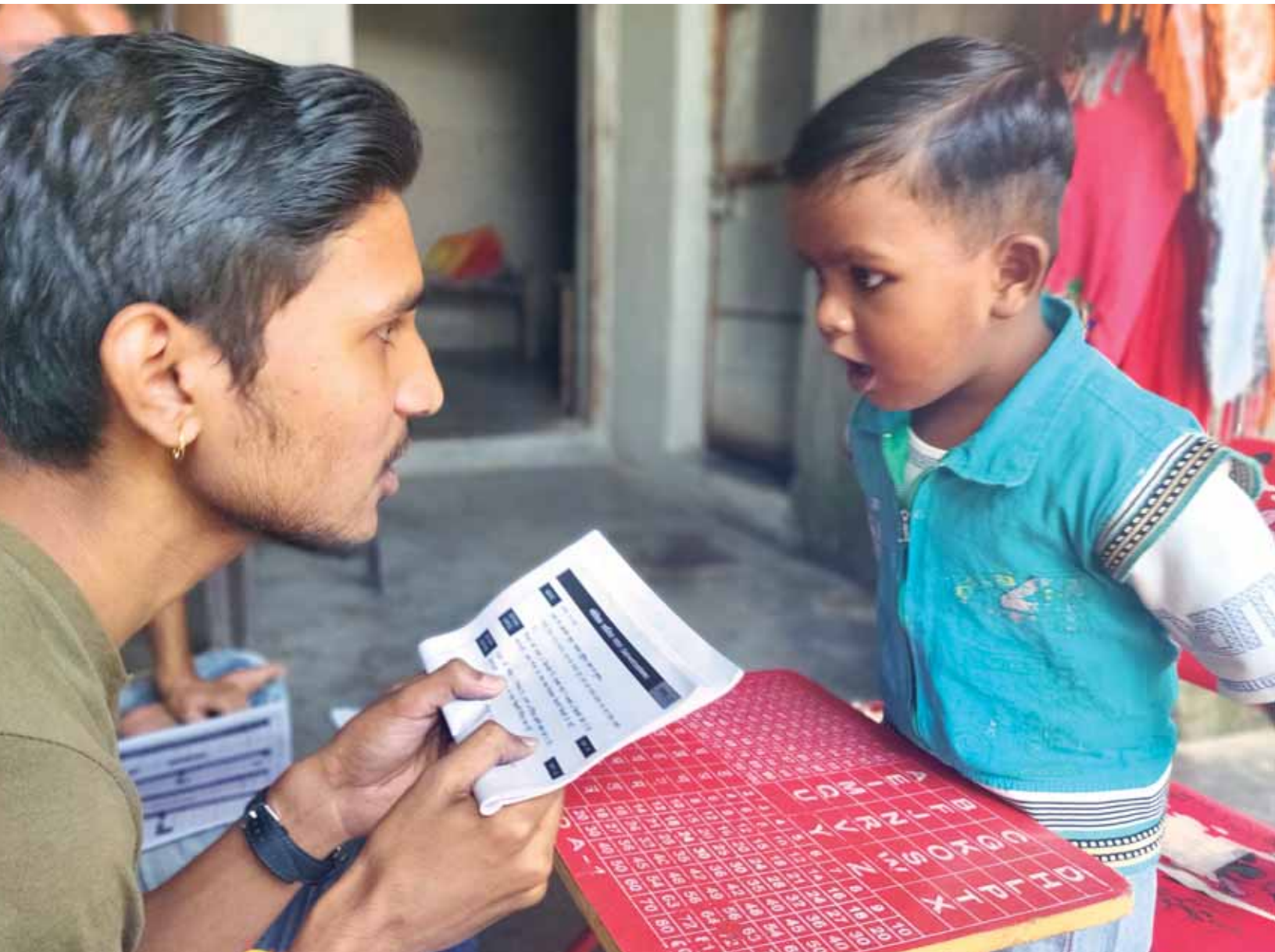
Further, parents, families, community members and others are not always clear about the different kinds of abilities that can help young children cope with the demands of both academic learning and everyday life. Child development experts know that breadth of skills and experiences is critically important in the early years and that exposing young children to formal academic content too early is often counterproductive; but many other adults responsible for children's welfare - parents and policy makers alike - do not. Given the rising aspirations for educational success, parents often put their children into school well before they are developmentally 'ready'. For example, ASER data from 2018 shows that across rural India, 10% children age 4 and 34% children age 5 are already attending primary school. Similar findings have been reported in the India Early Childhood Education Impact (IECEI) study, 2017.[3] What this means is that significant proportions of young children in India are exposed to educational environments that are inappropriate given their age.

The draft National Education Policy 2019 acknowledges, "A major part of this (learning) crisis appears to be occurring well before children even enter Grade 1. Far too many children are enrolling in Grade 1 before the age of 6, due to a lack of any suitable pre-primary options (and limited ECCE); these are often the children that remain the most behind in primary school and beyond."[4] Worldwide research tells us that lack of access to an appropriate environment and activities means that many children do not have the skills and abilities expected when they enter school, and therefore have difficulty coping with the school curriculum. Once they fall behind, it is difficult to catch up. For the past 14 years, ASER has measured foundational reading and arithmetic skills for children in the 5 to 16 age group. Consistently, ASER data shows that even in early primary grades, large proportions of children do not have the reading and numeracy skills required to keep up with the expectations of their grade level textbooks.

In order to ensure that the needs and abilities of young children move into the center of current debates on educational policy and practice in India, evidence needs to speak to and be understood by a much wider set of actors - parents and community members as well as policy makers and early childhood development professionals. The evidence generated by ASER 2019 'Early Years' aims to broaden and contribute to ongoing discussions on providing quality education in the early years to all our children.

[1] http://uis.unesco.org/sites/default/files/documents/quick-guide-education-indicators-sdg4-2018-en.pdf
[2] http://samagra.mhrd.gov.in/docs/Framework_IISE%20_F.pdf
[3] Kaul, V., Bhattacharjea, S., Chaudhary, A. B., Ramanujan, P., Banerji, M., & Nanda, M. (2017). The India Early Childhood Education Impact Study. New Delhi: UNICEF.
[4] Draft National Education Policy 2019 (15 December 2018) - https://mhrd.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN_Revised.pdf

Commentary



Young children, mothers and the nation

Madhav Chavan[1]

The idea and practice of universal and compulsory primary education is two hundred years old. In comparison, the idea of universal early childhood education is much more recent. Private schools of all kinds have pre-school classes attached but this is not true of government schools of India except in some places. That is not to say that its need and importance is not acknowledged. Although the need for early childhood education for all, and particularly the underprivileged, has been emphasized in policy documents, universal early childhood education is not practiced the way it should be. Perhaps nothing in this report is surprising but it is something that needed to be recorded on a large scale.

Twenty five years ago Pratham started its work with early childhood education in slums of Mumbai. How can anyone start 'balwadis' or pre-school education centres when there are no trained teachers, no space and no money to support the project? That was the question people asked when we spoke of the need for 3,500 balwadis to ensure universal coverage of 5-year-olds who were to join formal schools the next year. But in spite of these seemingly insurmountable hurdles, we were able to set up over three thousand balwadis in a matter of three years. Of course, the pre-school centres did not have much learning material, nor did they have much space. They really depended mostly on the enthusiasm and simple skills of young local women who received a bit of training and big doses of motivation as the surrounding community called them 'didi' and 'teacher'.

The main reason why this project scaled up so quickly was because of a strong latent demand. Parents, especially mothers, wanted their children to go to pre-schools just like the children of the middle class families in the apartments nearby. In a survey we also found that the mothers were happy someone else looked after the children for a couple of hours. They could relax or earn some income by working as domestic helps. Of course, they wanted the children to learn but these other reasons were significant too. From a different perspective, in a society of nuclear families where both parents work, a safe place to look after children is necessary.

The demand for pre-school had another dimension that we had not sensed to begin with. Although the pre-school centres were for children age 3 to 5, most of the children who came were 4 or 5. So, we expected the 4- year-olds to stay in our pre-school centers for two years. But we found out that a large proportion of the children started moving to kindergartens in nearby private schools after one year. Apparently, private schools had started opening new divisions and the parents who had seen how their children were learning in our balwadis were eager to give their children 'English' education. They were willing to take the children to a slightly distant Sr. KG and also pay for it. We could not persuade them to keep the children in what must have looked like 'pre-school centres for the poor'. If parents can see an alternative they think is better and within reach, they go for it.

That was 1995-98 when a majority of children in slums of Mumbai still went to the municipal schools. Over the last quarter century much has changed. Municipal schools in Mumbai had already started emptying out from the southern tip as the population shifted beyond the suburbs from the early nineties. Today the municipal school enrollment has dropped to nearly 30% of what it used to be.

Government policy and practice has not kept pace with people's aspirations as the Indian economy liberalized. The scenario is changing rapidly over the decades. Most of the young mothers in the next decade will not be very young as median age of marriage has increased from 18.2 years in 2001 to 19.2 in 2011 to nearly 21.7 in rural India and 23.4 in urban India by 2016. Further, most of these young mothers will have had at least 5 years of schooling. These changes in the young Indian mother's profile need to be taken into account when thinking of the education inputs to be designed for the Indian child of the next decades.

In addition to the above changes, the Labor Force Participation Rate (LFPR): females age 15 to 64, which is the proportion of all females who supply labor for production of goods and services, has dropped significantly over the last 30 years. It was around 32% in the early nineties and it is estimated to have dropped to about 25% in 2019.[2] India ranks 172nd in the world in LFPR. The LFPR in rural India is 30% while it is just about 15% in urban India.[3]

[1]President and member of the Board of Directors, Pratham Education Foundation
[2]https://www.indexmundi.com/facts/india/labor-force-participation-rate
[3]http://mospi.nic.in/sites/default/files/reports_and_publication/statistical_publication/social_statistics/WM17Chapter4.pdf

Many authors and agencies have tried to explain the reason behind these trends but the important point is that the world LFPR rates for females are around 50% while we are at half of that number. Advanced economies of Europe and North America interestingly have a high LFPR (around 70%) along with East Asia, South East Asia and Sub-Saharan Africa; while South Asian countries have an LFPR lower than the world average along with North Africa and the Middle East (20-30%).

The status of participation of women in the labor force is a reflection of both their status in society and the needs of the economy. It seems that the need of the backward economies of Sub-Saharan Africa and the advanced economies of Europe is the same - to have more females in the labor force for completely different reasons. Low LFPR in India seems to say either that the Indian economy does not have place for women or the other way round or both. It appears to reason that higher economic growth will need much greater labor force participation of educated, skilled women of India both in rural and urban India. This is likely to be correlated with the structures that society creates to look after young children, so that young females can be freed for work (assuming they are skilled and there are opportunities created for them to work).

The Integrated Child Development Scheme (ICDS) was created first in the mid-seventies. Its core structure has not changed although it is now universalized in urban and rural communities across the country. Although it has had its successes, clearly this system is not adequate for the purpose of education of the children. There is a need to expand and upgrade it to ensure that children get adequate and correct educational inputs of the kind that are not modeled after the formal school. Secondly, there is a need to create day care centres that will allow mothers of young children to work when they find opportunities. It is possible that in future many more women will find jobs in the community centres created to look after the young while their parents work.

Bringing up the young and looking after the sick and the elderly are two areas of service that need expansion as the demand for quality education grows and as our population grows older with increasing longevity. Both these sectors should create greater opportunities for women to work although I do not want to succumb to gender stereotyping.

There is another angle to be considered. As the education levels of young mothers grow and if their intention is to stay at home, they should become much more effective caregivers at home and help the children learn more and better. Pratham has been working on projects where mothers of children who go to anganwadis are supported to help their children at home. This is proving to be very effective. Such efforts should help in creating a much stronger ecosystem of early childhood education. Our model of school education isolates the school from the home and equates it with what is learned in schools. This needs to change drastically, making it immediately possible to do much more in the early childhood stages than at higher ages.

The cause of universal compulsory primary education got a big boost in the nineties as UNICEF the world over started talking about 'primary education: the best investment a country can make'. In India, with a liberalized economy this tagline was picked up by many, then young, industrialists. Later, many who became billionaires created big foundations for education. The link between social justice and education had been around for more than a century in India but its connection with economic growth was new. The two together created the force necessary to push for at least the creation of infrastructure for education.

It is now important to stress that early childhood education is not only good for the child but it is good for the mother, the family, the society, and the economy of the country. It is for these multiple reasons that we need to strengthen and expand early childhood care and education based on what we know about the growth of the child.

Building blocks to a better future: The urgent need to focus on early years

Rukmini Banerji[1]

While the fundamental importance of good early childhood education has been known for a long time, the draft National Education Policy (NEP) that was released in early June 2019 makes a very clear statement about the "severe learning crisis" and its connection to what is currently happening with young children in the country. The voluminous policy document points out that a very large number of children currently in elementary school do not have foundational literacy and numeracy skills. The draft NEP estimates that close to 5 crore (i.e. 50 million children) are behind or have fallen behind and that once children fall behind, they are unable to catch up.

Right in the first chapter, the draft NEP points out that the major part of this crisis happens well before children even enter Std I. The document cites several reasons for this. First, many children enter school before age 6. This is partly due to the lack of affordable and accessible options for pre-schooling. As a consequence, too many children enter school with limited exposure to early childhood education. As with everything else, children from poor families have a double disadvantage; lack of healthcare and nutrition on one side and the absence of a supportive learning environment on the other. Although the anganwadi network across India is huge, by and large, school readiness or early childhood development and education activities have not had high priority in the ICDS system. Private pre-schools that are mushrooming in urban and rural communities have increased access to pre-school education but are often designed to be a downward extension of schooling. Thus, they bring in school-like features into the pre-school classroom, rather than developmentally appropriate activities by age and phase.

Does available evidence back the statements made by the draft NEP?

In 2005, the first year we did ASER, we focussed on 6- to 14-year-olds and on those who were or should have been studying in elementary grades - Std I till Std VIII. Several years later the Right to Education Act also referred to this age group when free and compulsory education became the law.

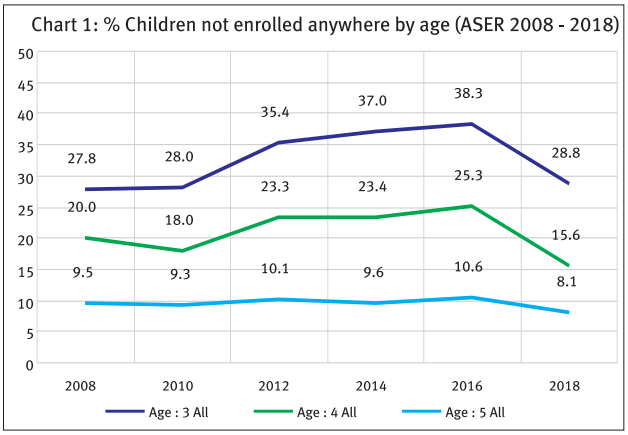
However, even in the first year of ASER, going from household to household, talking to thousands of families we could see that there were children who were in Std I who were not as yet 6 years old. Therefore, from 2006 onwards we expanded the focus of the ASER exercise to include 5-year-olds in the survey. Any child who was enrolled in Std I was asked to do reading and arithmetic tasks; even if the child was 5 years old. We also asked about the enrollment status of younger children - age 3 and 4.[2]

Over the last fifteen years, ASER has become well known for generating estimates of basic reading and arithmetic levels for children in the elementary school age group. What is less well known is that in ASER there is rich data over time about the educational status of children below the age of 6. Looking at this dataset, three clear trends are visible. To begin with, there is considerable scope for expanding the outreach of anganwadis for children in the age group 3 and 4. Next, the proportion of children who are already in Std I but not yet age 6 continues to be high. All India data from ASER 2018 indicates that close to a third of all children enrolled in Std I are less than 6 years old. Third, going early into formal schooling leaves the younger children at a huge disadvantage; in the same grade, older children are able to do much more than their younger friends.

Let us discuss each of these trends one by one.

<u>The need to expand anganwadi coverage:</u> Chart 1 outlines the urgent need for greater outreach for early childhood education and development. Based on data collected from 2008 onwards, it is clear that there is potential for bringing many more children into the anganwadi network. All India data (2018) shows that slightly below 30% children at age 3 and 15.6% of children at age 4 are not enrolled anywhere.[3]

Chart 1: % Children not enrolled anywhere by age (ASER 2008 - 2018)



[1] Chief Executive Officer, Pratham Education Foundation

[2] ASER was done in practically every rural district of India for the period 2006 to 2014. On the 10th year of the ASER exercise a decision was taken to do the nation-wide ASER every alternate year.

[3] While the method of measurement remained the same between 2005 to and 2016, in 2018 a more detailed classification of what children were doing from age 4 onwards was put in place.

But these figures (Chart 1) for children at age 3 and 4 who are not enrolled anywhere are much higher in states like Rajasthan, Uttar Pradesh and Bihar. In this age group being in an anganwadi may increase exposure to developmental activities appropriate for this age. Expanding access to anganwadis would be an incremental step that would strengthen the impact of the existing early childhood provision that is already in place.

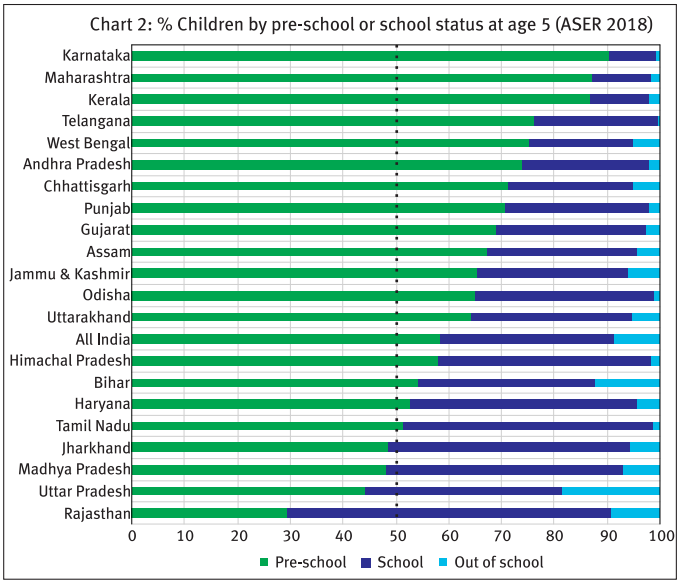
Early entry to formal schooling: It is commonly assumed that children enter Std I at age 6 and that they proceed year by year from Std I to Std VIII reaching the end of elementary school by age 14. The Right to Education Act 2009 also refers to free and compulsory education for the age group 6 to 14. However, the situation on the ground is quite different.

A closer look at age 5 also provides important clues for how what children are doing at this young age influences their later chances in education and in life. For example, even if we look at the all India age 5 cohort in 2018 we can see that 28.1% are still enrolled in anganwadi, a similar proportion (27.5%) are in private LKG/UKG and 23.3% are enrolled in government schools and a little under 10% are enrolled in private schools. 8.1% are not enrolled in any kind of pre-school or school (Table 1).[4] Those who are in school at this age would usually be in Std I but it is possible that a few may be in higher classes too.

Table 1: % Children enrolled in different types of pre-schools and schools by age 2018

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt	Other		
Age 3	57.1	1.0	10.0	2.0	1.0	0.1	28.8	100
Age 4	50.5	2.1	23.4	5.3	3.0	0.2	15.6	100
Age 5	**28.1**	**2.8**	**27.5**	**23.3**	**9.8**	**0.3**	**8.1**	**100**
Age 6	7.6	1.9	16.4	49.5	20.7	0.5	3.3	100
Age 7	1.8	0.8	7.3	59.1	28.7	0.6	1.8	100
Age 8	0.7	0.4	3.3	62.6	30.8	0.7	1.5	100

At age 5 across India, there are big differences across states about where children are enrolled at age 5. In Chart 2 alongside, pre-school refers to enrollment in anganwadis, government pre-primary grades and in private LKG/UKG. School refers to enrollment in either private schools or government schools.



Putting together all those who are in school, we see that this figure is one third of all children in this age group. Interestingly, if the type of pre-school or school is considered, about half of all children age 5 are in government institutions (anganwadi and government schools) and close to 40% are in private institutions (private LKG/UKG and private schools). Depending on where they are enrolled, children get different opportunities for development and learning.

After several decades of efforts to universalize elementary education, there is widespread understanding of the importance of schooling. In fact, parents who have not had much education themselves have high educational aspirations for their children. Enrollment in formal schools at any early age is a consequence of what can be seen as 'over universalization' of elementary education. Children as young as three or even less are enrolled in pre-schools and play schools, especially in urban areas and in middle income and high income families. The belief that more years of schooling is better than less and that the sooner the child enters 'school', the faster she or he will be ready for future learning is held by many people. In any case, in most private schools, parents are encouraged to bring their children at age 4 or 5 into kindergarten (LKG or UKG) and not directly into Std I. Poorer parents, who cannot find accessible or affordable pre-school alternatives and who do not see anganwadis as an option for education will often enroll their children into the nearest government school. These patterns lead to very different age distributions in Std I in government school and private school.

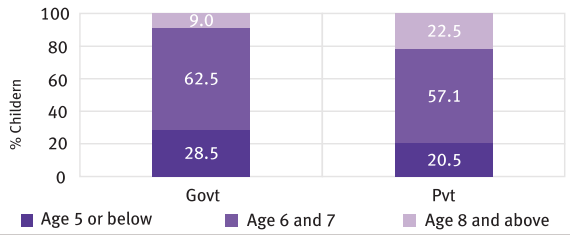
[4]ASER Centre (2019). Annual Status of Education Report (Rural) 2018 - 'Young Children'.

Age implications for learning: Data from ASER 2018 clearly shows that of all children enrolled in Std I in rural India, 35.6% are enrolled in private schools and 64.4% in government schools. In private schools, only 20.5% of children are age 5 or younger whereas this number is 28.5% in government schools. Similarly, there are 22.5% children in private schools who are 8 or older but the figure for government schools is less than 10% (Table 2 and Chart 3)[5]. All India patterns do not reveal the wide variations in age distribution in Std I in different kinds of schools; these lopsided patterns are more acute in some states.

Table 2: % Children enrolled in Std I by school type 2018

% Children in Std I enrolled in	Govt	Pvt	Total
	64.4	35.6	100

Chart 3: % Children enrolled in Std I by age and school type 2018



This chart shows the distribution of enrollment in Std I in different types of schools by age.

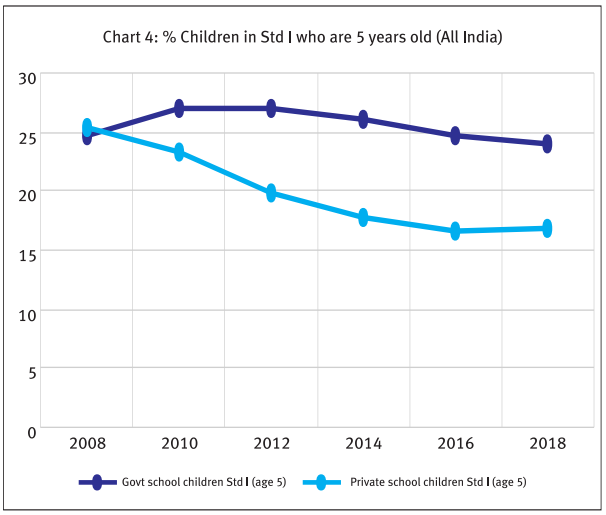
Table 3: Reading and arithmetic levels for Std I children by age and school type 2018

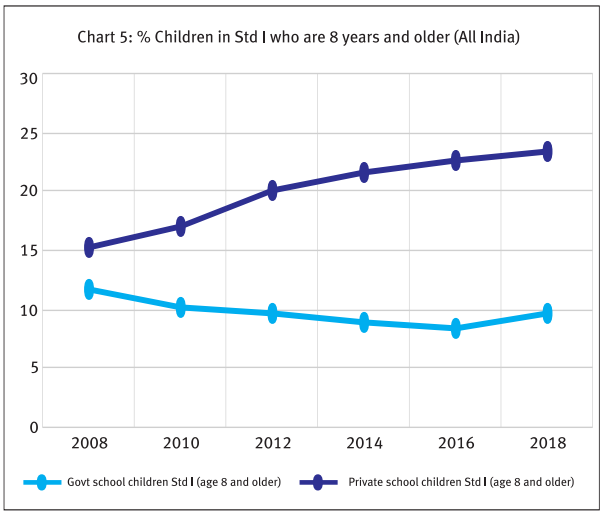
Age	% Children who	
	Can read at least letters	Can recognize at least numbers (1-9)
Government schools		
Age 5	33.0	38.7
Age 6 and 7	50.0	57.8
Age 8 and above	58.3	68.9
All	46.8	54.4
Private schools		
Age 5	57.1	63.4
Age 6 and 7	79.0	84.4
Age 8 and above	86.3	92.1
All	77.0	82.7

This table shows the proportion of children in Std I who can read at least letters and recognize at least numbers up to 9.

Even a cursory look at all India data from ASER 2018 for reading and arithmetic in Std I indicates that even in the same grade and same type of school, older children can do more than younger children. The difference in a 5-year-old's ability to recognize numbers can be up to 30 percentage points less than that of an 8-year-old (Table 3).

Enrolling children into formal schooling when they are too young may be an important reason why these children remain academically behind others through their school life. ASER data over time shows that in Std I, the proportion of younger children is falling over time in private schools (Chart 4 and 5). As it is children in rural India who are enrolled in private schools come from families with more education and a higher level of resources. This advantage is further strengthened by reducing the age disadvantage.





[5]ASER Centre (2019). Annual Status of Education Report (Rural) 2018 - 'Young Children'.

Available data and evidence strongly reinforce the recommendations suggested by the draft NEP document released in June 2019. For the future of India, these policy directions need to be taken very seriously. ASER data over the years provides some understanding of the patterns and practices based on ground realities. Other research studies like the longitudinal research done in the India Early Childhood Education Impact Study (IECEI)[6] 2017 also provide important insights into what is happening with young children, their schooling and learning in India today. Understanding challenges that children face when they are young is critical if we want to solve these problems early in children's lives rather than waiting till much later to attempt remedial action which is harder to do. The entire ASER 2019 effort was designed to explore more deeply where young children are and what they can do. More studies need to be undertaken that provide empirical evidence for the situation on the ground so that practical and feasible policy decisions can be taken.

Research and data gathering is needed not only to inform high level policy. It is equally important to think about what information is needed to guide practice on the ground. The push from draft New Education Policy document to pay attention to this early age group should lead to more detailed tracking and mapping for the provisions that already exist at macro and micro levels. In many communities, anganwadis are already located inside the government school compound or very close to it. Any planning for a pre-primary class in the government school needs to take into consideration what exists, how that functions and how existing structures and processes can be adapted to strengthen current delivery and also how that can dovetail into anything new that is brought in. In fact, detailed mapping can also help to maximize the impact of the expenditures being done by the ICDS department and the school system.

The gap between policy and practice is also very visible in what happens inside pre-schools and pre-primary grades. In fact, the early years space (age 4 to 8) in India can be seen like a 'see-saw'. Large number of young children are enrolled in anganwadis. But within the anganwadi system, early childhood education is not given the priority it needs. Although children are in anganwadis, they are not benefitting to the extent that is possible in terms of getting children ready for school. At the same time, increasing numbers of children are entering private pre-schools and pre-primary grades. But even as the name suggests, the activities at this stage are very much like a downward extension of schooling. Therefore, for different reasons, neither the government provision nor the private delivery is able to adequately provide exposure to developmentally appropriate "breadth of skills" that children need at this age. On the pedagogy side, a reworking of curriculum and activities is urgently needed for the entire age band from age 4 to 8, cutting across all types of pre-schools and early grades regardless of whether the provision is by government institutions or by private agencies.

Anyone looking closely at the status of young children in India will completely agree with the draft NEP statement that early childhood education has the potential to be the "greatest and most powerful equalizer" (p.46). 2020 marks the 10th anniversary of the RTE Act. This is the best moment to focus on the youngest cohorts before and during their entry to formal schooling and ensure that ten years later they complete secondary school as well-equipped and well-rounded citizens of India.

[6]Kaul, V., Bhattacharjea, S., Chaudhary, A. B., Ramanujan, P., Banerji, M., & Nanda, M. (2017). The India Early Childhood Education Impact Study. New Delhi: UNICEF.

The early years continuum

An interview with Dr Venita Kaul[1]

I must congratulate ASER for including early childhood, especially the 4-year-olds and the pre-schoolers, into this survey for the first time because to date there is no large scale data set for this stage of education. On the one hand, we as a government, as an academic community, as a research community, as a people interested in international development, development agencies, everyone is talking about the criticality of the early years of life. There is an undisputed acknowledgement of how important this stage is. And on the other hand, we are also very concerned about the learning crisis in this country which ASER Centre and the NAS have been demonstrating for many years. But in this context, in our discourse to address this crisis, a very important basic principle that is easy to forget is that the learning process is a continuum. It is a continuous process. What we see at the primary stage is a reflection of what the status is at the early childhood stage, which is so much more critical. That's why it is important to address the initial stages. Actually birth to age 3 is the most critical period, because that is when the brain develops at the most rapid pace, but we are looking at the next stage, the period when children have started to learn in an organized and more structured way. There are certain critical periods of learning within this stage that are foundational for later school learning, and so if we are concerned about the learning crisis, then how can we ignore this stage?

The India Early Childhood Education Impact study (IECEI) study that ASER Centre and CECED[2] at Ambedkar University Delhi did together, with its large sample and important findings, was a significant contributor to the draft National Education Policy (NEP) because we had convincing evidence to show that it matters if any country invests in young children. Thanks to the study we were able to talk about the multiple pathways that had to be addressed, the need for flexibility, and the emphasis on the early continuum for later learning. This has indeed been addressed in the draft policy, which has thus taken a more informed perspective that is contemporary and locates early childhood education within the larger crisis of learning.

Unfortunately, the NEP has taken only a partial perspective on this. The emphasis has to be on the continuum - one has to look at pre-school alongside primary school, not in isolation, because the child is common to both; the same child is going to both. We say the age for early childhood is 3 to 6 years, and 6 to 14 is the elementary school age group. But most states have 5-year-olds going to Std I across the country, as the ASER data also shows. The prescribed official age for Std I is usually 5+, which is in complete disregard for any sort of understanding of children or child development, because on one hand you require a child of this age going to pre-school or Anganwadi to be exposed to an integrated curriculum, but it seems that if the same child goes to Std I she does not require any of that! Also, the fact is that there is a non-linearity in early participation which the IECEI study has shown up, where we have 4-year-olds sitting in Std I and 7-year-olds in pre-school. The important thing therefore is to see that the early childhood curriculum should match with the reality rather than with our assumptions. Our study showed that there is a huge developmental difference between the performance of a 5-year-old and 6-year-old, which we are not considering: we are going straight to offering a 5-year-old what a 6-year-old should be offered.

And then we have children of varying ages and varying patterns who have gone through different kinds of early experiences, all of whom are coming into the primary school system. When each grade is multi-age and multi-level, how can it be offered just one syllabus, that too an annual syllabus that starts in July or April and ends in March? Whatever level the child is in March, we end there and then proceed to the next level, which does not match what the child needs or has understood, or provide a child the opportunity to revisit and learn. This linearity in the curriculum, especially when learning is more spiral in nature, is what leads to a cumulative deficit in learning of which the learning crisis is a reflection. It's so important to see these factors together, especially if we have to consider the way forward.

Unfortunately, there is a hesitation on the part of those associated with primary education curriculum to 'see' things differently from where they are used to starting. There was somebody who said that in pre-school we teach 'children', but in primary school we teach 'subjects'. Perhaps that difference in perspective is where it comes from: the understanding that this is the defined syllabus from which we have to teach, regardless of who is being taught - adult, child or infant. We have to start from the alphabet, numbers - this is the technical understanding of people engaged with primary education, who do not give the required

[1] Dr Venita Kaul, Professor Emerita Education, Ambedkar University Delhi
[2] Centre for Early Childhood Education and Development

attention to thinking about who the learner is. There is thus a huge gap between the understanding of the learner and what has to be learnt. There is no continuity or consonance between the two.

The NEP while rightly highlighting the early stage from 3 to 8 years as the foundational stage, should have had an integrated chapter on pre-school and foundational learning which should have viewed the age group 3 to 8 or even 3 to 11 together, in order to address these specific foundational issues. It is commendable that the Committee has thought in terms of restructuring school education into sub-stages of 5+3+2+2 and given importance to foundational learning, but the curriculum also needs to be relooked at, especially to explore how to help the transition of children who are coming from homes that are very different from what they used to be in terms of a learning environment, with a lot of first generation learners coming in. The curriculum should make the transition for this section of learners easier. The curriculum and syllabus need to be much more dynamic in the sense of accommodating to the context.

A very worrisome situation in early childhood that we saw clearly in the IECEI study, and the subsequent analysis we did for a recent publication that we brought out, is that across the board mainly didactic and formal teaching is taking place in pre-schools, which is actually a downward extension of the primary school. We saw very little of what is considered developmentally appropriate play-based curricular practice. Our analysis shows that formal teaching is actually counterproductive for learning since it has an inverse relationship with school readiness and thus negates much of the potential gains from pre-school education.

In terms of the ASER data that has now come in, I look forward to getting some very vital evidence for this stage. Of course we first need to know what percentage of children actually participates in pre-school, but beyond that, if we assume that they are not getting a developmentally appropriate curriculum, then how is this reflected in their school readiness on school entry, and their learning outcomes in school? My hypothesis (based on my own studies and others on a smaller scale) is that children learn both number recognition and counting very fast by rote, which is how they are able to move forward. Subsequently rote becomes the critical mediator for learning, at the cost of conceptual understanding. Even the algorithms that they are expected to do are more through rote, without the corresponding conceptual understanding. While Std I and Std II are still managed by rote, from Std III onwards, where the curriculum requires more application and conceptual understanding, they start faltering. And this is how we have a crisis where arithmetic is concerned. Similar issues are there in language learning as well.

These are some of the very interesting and fascinating questions related to curriculum and the learning process, both from the perspective of diagnostics of learning as well as from the point of view of curriculum development, and also from the point of view of advocacy. We know that early childhood education can nullify equity gaps, but that can happen only if it is a good quality early childhood education. So, is the kind of early childhood education that we have now actually nullifying those equity gaps or widening them? There's also the whole question of gender because again, in the IECEI study, we found that girls are pushed more into the government systems and are in anganwadis, government primary schools etc. whereas boys are put more into private schools. Is this happening across all states, or are there state or regional differences? To what extent is gender a factor? To what extent is the state a factor? Then of course the IECEI study also identified a major trend of multiple pathways in the initial years, with 4-year-olds sitting in Std I and 7-year-olds in pre-school. Those findings are what actually led to the NEP recommending foundational learning in a flexible mode. Is this phenomenon evident at scale also? Last but not least, ASER has developed and used a tool for psychosocial development, which has been a challenge internationally in terms of measurement at scale. It will be very important to see whether the ASER tool is able to discriminate among children appropriately, whether there are consistencies or associations between social-emotional learning and cognitive or language or any other domain. Of course ASER is not a longitudinal sample but it will hopefully provide robust data on all of these questions, which will definitely add weight to the importance of looking at the early years as a continuum.

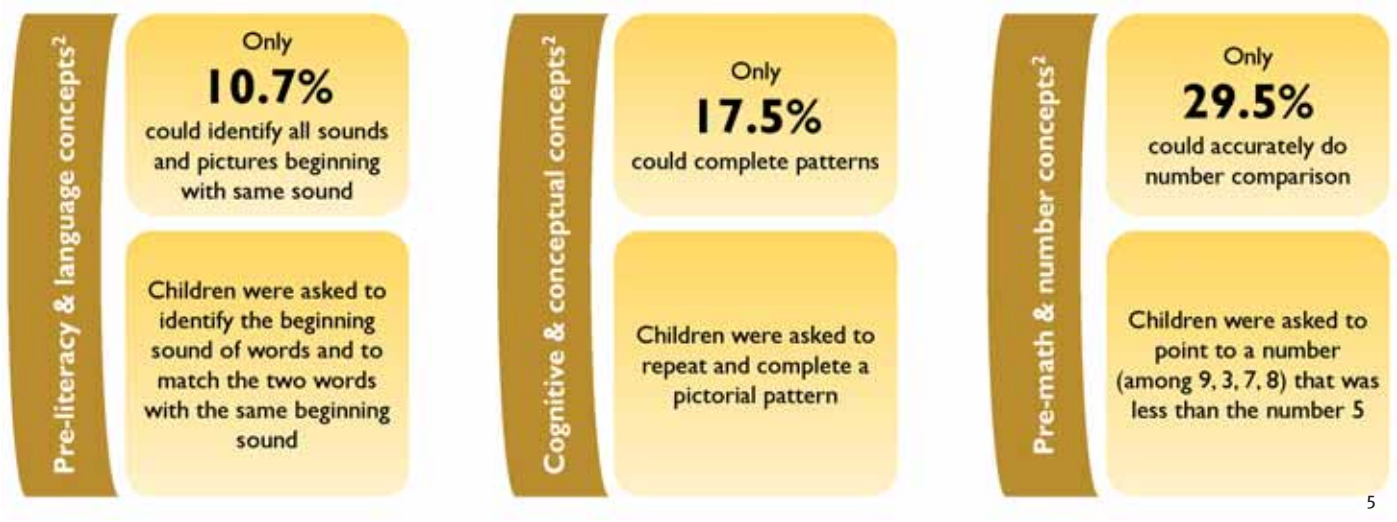
Pre-primary schooling: An urgent priority for India

Ashish Dhawan[1] and Krishnan S[2]

A crisis of school readiness

India's learning crisis is not news. The National Achievement Survey of 2017 tells us that 1 in 3 students in Grade 3 cannot read small text with comprehension and that 1 in 2 students in Grade 3 cannot use math to solve daily life problems. The findings from the 2018 ASER report are even more stark - only 50% of children in Grade 5 in rural India could read a Grade 2 level text, and only 28% of children in Grade 5 could solve a division problem.

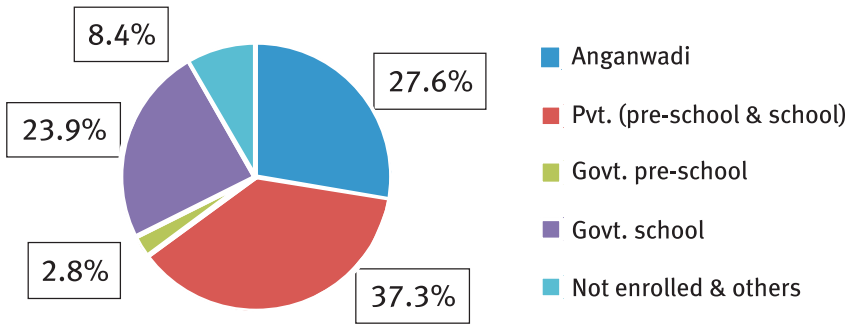
But when exactly do these learning deficits begin? The ASER data from 2018 begins to reveal some answers. For instance, 42.7% of rural Indian children in Grade 1 could not even recognize the letters of the alphabet in their medium of instruction, and 35.7% could not recognize numbers from 1-9. Data from the 2017 India Early Childhood Education Impact study by Ambedkar University and ASER Centre tell us that the origins of this crisis lie even before children enter Grade 1. Only 1 in 10 children aged 5 could match two pictures beginning with the same letter, and only 1 in 6 could complete a simple pictorial pattern. Data from FSG's PIPE program[3] (pre-schoolers in urban India) and from state government-led school readiness programs (children at the start of Grade 1 in Karnataka and Gujarat)[4] confirm the same hypothesis. Children in India were simply not school-ready! The IECEI study also goes on to confirm something in the Indian context that research from around the world has been telling us for almost half a century - that a well-designed and well-delivered pre-primary program is the most effective way to bridge the learning gap early and set the children up for success in later years.



However, the public system in India has been unable to provide quality Early Childhood Education to our children aged 3-6, and even more specifically to our children aged 5-6. Pre-schooling is but one of six services delivered through the Anganwadi network, and is arguably the least prioritised. Further, to make things more difficult, an anganwadi worker is tasked with responsibilities such as vaccinations, maternal health and malnutrition making it difficult to ensure sufficient instructional time. Consequently, only slightly more than a quarter of children in the 5-6 age cohort were in anganwadis in rural India[6]. So, where are the rest of the children? A weak Anganwadi network is causing children to either attend private kindergartens and nursery schools (unregulated and emphasizing almost completely on rote learning), or enter school directly in Grade 1, unready and unprepared to face the rigours of formal schooling. Naturally, this lack of a developmentally appropriate pre-primary education leads to poor school readiness, which gradually balloons into a learning crisis at a national level.

[1] Founder and Chairman, Central Square Foundation
[2] Senior Program Manager, Central Square Foundation
[3] https://www.fsg.org/pipe
[4] http://centralsquarefoundation.org/articles/school-readiness-programs-karnataka-gujarat.html
[5] Results from India Early Childhood Education Impact Study conducted across 3 states (Telangana, Assam, Rajasthan) by Centre for Early Childhood Education and Development and ASER Centre - http://ceced.net/iecei/
[6] Annual Status of Education Report (2018) - http://www.asercentre.org/Keywords/p/337.html

Distribution of 5 year olds across different models[7]



Pre-primary sections (PPS) in primary schools: India's best bet for quality at scale

The recently released draft NEP, to its credit, calls out early childhood care and education as a clear priority area and goes on to call it 'perhaps the greatest and most powerful equaliser'. However, while it calls for universalizing 3 years of pre-primary schooling, it suggests no clear pathway to the central or state governments to implement the recommendations. In fact, of the four modalities suggested in the document, three involve strengthening the size and quality of the Anganwadi network. Any effort to bolster the Anganwadi network could turn out to be sub-optimal, considering that a vast majority of parents, especially of the older children, seem to have already abandoned the system in favour of schools or private pre-schools.

While we need to work on enhancing the pre-school component of the ICDS, we need to be cognizant that the beneficiaries would most likely be younger children, mostly 3 year olds, and some 4 year olds. The cohort of students who will enter Grade 1 the next year, most likely in the 5-6 age group, would be best served by a year of quality pre-schooling delivered through the public education system. Indeed, one of India's pressing reform priorities would be to ensure provision of at least one year of developmentally appropriate pre-primary schooling (PPS) delivered through the primary school. Many countries globally with comparable GDP per capita, including China and Bangladesh, have made this a top reform agenda in recent years.

A well-designed PPS class with a dedicated teacher could ensure that all children will enter Grade 1 school ready. The teacher, with 3-4 hours of instructional time per day, would be able to work on multiple aspects of school readiness with this cohort- the ability to pay attention in the classroom, follow instructions, interact with peers, identify shapes and colours, recognize patterns, correlate alphabets to their sounds, count numbers, and even learn how to hold a book. And as data from the IECEI shows, acquisition of these critical skills between the age of 5 and 6 years correlates very strongly with the ability to read with comprehension and do basic math by age 8 or 9.

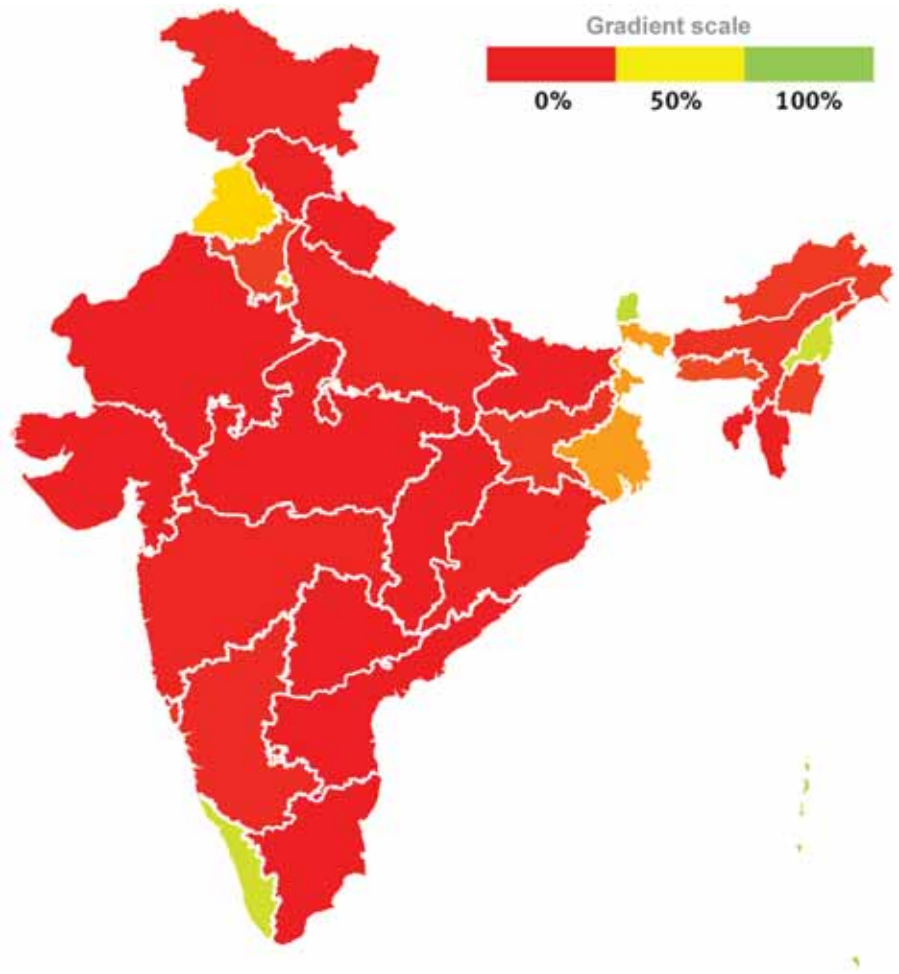
An additional aspect in which state governments might benefit by implementing PPS is enrolment. A lot of children who enter private schools at age 4 or 5 due to a lack of public provision will be able to enter government schools. If implemented in a phased and strategic manner, PPS could well arrest or maybe even reverse the trend of declining enrolment in public schools.

An implementation blueprint for states

There have been some government efforts across the country to introduce PPS in primary schools, but these have been mostly in municipal corporations (Pune, Chennai, Mumbai) or small states (Delhi, Sikkim). Some large states like Assam, Haryana, West Bengal and most recently Punjab have provided for one year of PPS, but multiple questions loom around quality and modality of implementation. Civil society organizations working in these geographies report that the provision in most cases lacks a structured curriculum, a dedicated teacher, adequate instructional time, or in most cases, all of the above.

[7] Annual Status of Education Report (2018) - http://www.asercentre.org/Keywords/p/337.html

Provision of Pre-Primary Sections in Primary Schools across States[8]



The role of the state education departments becomes integral in ensuring that quality ECE is provided to all children at scale. This can be broken down into four pillars.

1. Build technical competence

In India, there is broad consensus around what constitutes quality ECE and what competencies need to be developed in a child to be school-ready and the school to be child-ready! The National ECCE Policy (2013) lays out the curricular principles very clearly, and the NCERT also released a preschool curriculum and guidelines for implementation in August 2019. States would need support in contextualizing these guidelines for their local context and designing an optimum model that encompasses classroom material, teacher training, monitoring framework and assessments. And to plug this gap, there already exists a robust ecosystem of sector experts and civil society organizations with deep understanding of local contexts and of early childhood pedagogy from across the country. For instance, Pratham in Punjab & Himachal Pradesh, Vikramshila in Kolkata, Akshara Foundation in Bengaluru, CLR in Pune etc. State governments should proactively seek to partner with these organizations to upskill themselves on all dimensions of quality ECE.

[8] DISE 2017-2018 | % of primary schools with PPS (teacher › 0 and enrolment › 0)

2. Identify staffing models

The presence of a dedicated teacher (and therefore adequate instructional time) is one of the important prerequisites to deliver a quality pre-primary program. Hence, the need of the hour is for State Governments to gradually hire new teachers for the pre-primary program and eventually create a separate cadre of teachers that are specialized in delivering pre-primary instruction.

In the interim, in order to minimize hiring, State governments can experiment with a combination of models to provide the extra resource. For instance, in districts where there are aggregate excess teachers, they could be redeployed to pre-primary classrooms. Another option would be to hire contractual teachers for a specific tenure (for eg. Telangana). Alternatively, underutilized cadres [for eg. Shiksha Mitra (UP), Panchayat Education Assistants (Sikkim)] could be leveraged to staff pre-primary classroom. And in some cases, the School Management Committees could also be empowered and encouraged to appoint teachers from school-level funds (for eg. Karnataka and Kerala).

3. Leverage central government funding for pilots

Funds allotted under the Annual Work Plan and Budget (AWP&B) are a great opportunity for states to set up meaningful pilots around different pre-primary models. For the past couple of years, state governments have been getting increased allotment under the SSA for pre-primary education. For instance, there were three states which were allotted more than Rs. 45 crores (including a high per school allotment) in 2019-20 (Punjab, HP and MP). This quantum of financial assistance from the centre with a high per-school allotment can boost provision of quality pre-primary education. While some states have been able to set up interesting PPS pilots using these funds, most others continue to use them for infrastructure or input upgrades for anganwadis. State governments should look to leverage these funds in a strategic manner and unlock higher funding in successive years.

State	PAB funding 18-19 (INR cr.)	PAB funding 19-20 (INR cr.)
Punjab	28.0	105.9
Himachal Pradesh	3.0	59.2
Madhya Pradesh	0.1	45.0
Andhra Pradesh	5.5	26.1
Kerala	10.0	20.1

4. Create a pathway to scale

Universalizing PPS in any one state in one go, while a positive political move, would be extremely difficult given current funding constraints and would inevitably also lead to dilution of quality. States should begin introducing PPS in larger schools in the first few years so as to ensure sufficient enrolment to warrant appointing a dedicated teacher. States could create a phased implementation plan eventually covering a significant percentage of 5-6 year old children through a much smaller percentage of schools. For instance, 47% of all students in Grade 1 in government schools in Gujarat are enrolled in only 6600 schools (19% of the total primary schools in the state). These 6600 schools would be an obvious choice to implement PPS in, in the first phase.

Conditions are ripe in India for multiple states to consider introducing a high-quality pre-primary program: a strong policy thrust from the NEP, availability of funds from the centre, and renewed hope and interest among civil society organizations. A strategic and phased approach to introduce one year of pre-primary classes through all primary schools in India would go a long way in effectively tackling our foundational learning crisis. 58% of the children in government schools in the country are currently enrolled across ~2.3 lakh high-enrolment schools[9]. A realistic yet ambitious 5-year target for India could be to provide a high-quality pre-primary section in each one of these 2.3 lakh primary schools to begin with.

[9] DISE 17-18 | Grade 1 enrolment greater than 20

The early advantage: Learning levels in Std I

Wilima Wadhwa[1]

This year, ASER 2019 looks at the 'Early Years' and focuses on a wider set of domains for 4- to 8-year-olds. Based on a sample of almost 37,000 children from 26 rural districts across 24 states, ASER 2019 gives a snapshot of the schooling or pre-schooling status of children in this age group. More importantly, it provides estimates for selected competencies that international research has identified as important predictors of future success: early language acquisition, pre-numeracy and numeracy skills, cognitive abilities, and social and emotional learning.

One of the big debates in Early Childhood Education (ECE) is on children's 'school readiness'. In particular, does ECE provide children with the requisite skills to cope with school curriculum? There is a huge literature on the importance of certain cognitive abilities that develop in these early years which serve as building blocks of not only future academic competencies but also of lifelong learning. Many of these competencies are supposed to be developed during the years children spend in pre-school, so that they are 'ready' when they enter school in Std I.

In terms of what children learn in school, one of the big debates is on whether children in private schools perform better than those in government schools. This debate has typically focussed on learning levels in school and what proportion of the differences can be attributed to 'home-related' factors and, therefore, what is the 'true' private school effect. In the Indian context, the consensus seems to be that a large proportion of the differences in the learning levels of children enrolled in private and government schools can be attributed to these 'home factors'.[2] And, while the private school effect remains positive, even after controlling for the child's home environment, children's performance in private schools is nowhere near grade competency.

But when do these differences start to manifest themselves? Is it the case that children enter school (Std I) with similar 'school readiness' levels and the greater value added in private schools accumulates over time, or is the case that children who start Std I in private schools do so with a learning advantage? Let's look at the case of language first. According to the National Council of Educational Research and Training (NCERT) learning outcomes for grade 1[3], the children are supposed to be able to identify and read words and simple sentences. According to ASER 2019, 21% children in Std I of government schools could read words as compared to 46.7% children in private schools - an advantage of 122%! How is this possible? Is this a fair comparison - are we comparing apples with apples? The answer is clearly no.

First, the age distribution in Std I of government schools is very different from that in private schools. The Right to Education Act (2009) and national policy mandates that children enter Std I at age 6. However, 26.1% children in Std I of government schools are 4 or 5 years old as compared to 15.7% children in private schools. On the other end of the spectrum, 30.4% children in Std I of government schools are 7 to 8 years old, as compared to 45.4% children in private schools. Therefore, comparing learning levels in Std I between government and private schools becomes problematic. Since there is a clear progression in learning with age, the higher learning levels in Std I, in private schools, may be partly due to the fact that Std I in those schools has a higher proportion of older children.

Second, it is well known that children who go to private schools come from relatively affluent backgrounds. They also tend to have more educated parents. This affords them certain advantages that aid learning. These advantages are not available to children who are from less advantaged families and are more likely to attend government schools. For instance, 21.8% children enrolled in Std I in the ASER 2019 sample had mothers who had never been to school. Of these, 73.7% children were enrolled in government schools. In comparison, out of the children whose mothers studied beyond Std X, 26% were enrolled in government schools.

Third, as stated earlier, ECE is supposed to prepare children for school. Children are supposed to be exposed to activities that build their cognitive abilities and early literacy and numeracy skills. For instance, the National Early Childhood Care and Education (NECCE) Curriculum Framework talks about developing skills related to sequential thinking, identifying patterns, observing, reasoning and problem solving at the pre-school stage. The pre-school learning outcomes laid out by the National Council of Educational Research and Training (NCERT)[4], expect children to be able to tell a familiar story using pictures from a story book

[1]Director, ASER Centre
[2]See for e.g., Wadhwa, W. (2017)," School Matters" in Annual Status of Education Report. New Delhi: Pratham Resource Centre and ASER Centre.
[3]See http://www.ncert.nic.in/publication/Miscellaneous/pdf_files/tilops101.pdf
[4]See http://www.ncert.nic.in/pdf_files/preschool_curriculum.pdf

and use of listening skills. These cognitive and early language skills are highly correlated with the child's ability to acquire further language skills. Therefore, children who enter Std I better prepared with these skills are likely to perform better. For instance, among the cognitive tasks administered in ASER 2019 (seriation, pattern recognition, and puzzle), only 23.8% children in Std I in government schools could do all three tasks as compared to 43.1% in private schools.

Once we control for all these factors - age distribution in Std I, home factors like affluence, mother's education, home learning environment, and some baseline abilities that children enter Std I with, we are left with a difference of only 35% compared to 122% that we started with. In other words, 71% of the difference in learning levels of language in Std I, between government and private schools can be explained by factors other than the private school effect. But private schools still have a learning advantage of 29% - where is this coming from? Since we are talking about Std I, this difference cannot be attributed to an accumulated effect of better teaching practices in private schools. It is not because some children come better prepared for school, since we have controlled for that, as well. Is there something else that some children are learning in pre-school that helps them perform better when they enter school?

Ideally, one would need a longitudinal dataset with repeated observation/assessment of the same child to disentangle these effects. However, even though ASER is not a longitudinal dataset, we can use evidence from other such studies and the ASER data to try to answer this question. ASER 2019 tells us the current enrollment status of a child - school, pre-school, etc. - but not what the child was doing in the previous year. This is especially the case when talking about the type of school. So for instance, ASER does not tell us what kind of a pre-school - government or private - a child who is in Std I of a government school today, attended in the past. But using evidence from the India Early Childhood Education Impact (IECEI) study, conducted in 3 states of Assam, Rajasthan and Telangana, one can safely assume that children in government schools are more likely to come from government pre-schools and those in private schools from private pre-schools.[5] In fact, one can go one step ahead and assume that the pre-school experience of Std I government school children has been mostly[6] in an anganwadi centre.[7]

If that is the case, then one can check if there is something special going on in the private pre-schools that better prepares children for the Std I curriculum. And, the answer is yes! What these private pre-schools are doing is to start children on the school based curriculum in pre-school itself! In other words, the private sector keeps children longer in pre-school and exposes them to school-like curricula even before they have entered school. For instance, 14% children in anganwadis could recognize letters or more as compared to 52.9% in private pre-schools; and 12.9% children in these private pre-schools were already reading words (something they are supposed to learn in Std I) as compared to 2.9% in anganwadis. It is not surprising, therefore, that children from private pre-schools perform better in school even after controlling for other factors - it is because they have learnt some of the Std I curriculum in pre-school itself. Finally, children in anganwadis do worse than private pre-school children on cognitive as well as early language tasks like picture description. For instance, while 23.4% of private pre-school children could do all three cognitive tasks, only about half (12%) of the children in anganwadis could do them. Similarly, though 54.8% children in anganwadis could do the picture description task, an even higher proportion (73.1%) could do the task in private pre-schools.

To summarize, children in government schools enter school in Std I, not only with the usual disadvantages of coming from poorer backgrounds and having less educated parents, but also a pre-school experience that is not disposed to teaching school based material at the pre-school stage. This is not necessarily a bad thing. However, even though the gap is much less as compared to the academic competencies, anganwadis also lag in other areas that should be focused on in pre-school, like cognitive skills.

This latter point, that the learning gap between government anganwadis and private pre-schools is far less in conceptual skills than in academic skills is much clearer when we look at numeracy skills of children in Std I. According to the NCERT learning

[5]Kaul, V., et. al. (2017), The India Early Childhood Education Impact Study. New Delhi: UNICEF.

[6]According to the IECEI study, contrary to expectations, young children do not follow the linear age-based trajectory that policies prescribe. Like ASER 2019 also shows, many 4-year-olds are in school and many 6-7-year-olds are still in pre-school. Further, the study also finds that there is a lot of back and forth between type of school and school and pre-school. For instance, it is not uncommon for children to be enrolled in grade 1 and then go back to pre-school or be enrolled in an anganwadi, then go to a private pre-school and then go back to the anganwadi.

[7]In most states, it wasn't till quite recently that government schools introduced a pre-primary class in government schools. In fact, this was largely done to provide an alternative to private schools which had both pre-school and school classes in the same premises and therefore, tended to retain their children after the pre-school stage. As a result, the proportion of children enrolled in government pre-primary tends to be quite small. For instance, according ASER 2019, while 44% of 4 year olds were enrolled in an anganwadi and 36.7% in a private pre-school, only 5.6% were enrolled in a government pre-primary class.

outcomes, children in Std I should be comfortable with single-digit operations - number recognition, addition and subtraction - both numerically as well as conceptually in terms of being able to solve day-to-day problems related to addition and subtraction using numbers 1-9.

Let's take the case of single-digit addition. In the case of numerical addition, where children are asked to solve an addition problem, 71.3% children in Std I of private schools could do such a problem compared to 35.8% in government schools - a gap of 35.5 percentage points or almost 100%. Once we control for the age distribution in Std I, their household characteristics, mother's education and what they are supposed to have learnt in pre-school (cognitive tasks and single-digit number recognition), this gap narrows to just 25% or 8.8 percentage points.

In the case of oral word problems where children are supposed to apply the concept of addition to solve problems couched as simple day-to-day tasks, the gap between government and private schools is narrower to start with and it narrows far more once we control for other factors. In private schools, 50.7% children in Std I could solve the oral word addition problem compared to 29.3% in government schools - an advantage of 21.4 percentage points or 73%. However, when we control for other factors that affect learning in grade 1, this gap almost disappears to just 3.1 percentage points or 10.6%.

So it seems that while children in private school have an advantage in numeracy as well, this advantage is mostly limited to the more mechanical operations rather than the day-to-day understanding of these operations. Why this is happening can be understood if we look at what children are being taught in pre-schools. Private pre-schools tend to emphasize academic school based competencies in pre-school itself. For instance, 65.9% children in private pre-schools are already recognizing numbers 1-9 and 28.1% are already able to do numerical addition problems compared to 16% and 5.8% children in anganwadis. In fact, 31.3% children in private pre-schools can recognize double-digit numbers, a competency which they are only expected to learn in Std I- this number is only 2.9% in anganwadis. These findings are confirmed by the much more detailed IECEI study, that found "...at the time of school entry at age 5, most children's school readiness levels are far below expectations. From 'multi-tasked' Anganwadi Centres to 'demand-driven' private preschools, the quality of preschool education is not developmentally appropriate for children."

India has a huge investment in its early childhood program, administered through anganwadis under the Integrated Child Development Scheme. It is the largest program of its kind in the world with almost 1.2 million anganwadis across the country. The findings of ASER 2019 make a clear case for strengthening these Early Childhood Development centres so that they implement appropriate school readiness activities. A case can also be made for streamlining the curriculum at the pre-school stage so that all pre-schools focus on activities that build cognitive and early language and numeracy skills that aid further learning, rather than exposing our young children to rote-based and mechanical learning of competencies that they are supposed to learn when they enter school.

The hardest puzzle of all

Suman Bhattacharjea[1]

As ASER teams travelled around the country during the roll out of ASER 'Early Years', every now and then we would ask children to tell us which of the ASER tasks they had liked the most. Of the total of 24 items, most children mentioned one of the 5 tasks in the domain of cognitive concepts and skills - those related to, for example, the ability to categorize, remember, and reason. In other words, these questions weren't about subject-specific knowledge (like math sums), but rather they addressed more basic skills that our brains need in order to store and process information in different ways.

Of course the kids weren't thinking about strengthening their brains, they were identifying tasks that they had enjoyed doing. Of these five tasks, three were given to all children in our target age group of 4 to 8. The seriation task required children to lay out a set of four picture cards from smallest to largest, based on the size of the image on each card. In the pattern recognition task, the volunteer showed the child a two-item pattern and demonstrated how to figure out which item came next. She then showed the child a three-item pattern and asked her to point to the item that should come next in the sequence. In the puzzle task, the volunteer showed children how to put a 4-piece puzzle of a horse together by looking at the picture of the horse in front of them, and then asked them to do a similar puzzle on their own, this time with a picture of an elephant.[2]

Of course, no one who has interacted with young children will be at all surprised by the fact that the tasks they enjoyed the most were hands-on activities involving colours and pictures. What we did not anticipate was the response of family members who were present during the process. Over and over again, older siblings, mothers and even grandmothers looked on fascinated (there were usually more adult women around than adult men) - you could see they wanted to have a go at the tasks themselves. Because ASER is a household survey, curiosity about what we are up to is a key part of the process, and stimulating that interest is one of the reasons the process is designed the way it is. But the 'Early Years' tasks that we used this year generated a level of interest that was unprecedented even by the standards of the 13 previous occasions that ASER has been in the field. So much so that once the process had been completed with the children in our target age group of 4-8 in a sampled household, we would often invite the onlookers to try doing the tasks themselves. And once *didi* or *amma* or *bua* had experienced the fun of figuring out how to make pieces of elephant come together as a real, complete picture of an

[1]Director of Research, ASER Centre
[2]Older children age 6-8 were given a 6-piece puzzle.

elephant, it was a natural next step to discuss how it was easy to create more such activities by cutting up pictures from an old calendar or magazine.

The Early Learning Development Standards (ELDS), developed by the Centre for Early Childhood Education and Development (CECED) at Ambedkar University Delhi with the participation of UNICEF and a range of government and non-governmental institutions, suggest that all three of these tasks should be well within the capability of a 5-year-old child to handle.[3] The specification of learning outcomes developed by NCERT for children in pre-primary grades also includes these kinds of tasks.[4] But in the ASER 'Early Years' sample only about half of the 5-year-olds could do them: 50.6% could do the seriation task, 47.3% could identify and extend the pattern, and 52.4% could put together the elephant picture from its four component pieces. Only about 2 in every 10 of these 5-year-olds were able to do all 3 cognitive tasks.

One reason this matters is that ASER 'Early Years' data underlines what child development experts have been saying for years: cognitive skills matter. The extensive literature on school readiness shows that children's cognitive development is closely linked to their outcomes in many other areas. ASER 'Early Years' data shows a very clear relationship between children's cognitive skills on the one hand, and their early language and numeracy abilities on the other. This relationship is visible in every subpopulation of the sample: it is true for children age 5 as well as those age 8, among children in pre-primary grades as well as those in Std III of primary school. Even more important is the fact that this relationship is strongest when it comes to tasks requiring conceptual understanding rather than mechanical task completion, as Wilima Wadhwa's article in this report discusses.

ASER is not a longitudinal study that follows the same children over time, so it is not possible to say with certainty whether the advantages generated by stronger cognitive development persist as children progress through school. But these findings point in the same direction as those of India's first large scale longitudinal study of young children - the India Early Childhood Education Impact study (IECEI), conducted by ASER Centre and CECED between 2011 and 2016, which tracked a cohort of 14,000 children from age 4 to 8 - exactly the same age range as was covered by ASER 2019. The IECEI study found, for example, that children who were able to do tasks such as sequential thinking at age 5 had better early language and numeracy outcomes than their peers who could not do these tasks and moreover, that this advantage persisted even three years later.[5]

How best to ensure that children acquire this toolkit of cognitive concepts and skills first, before they are required to plunge head-first into the primary school curriculum? Both ASER and IECEI data show that to some extent, no intervention is required - children develop these skills naturally as they grow older. So one part of the solution may be to simply ensure that children do not enter school too early. Most states in India permit entry to grade 1 at age 5, and data from ASER 2018 shows that more than a quarter of 5-year-old children in rural India were already enrolled in school.[6] Assuming that the 2018 cohort of 5-year-olds had similar levels of skill and ability as those in the ASER 'Early Years' sample, most children would not have developed the cognitive concepts and skills that are necessary building blocks for learning. The age-grade distribution in different types of schools shows that most of these underage (relative to RTE norms) children are in government, rather than private schools - their peers whose families are able to afford private schooling are usually enrolled in pre-primary classes (LKG or UKG) rather than in grade 1. Many children going to government schools also have limited access to learning support at home relative to their private school going peers, since the rapid expansion of private schooling options has meant that increasingly, only children from the most disadvantaged households - which are also those with the least exposure to and familiarity with schools and schooling - attend government schools. 5-year-olds in grade 1 thus often face a double disadvantage, both of age and of limited home support, at the stage when they are just beginning their journey through the formal school system. And as ASER reports have been repeating for the last fifteen years, lack of flexibility in the school system means that once children fall behind it is very difficult for them to find a way to catch up.

The other part of the solution is, of course, to ensure that children access high quality and developmentally appropriate pre-primary education that provides them with the foundational skills and abilities they need before they enter school. International recognition of the importance of ECE, as reflected in SDG 4.2, targets exactly this objective - that quality ECE interventions should

[3]CECED and UNICEF (2018). Early Learning and Development Standards (ELDS). Centre for Early Childhood Education and Development and UNICEF India.
[4]National Council of Educational Research and Training (2018). Preschool Curriculum. Delhi: National Council of Educational Research and Training.
[5]Kaul, V., Bhattacharjea, S., Chaudhary, A. B., Ramanujan, P., Banerji, M., & Nanda, M. (2017). The India Early Childhood Education Impact Study. New Delhi: UNICEF.
[6]ASER 2018 figures are cited here because unlike ASER 'Early Years' which covered one purposively selected district per state, the 'basic' ASER conducted in 2018 covered almost all rural districts, reaching more than half a million children in all.

support young children with the appropriate environments and inputs that will enable them to develop these foundational skills, thus providing children with a more level playing field in terms of their ability to cope with the formal school curriculum.

This objective is now very much on the government's agenda, as evidenced by a range of new policies and programs over the past few years. The most recent reflection of this focus on the early years can be seen in the draft National Education Policy (2019) which envisages a "flexible, multifaceted, multilevel, play-based, activity-based, and discovery-based learning about, e.g., alphabets, languages, numbers, counting, colours, shapes, indoor and outdoor play, puzzles and logical thinking, problem solving, drawing/painting and other visual art, craft, drama and puppetry, music and movement."[7] Of course, the devil is in the details, and states are grappling with how best to design mechanisms that work for their particular context and needs. But while the various government systems sort out who will do what, how they will be trained for these new roles, and how they will coordinate with each other to ensure that the envisaged continuum of early learning moves from policy pronouncement to ground reality, it is important not to forget that at this young age children still spend most of their time at home. 'School readiness' ideally means that families and schools should work together to ensure that children have a smooth transition from one environment to the other. An uneducated mother may not be able to offer the expert scaffolding that a well-trained ECE teacher can provide to help young children grow and learn, but she can still do a great deal.

A necessary first step, though, is to find effective ways of spreading the message that for young children especially, learning should not be about textbooks and memorizing the 'right answer'. For the many adults in a child's life, both at home and in pre-school or school, perhaps the most challenging puzzle of all is to be able to see the big picture in terms of how young children learn. Once the overall picture is clear, the 'studying' and 'having fun' pieces can be put together, arranged and rearranged in many different ways.

[7]MHRD. Draft National Education Policy 2019.

To accelerate learning, press Play

Sonali Khan[1]

Background

One of the primary targets of Sustainable Development Goal 4 is to ensure that "all girls and boys have access to early childhood care, development and education so that they are ready for a primary education."[2]

Early childhood offers us an exciting window of opportunity for a lifetime of health and educational outcomes. Evidence from neuroscience shows that 85% of brain growth happens before the age of 6. According to the Harvard Centre for the Developing Child, the brain makes over 1 million new neural connections per second in the early formative years.[3]

Several studies point to the lifelong consequences of early child development. A study done with 30,000 children by the National Council for Education Research and Training (NCERT) title "The impact of pre-school education on retention in primary grades", (1992), illustrates the direct correlation between exposure to pre-school education and retention rates, attendance rates, and most significantly, learning outcomes in primary school and beyond.[4] Studies around the world also make the link between quality early education and its long-term bearing on higher income and home ownership rates and lower rates of unemployment and crime.

In India, the most widespread provider of early childhood care is the Anganwadi network which, under the aegis of the ICDS, provides commendable support in early health and nutrition, education and community building to close to 100 million children, aged 0-6 years, and their families.

A recent report by the Ministry of Women and Child Development, however, points to acute staff shortages facing the Anganwadi network.[5] The Draft National Education Policy, 2019, while lauding the success of the Anganwadis with respect to mother and child health, early nutrition and awareness around immunisation, also acknowledges the deficits in delivering high-quality early education, due to lack of adequate infrastructure and training[6] and makes recommendations for more developmentally-appropriate curriculum and pedagogy to meet its vision of 'transforming nation sustainably into an equitable and vibrant knowledge society by providing high-quality education to all.'[7]

In this context, identifying key elements of quality learning experiences and supporting communities to access and utilize them are critical to achieving this collective goal.

About guided play

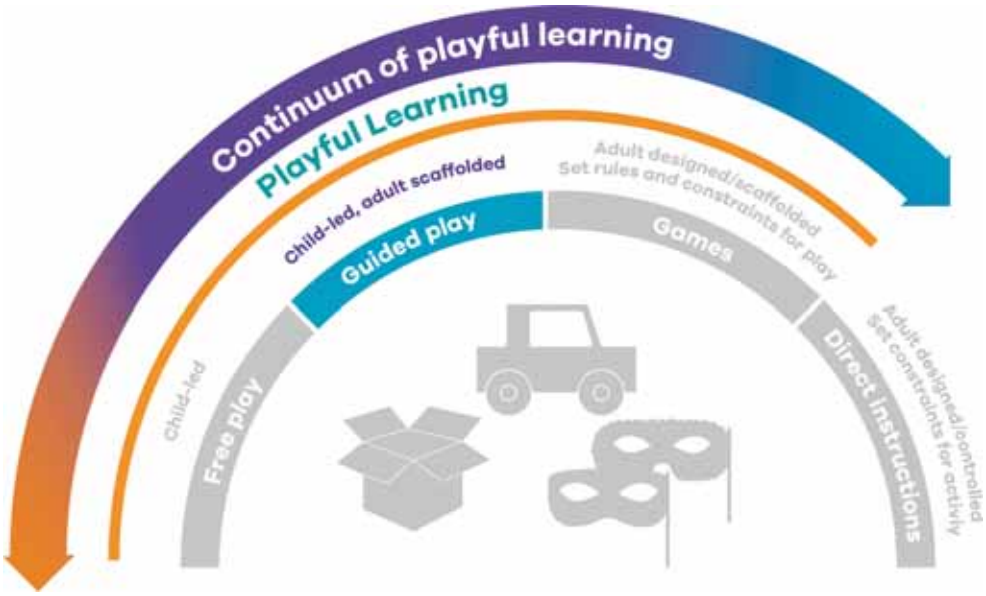
Research shows that playful learning experiences for young children help foster their development in key cognitive, physical and socio-emotional areas and can prepare the ground for them to become creative, engaged, lifelong learners.[8]

Moreover, a supportive adult guiding a child through play can unlock these transformative early learning experiences and build readiness and motivation for future learning.

The types of play described by Fischer et al. (2011)[9] - free play, guided play and didactic instruction - can be visualised on a continuum of playful learning.[10] While free play and didactic instruction are both associated with positive learning outcomes, evidence suggests that play with some degree of adult guidance and scaffolding is most effective for achieving positive educational outcomes with pre-schoolers. Under guided play, a supervising adult points a child towards discovery and specific

[1]Managing Director, Sesame Workshop India
[2]United Nations (2016). Goal 4: Ensure inclusive and quality education for all and promote lifelong learning,
Retrieved from: http://www.un.org/sustainabledevelopment/education.
[3]https://developingchild.harvard.edu/science/key-concepts/brain-architecture/
[4]Citation retrieved from: Draft National Education Policy (2019), Pg. 45
[5]https://www.hindustantimes.com/india-news/staff-shortage-hits-anganwadi-services-wcd-report/story-vqmui2RkZLhgCuqFGxDTnI.html
[6](Draft National Education Policy (2019)., Chapter 1, Early Childhood Care and Education: The Foundation of Learning, Page 48) Draft National Education Policy (2019). Part 1, Ch. 11. Early Childhood Care and Education: The Foundation of Learning. Pg. 47
[7]Draft National Education Policy (2019). Vision. Pg. 41
[8]Brooker, Liz and Woodhead, Martin (Ed.) (2013) The right To Play. *Early Childhood in Focus, 9*. The Open University: Milton Keynes, United Kingdom. Retrieved from http://oro.open.ac.uk/38679/l/ecif9the%20right%20to%20play.pdf
[9]Fisher, Kelly, Kathy Hirsh-Pasek, Roberta Golinkoff, Dorothy Singer and Laura W. Berk (2011). 'Playing Around in School: Implications for Learning and Education Policy. In the Oxford Handbook on the Development of Play, edited by Anthony B. Pellegrini, 341-62
[10]UNICEF, Learning Through Play (2018)

learning outcomes in a fun, relaxed way. This kind of play involves specific props and toys with which the child interacts to learn more, and close observation and interaction by a supervising adult.



It follows then that a child would benefit if caregiving adults in the child's universe were empowered with quick, easy, actionable tips and strategies that leverage the principles of guided play to support the child's development.

What stops caregivers from playing with children?

To understand parental attitudes and behaviours around play, access to material for play and the current role of play in children's lives, Sesame Workshop India conducted a study in November 2016, with parents of children aged 3 -6 years in 4 zones of Delhi, from a mix of migrant and non-migrant low-resource communities.

The study revealed that most parents see play as separate from education and value formal education over play, perceiving it as a pathway to a better future.

Further, work demands leave parents with little time and energy to engage with their children. As Casey Lew-William points out, "It's exhausting to be a parent in any circumstance, but it's much more exhausting to be a parent when you don't have the resources that other families have."[11]

Concerns about safety, especially around daughters of all ages and young sons, further reduce access to play, both outdoors and indoors. Parent themselves lack role models on how to play with their children. Many are held back by negative perceptions around playing. "What will people say when they see me playing with a child?"

Learnings from the Play Every Day initiative [12]

Play Every Day was a multi-country initiative that aimed to get past these barriers and enable children and caregivers to harness the transformative power of play. While contextualised for low-resource communities, the rich, hands-on learning experiences that emerged from the initiative inform global best practices on play and can be universally accessed by caregivers across settings and socio-economic boundaries.

[11] Lew-Williams, Casey (2016) Forget Flashcards, Play with Sticks

[12] The Play Every Day initiative was made possible by generous support by the Lego Foundation. It was delivered at scale through partnerships with organisations already working in the target communities in Delhi: Action India (AI), Child Survival India (CSI) and Saarthi Education.

The overarching aspiration for parents of a better future for their children was broken down through play activities into tangible outcomes: play with your children because today's play is tomorrow's happy reality; play helps children learn good values and become responsible citizens; play helps children understand numbers better and develop math skills; play helps children learn skills for reading and building vocabulary.

Over a 12-week programme, caregivers were coached on how to be effective play partners to their children and supported with a public offering of play activities. These activities were developed using feedback from the communities and included contextually relevant content like *'gitte'* (a local game with 5 stones), *'saanp-seedi'* (snakes and ladders) and local songs and ditties. Caregivers were shown how to include play into their existing routines and settings, how to use household or waste objects as material for play, how to guide children in play and how to spot opportunities for discovery and learning through play.

The results in terms of shifts in knowledge, attitudes and behaviour were heartening and pointed to the feasibility of taking a similar methodology to communities at scale to enhance learning outcomes and put high-quality early educational experiences within the reach of every child.

The experience from the Play Every Day initiative generated a series of learnings about ways in which caregivers can be successfully encouraged to incorporate play into their children's lives:

Creating cultural contexts for play

Learnings from the 3-country initiative underscored the importance of a cultural context for play. A standardized framework and same types of play found deep resonance as they were adapted to local cultural norms and children's contextual reality. For example, a 'shop-keeping', counting game gained richness and meaning from being translated into a 'mela'.

Creating environments for play

Community involvement and reinforcement can support parents in their endeavours to incorporate play into daily routines. As the Play Every Day intervention gained momentum, entire communities were sensitised to the link between play and learning through events and rallies, many by children themselves. Community awareness and acceptance of the value of play strengthened the resolve of parents to incorporate play into their interactions with children. Thus, the role of the community cannot be undermined in creating a sustainable culture of playful learning.

Interleaving free-play

Interspersing sessions of guided play with free play can provide caregivers valuable feedback and time to reflect on learning and creativity. As a child assimilates the learnings of guided play and generalises these to free play, attentive caregiver can use these observations to create/build iterative, meaningful and joyful play experiences that take learning forward.

Facilitating play

Effective facilitation is a key contributor to helping a caregiver, whether parent or anganwadi worker, develop as a play-partner to a child. In addition to knowledge about play and child development, methods to introduce play activities to a child, ways to model an activity and strategies to support a child in play and extend learning, softer skills like patience, how to adapt activities, how to form associations between play and learning, how to question and guide a child to discover more are critical to building effective play experiences. A 'train-the-trainer' approach can be used to take effective, playful learning experiences to scale.

As parents become play partners and entire communities are co-opted in the movement, every child can have the opportunity to develop and enhance cognitive and socio-emotional skills to become a lifelong learner while also benefitting from a stronger parent-child bond. In this way, we can help every child grow smarter, stronger and kinder.

Engaging mothers in children's development, learning and school readiness

Smitin Brid[1]

I was traveling in the interior of Talasari block in Maharashtra, a tribal belt located towards the north of Maharashtra, on the border of Gujarat. It is very distressing to see the backwardness of this region, given its proximity to Mumbai, the state capital as well as the economic capital of India. We have been working in this area for the last 4-5 years to ensure that the community, especially the mothers, understand the importance of early childhood education and anganwadis deliver high quality early childhood education.

During my visit, I entered an anganwadi centre in a random village of this block. The anganwadi worker and local Pratham instructor were jointly conducting an activity with 25 children, who were sitting in a big circle and playing a game. They did not even bother to stop when I entered their centre. They were busy doing the circle activity. I was enjoying observing their play, too.

Scan this to see how the children were playing the 'circle activity'

Suddenly, a mother came to meet the anganwadi worker. She was holding a 'Child Report Card' that we had provided to all children in the anganwadis of the block. The mother wanted to talk to the anganwadi worker about the report card. She said that her daughter could easily do 'rope skipping', but worker had marked as 'she couldn't' in her report card. I was curious now, because we had designed this report card in a particular way - pictorial - so that everyone could understand it. I could see that was actually happening here. The anganwadi worker responded by saying that the girl could not skip the rope when she asked her to do it in the anganwadi. The mother was carrying the skipping rope in her other hand. She gave it to her daughter and asked her to skip the rope. The child followed her mother's instruction and started skipping the rope fast. The anganwadi worker was anxious. She took the report card, changed her remark on it, and handed it to the mother. The mother thanked the anganwadi worker for changing her remark on the card and sat down on the floor to see the activity that the children were doing. Her daughter joined the 'big circle' activity.

I was impressed with this mother. Her engagement and courage to come forward and challenge the anganwadi worker's comment was really admirable especially in such a deprived area. She must have carefully reviewed the report card after receiving it from the anganwadi worker and interacted with her daughter about the activities mentioned on it. When I came forward and started asking her about all this, she explained that there is a group of mothers in her hamlet. They meet regularly and talk to each other about their children's progress. The Pratham instructor - the person who was playing with the children in the anganwadi - goes to the hamlet and visits the group periodically, interacts with them, and also provides some material to them. That's how she got to learn many things related to her daughter's development and her own role in this process. The mother was feeling proud and confident while sharing her experiences of being active in her daughter's development and learning. She told me that her husband and mother-in-law also appreciates what she is doing for her daughter.

With the joint efforts of Pratham and anganwadi teams, there are more than 200 such Mothers' Groups active in this block in around 64 anganwadis now. We are trying to build a strong ecosystem of early childhood education in these villages.

While working with children in balwadis and anganwadis across India, we realized that nurturing children and preparing them for life and formal schooling is not a job of only the Government or anganwadis for that matter. This is a joint responsibility of society and governments. Therefore, in Pratham's Early Childhood Programs, we believe that it is essential to 'reach out', to engage mothers in supporting children's readiness for school and learning, besides actively building awareness about the food and feeding practices, basic health and overall development of the child. The family is the first and the most important contributor to any child's development. We believe that a supportive learning environment at home can be a big contributor to the overall development and growth of a child. According to a Chinese proverb, 'it takes a whole village to raise a child'. Thus, in order to nurture children properly, we need to build a good ecosystem for quality early childhood development. So far, governments across India have put systems and processes in silos without considering that coordination is needed across all areas of children's development, and most importantly all stakeholders in the child development process. The primary focus of the government-run anganwadi system is leaning towards health and nutrition of children, the pre-school education component of these systems leaves a lot to be achieved. While privately-run pre-schools also exist as an alternative in many areas, they are plagued by challenges of affordability and quality. However, in many households in rural communities and in urban slums, parents lack the guidance, know-how and time to engage appropriately with children themselves. As a result, children are often

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unable to develop solid school readiness foundations before they enter school. And then they face difficulties in learning and lag behind in their school studies.

Picture from Pratham's Program with Mothers in Varanasi, Uttar Pradesh

Since the mother is typically the one who spends the greatest amount of time with children at this stage, she plays the role of long-term influencer in the child's developmental journey and has the potential to be a strong pillar of support for furthering learning outcomes in children. Therefore, I think 'School Readiness' should be defined properly so that the transition of young children from preschool to grade 1 can be recognized and celebrated by everyone. If it is defined clearly and made simple enough for everyone to understand, then everyone, especially mothers, can support children to become school ready irrespective of their economic conditions. In our large-scale efforts to engage mothers across India, we have seen that mothers can do meaningful activities with their children - particularly helping children become school-ready - when simple ideas are given to them through demonstration, group discussions, short videos, etc. Digital technology is also acting as an enabler in breaking this gap between children, parents, anganwadis, schools and curriculum.

Child development is a continuous and cumulative process. Therefore, emphasizing on creating and sustaining learning activities at home and in the community to enhance each child's early learning is important. Mothers and other family members working together on easy assignments, creating opportunities for children to learn through exposure, and hands-on experiences with their families are highly important.

Picture from Pratham's Anganwadi Support Program in Ahmedabad, Gujarat

Mothers need to be invited in anganwadis. Periodic meetings and individual home visits should be conducted and inputs should be provided to them again and again.

Based on the experience of working with mothers across various parts of the country and analysis of the program data that we collect, we know that the mothers of these children currently attending anganwadis, are between 20 and 35 years old, and the majority have attended school at least till grade 5. These mothers show high interest in getting more and more information on how to support their children, how to tell stories to children, how to nurture good habits among them etc. Thus, wherever we are working with mothers, we go to their hamlets and work with them in small groups. We receive high response from them and also see the improved results. Meeting in small groups encourages mothers to support each other and they feel comfortable. These small groups are inculcating and promoting habit of 'Self-Help' among these mothers.

Picture from Pratham's Hamara Gaon Program in Balangir, Odisha

We need to empower the mothers to be able to play a more active role in their children's development, improve developmental outcomes and influence the household environment to make it conducive to their learning needs. An active mother can potentially also support the anganwadi in strengthening its school readiness activities.

We also need to involve larger community (other than parents) in the learning process of the children in their villages, districts and collaborate with ICDS (anganwadis). It is high time to increase investment of efforts, time and resources in spreading the importance of building the right foundations in the early years. This will also need to have continuous research and evaluation efforts to assess the effectiveness of processes and impact.

Begin early before it is too late

Samyukta Subramanian[1]

In recent years and especially in the last few months, India has been grappling with gender-based violence of enormous magnitude. Rapes, gang rapes, domestic violence, female foeticide, infanticide and malnutrition are issues that are unfortunately all too familiar for India. Individuals and organizations have been trying to stem these issues by working with the 11 to 14 age group, some with 14 to 18 years and above. But if the current ASER data is anything to go by, it is a startling indicator suggesting that the roots of inequalities and stereotypes about boys and girls are deeply ingrained in our society and begin to be evident quite early. Decisions about whether to invest in a boy or a girl are taken in the first 5 years of a child's life, and children's own stereotypes about what they can do or not do begin even earlier. Thanks to ASER 2018 and 2019, for the first time we have current data, nationally, for young children (4 to 8 years) with respect to pre-school and school trajectories and learning levels. This data creates the possibility of understanding the status of girls' education in their formative years in our country. The present attempt is to analyse the data collected to ascertain the equality or disparity between boys and girls in terms of education trajectories and response trends in the early years.

Sex-wise enrollment in schools in the early years

In ASER 2018, data was collected across 596 of 619 districts of India. At age 4, 60.3% girls were in government pre-schools/ schools as compared to 55.7% boys. The percentage point difference here was 4.6. By age 8, this difference had risen to 8.4, with 68% girls in government facilities as compared to 59.6% boys (see adjoining ASER 2018 table).

Table 1: % Children age 4-8 enrolled in Govt pre-schools/ schools by sex 2018[2]

Age	Enrolled in govt schools/pre-schools		Gender difference in enrollment in percentage point
	Boys	Girls	
Age 4	55.7	60.3	4.6
Age 5	51.8	56.8	5.0
Age 6	55.8	62.5	6.7
Age 7	58.1	65.6	7.5
Age 8	59.6	68.0	8.4

When data was collected across India in ASER 2019, this trend was again visible nationally, with 56.8% girls in the age group of 4-5 enrolled in government pre-schools/schools as compared to 50.4% boys (see Chart 1- % Children age 4-8 enrolled in different types of pre-schools and schools by sex 2019, page 51 in this report). At age 6-8, a similar trend was visible, but the gap widened with 61% girls in government institutions as compared to 52% boys. The reverse was seen in private schools where 39% girls are enrolled at age 6-8 as compared to almost 48% boys.

What do these trajectories imply?

Government schools are free of cost while private schools cost money. Private pre-schools and schools are perceived as providing better quality education. Many are also popularly known as 'English medium' schools. Though studies[3] have pointed out that the quality of private schools is highly inconsistent and often leaves much to be desired in terms of developmentally appropriate practices, the reality is that they are much coveted. In all probability, when there is a paucity of resources and parents have to choose which child to invest in, they choose to provide 'better quality' education to the son first as compared to the daughter.

This trend becomes all the more daunting in the face of the fact that India has a skewed child sex ratio. As per Census 2011, the child sex ratio (0-6 years) in India has been declining dangerously over the years with respect to girls (919 females per 1000 males).[4] This means that as many girls as should be born are not born. Even if they are born, many die before the age of 6 years due to infanticide, malnutrition and other reasons. In other words, there are fewer girls in India as compared to boys and of the girls in rural India, a higher percentage of girls are enrolled in Government pre-schools/schools as compared to boys.

[1]Program Head - Early Years, Pratham Education Foundation
[2]ASER Centre (2019). Annual Status of Education Report (Rural) 2018 - 'Young Children'.
[3]One such study is the India Early Childhood Education Impact Study by ASER Centre with CECED, Ambedkar University Delhi
[4]An adverse child sex ratio is also reflected in the distorted gender makeup of the entire population. Child Sex Ratio is defined as the number of females per 1000 males in the age group 0-6 years. In census 2001, the child sex ratio of India was 927 which declined to 919 in census 2011. For state-wise details see https://pib.gov.in/newsite/printrelease.aspx?relid=103437

No Response

During the ASER assessment when children are given a task, they answer correctly, incorrectly or give no response, and this is recorded as such. No response means that the child did not answer the question. The surveyor would know this if the child either said, 'don't know' or simply remained silent.

In ASER 2019, for age 4 to 8, there were a maximum of 24 tasks that 4- and 5-year-old children were expected to attempt. 6- to 8-year-old children had to carry out 21 tasks. An analysis of the responses by children shows that for almost every task, the proportion of girls giving no response was higher than that of boys (See Annexure on No response by age and sex, page 168 in this report). Interestingly, even in ASER 2017 'Beyond Basics' which was carried out for much older children in the 14 to 18 age group, for every one of the 24 assessment tasks administered to youth in ASER 2017, a significantly higher proportion of girls than boys did not even attempt a response.[5] While the difference between boys' and girls' responses seen in ASER 2019 is small for young children between ages 4 to 8, it becomes much wider by age 14 to 18. This trend of higher 'no response' by girls across age groups cannot be a mere coincidence.

Throughout the ASER field survey 2019, volunteers said that on many occasions they could not really tell the difference between girls and boys. At a very young age, it is often difficult to distinguish between the sexes based on external physical characteristics like length of hair or clothes. Yet, this data on 'no response' indicates that while on the outside there is no apparent difference, something invisible in terms of socialization is certainly already changing the perception of boys versus that of girls. Are girls not answering because they are shy as compared to boys of the same age? Is it possible that confidence of girls or willingness to negotiate with the task at hand is already lower at age 4 as compared to boys? Is it this gap that begins early and becomes even more pronounced over the years and manifests itself clearly in the 14 to 18 year age group?

These two data points from ASER - one on enrollment patterns and the other on children's response to the assessment tasks - seem to highlight separate, but obviously related ways in which boys and girls experience education differently. One indicates preferential treatment towards boys and the other points to a lack of self-confidence among girls. Both are debilitating factors that only increase in magnitude as girls grow older.

These indicators point to a larger issue around perceptions and beliefs of parents in rural India. While the silver lining is that parents across India have begun sending both their boys and girls to school, parents perceive private schools as providing better education as compared to government schools. The higher enrollment of girls in government schools suggests that parents are probably guided by the widely held societal belief and cultural norm that boys should have the first right to perceived better resources. Anecdotal evidence from the ground also suggests that parental decision-making with respect to allocation of resources among girls and boys is skewed in favour of boys. Differences between the sexes are unfortunately interpreted as inequality between them and decisions in homes taken accordingly. These perceptions and beliefs combine to determine the choices that are made for each sex from a very early age. The burden of future expectations that arise from these choices are accordingly carried by both boys and girls from their formative years.

As a society, these trends should strike a warning bell for researchers, policy makers, government institutions and not-for-profit organizations alike. Over the last 14 years, ASER has succeeded in collecting nation-wide rural data across the life span of children and youth (4 to 18 years) in India. Analysed from the lens of gender equity, so many years of data has the potential for much deeper research and investigation. At first glimpse, however, it already throws up many questions for each of us: How do we bring about a change in existing belief systems so that girls are treated equitably in our country? How are government schools preparing for the fact that more girls than ever before are in their system today? Will making girls' toilets within schools suffice or is there something more that needs to be done? To build the bridge towards gender equity, we must begin by recognizing the widespread gender discrimination that is embedded within and around us. Clearly, any effort to bring about a lasting change in mindsets and behaviours requires keen observation of pre-schools, schools and home environments and close engagement with young children, their parents and their schools as early as possible.[6]

[5]For more on this argument, refer to Suman Bhattacharjea's article on 'No Response' in the ASER 2017-Beyond Basics report.
[6]For more on this argument , see Subramanian, Samyukta (2019). "India's policy on early childhood education: Lessons for a gender-transformative early childhood in India", Policy Paper, Echidna Global Scholars Program, Center for Universal Education, Brookings Institution, Washington, DC.

Importance of literature to literacy

Saktibrata Sen and Simmi Sikka[1]

"Children will overcome all sorts of linguistic obstacles...if the alternative world of the story is one that is desirable and comprehensible."
- Aidan Warlow[2]

Narratives have been an intrinsic part of human civilizations since time immemorial. For centuries, humans have often used the power of narratives, as a prime expression, to transmit an idea down the generations, build up an identity, or to give insights to their existence. It is because of the episodic memories that define in many ways how we see ourselves, build our identities and our narratives of what we are.

Once human societies invented the writing systems, the task of reading came to the forefront amidst controversies and concerns, when an overall emphasis on orality gave way to written texts. But stories, still maintained their position of being core to the human heart, an inexplicable way in which we see and understand our larger selves.

Since humans are natural storytellers, many studies suggests that, processing information predominantly through narrative pathways comes naturally to us.

This is just why amidst our recent concerns with literacy, where we are so seriously discussing underachievement in literacy and systemic solutions to those, that we must be discussing children books. Variety of meaningful texts or literature, not as a 'good to have' but as a 'must have', should be included in the basic minimum provisions for literacy acquisitions.

Now, how should books for early readers look like? Is a commonsense approach enough for selecting good books for early readers? Or while creating books for this level, are there things that we need to keep in mind?

Well, it will be good to articulate, at the beginning of these questions, our beliefs and positions on how children learn to read. We must acknowledge that literacy is a process of meaning making, where the meaning is initiated through an interaction with the text and gradually, as an independent reader, the search for meaning can go beyond the confines of the text. Thus, Literacy needs to straddle two pathways in our brain, namely the orthographic and the language domains, that too simultaneously.

> Psycholinguistic research indicates that meaning is not simply transmitted, but is constructed by the reader when he or she interacts with the text. Therefore, a reader's background, past experience, and purpose, are important in constructing meaning.
>
> Children's literature builds on background, past experience, and interests of the learner. The literature suggests that the use of children's books in the reading and language art curricula has many benefits. First, the use of children's literature has been shown to facilitate language development. It also has positive effects on reading achievement, as well as on the acquisition of reading skills and strategies (Minardi, 1994).

This means, that depending on how children negotiate with the written word, based on the complexity of the language and the complexity of the orthography, there has to be a variety of texts in the classrooms. Stories or real texts, not only help children learn the mechanics of reading, but also motivate them to read a little beyond their levels of 'reading'. And thus, a variety of texts in the classroom must be an integral part of a child's literacy journey.

Stories in various writing styles and literary genres exposes early readers to a substantial range of language uses, which implicitly gives their language skills meaningful contexts and dimensions. Variety of rich text not just gives opportunities to enhance their linguistics, but also overlaps and intersects with areas of cognition, visual literacy, critical-logical thinking, problem-solving, metacognition and many more.

[1] Room to Read India Trust
[2] Editor, The Cool Web: Pattern of Children's Reading

> Children's literature encourages both high-level thinking and learner involvement, important in motivating students to read (Heald-Taylor, 1989).

The skills that children are learning while reading stories, of evaluating, analysing and processing one's understanding of text, then can be applied to any content they encounter in the future. These skills become their long-lasting understandings for acquiring any new knowledge or learnings.

Books are a mirror that reflects the self, community, cultural heritage, their history and help children build their identities along with a sense of belonging. They are also a window to other cultures; encouraging acceptance of diversity in people, their feelings and viewpoints.

Children develop empathy, socio-emotional intelligence, creativity and imagination. Reading varied texts pushes them to think deeper, develop their own opinions, make choices, but most importantly it allows them to accept some difference in opinion. Their acceptance of diversity and understanding of inclusion initiates children's personality development and interpersonal skills in this increasingly global world.

So, how should books for early readers look?

Narratives, for beginning readers, that rely more heavily on visuals than text encourages formative interactions with literature. The pictorial nature of the stories for early readers, like wordless and picture books, can be an excellent tools for teaching comprehension reading strategies, at the initial stages of literacy acquisition.

Wordless picture books can be effectively used to build a positive reading experience among emergent readers. "Wordless picture books are excellent stimuli for oral and written language" (Norton, 2010). When exposed to wordless books children are able to analyse the visuals and develop their own interpretation of the story, strengthening their cognitive functions, ability to form opinions on their own and to express themselves through language in summarising the storyline.

Picture book communicate stories through a series of visual with minimal text. Unlike other narratives, the text in picture books is undetailed and is dependent on the accompanying visuals for specific meaning and import of the story and the plot. It is often assumed that pictures are easier to interpret than words, but even the simplest of picture books requires complex interpretative skills wherein understanding of text, as both verbal and visual language, is important to comprehend the storyline.

Although picture books may seem fairly simplistic, they still can have all the elements of a good literature. Telling stories in ways children can understand might mean distilling various concepts and ideas down to their essence, but the messages that these books carry can still be complex and meaningful. Simplicity in diction, language and writing style, as children are learning to read, might be a necessity, but the subject or topic that they deal with can still have depth with all the emotions, expressions and conflict.

In early years, children's interaction with visually rich reading material seems to give them the reason, meaning, pleasure and motivation to the process of reading. Reading skills and habits of reading are more likely to be sustained when children are motivated and are enjoying the process of reading.

It is thus imperative to ensure a collection of books, for each stage of the continuum, that allows children to progress from simple to complex texts with appropriate challenges as they progress through various stages of their reading skill development.

The recommended collection of books for young readers should be very carefully selected.

Narratives, especially some of the traditional stories and folktales, which contain age-old stereotypes and inaccuracies about history or certain cultural groups can be very damaging in perpetuating stereotypes if we are not careful in choosing the books for our classrooms and libraries.

Quality children literature should finds its way into the hands on of early readers, which is able to satiate their curious and imaginative minds. Books that let children explore the world through fiction, fantasy and imagination, allowing them to relate these to their own lives, reflect on them, and also deepen their understanding about the realities around them, past or present. Learn to negotiate available information to build their identity, deal with their situation or problems, build on their knowledge, form opinions, interpret and interact with the world. Stories that can expand their horizons, introduce them to worlds they may have never seen or heard of, visit new places, meet different people and cultures.

> Research has shown that we learn best in the languages we speak most fluently. (MIT Linguistics Prof. Michel DeGraff, 2015)

Children, in early years, are able to communicate and learn better in their native language.Given the multicultural and multilingual environment in our classroom, an ideal book collection should ensure books in children's native languages. Narratives in their languages and cultures will facilitate participation from all children. They will also support in children transiting smoothly from native language to the language of instruction.

Literature has the power of building positive experiences and personal fulfilment, where children pick up many things subliminally while reading through a story.

Effective use of literature with appropriate pedagogic methods, to enrich linguistic abilities and meaning making among young children, has immense possibilities which still needs to be explored to its fullest potential.

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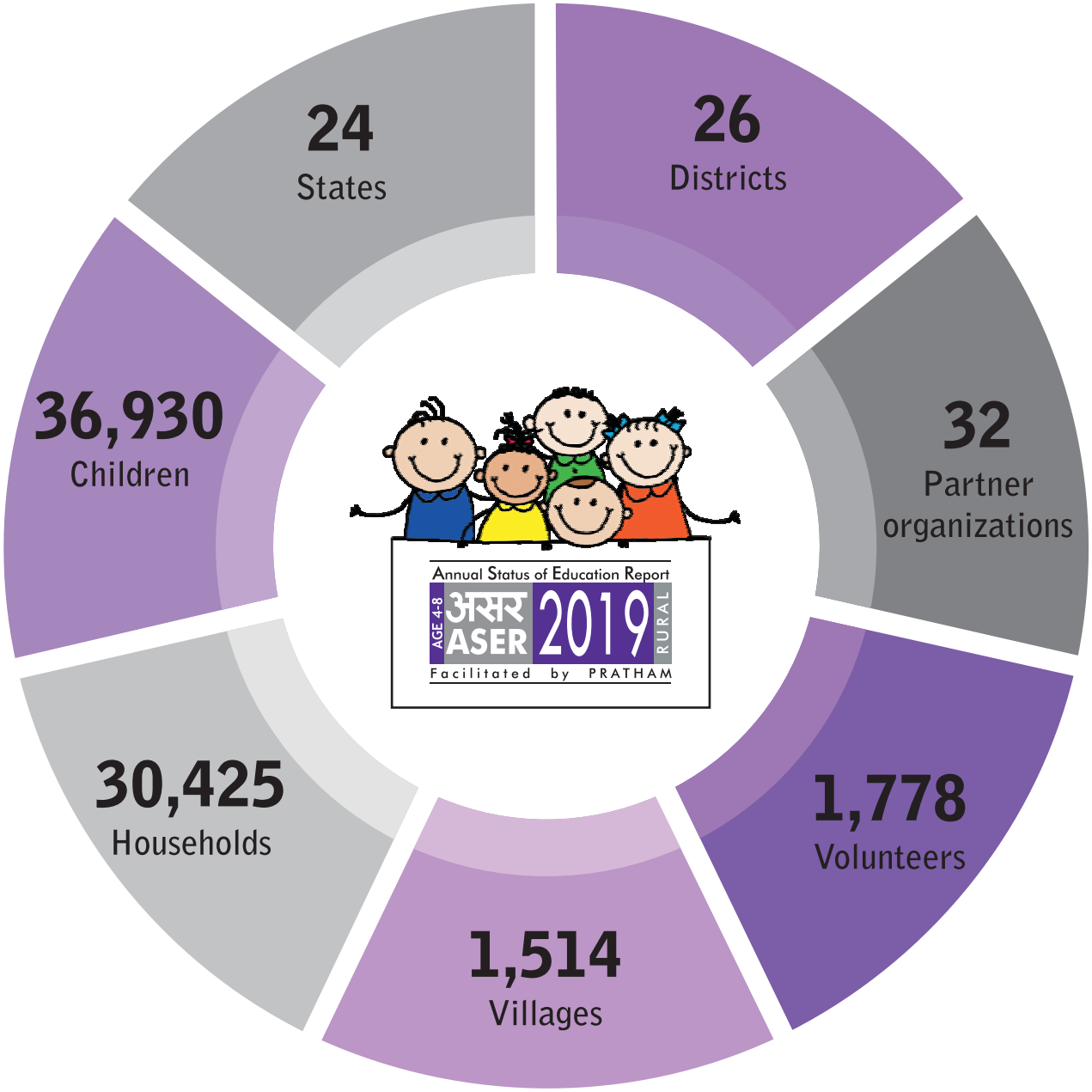
About ASER 2019 'Early Years'

ASER 2019 'Early Years' – Coverage



ASER 2019 'Early Years' – Summary of the survey process

A team of two volunteers goes to the village assigned to them by their ASER state team. They carry the material required to conduct the survey.

Once in the village, the volunteers meet the Sarpanch/Village representative. They explain what ASER is and ask for support to conduct the survey in the village.

The volunteers then walk around the entire village. They make a map showing the important landmarks in the village and fill the Village Information Sheet based on the facilities they observe. Next, the volunteers select the households. To do this, the volunteers:

- Divide the map into 4 sections or select 4 hamlets.
- Randomly select 5 households with children in the age group 4 to 8 from each hamlet/section using the 'every 5th household rule'.
- Follow this process in every hamlet/section in order to survey a total of 20 households in the village.

Volunteers record some basic information about all the households they visit during the sampling process. This includes: hamlet/section number, locked or no response household, name of head of the household, number of children in the age group 4 to 8 who regularly live in the household, and mobile number of the household.

In each sampled household the volunteers do the following tasks:

- Record information about children in the age group 4 to 8.
- Use the Testing Tool to assess children in the age group 4 to 8 on cognitive development, early language, early numeracy, and social and emotional development.
- Record children's response for each test item administered.
- Record information about parents' education and household assets.

After all 20 households are surveyed, the volunteers check and then submit the completed Survey Booklet to their ASER state team.

ASER 2019 'Early Years' – Early learning tasks

Young children's development can be assessed along many dimensions. While all of these are important, the guiding principles while creating an assessment for the ASER survey require it to be rapid, easy to administer consistently to children in the target age group in the household, and easy to understand by all stakeholders: children, volunteers doing the administration, and parents or community observing the assessment as well as researchers, educationists, and policy makers. The tasks for the ASER 2019 assessment were created keeping these principles in mind.

At the outset, a mapping of children's learning trajectories, policy guidelines, curricular frameworks, and learning outcomes defined for pre-school and early primary school (Std I and II) was conducted. Based on this exercise, an initial set of domains and tasks was developed, piloted extensively, and refined over several months. For the final assessment, four key domains were selected: cognitive development, early language, early numeracy, and social and emotional development. These broadly seek to address four key questions: Can children do simple problem-solving tasks? Do children have early language skills? Do children have a sense of numbers and quantity? Are children able to identify emotions? On average, four competencies within a domain were retained to provide an overview of what young children in India can and cannot do. The complexity of tasks within each domain is varied to accommodate expectations from the youngest child (age 4) to the oldest (age 8) in the survey age group.

Like every ASER, the assessment was conducted at home rather than in school, so as to include children not enrolled anywhere as well as children attending different types of pre-schools and schools. All children in the 4 to 8 age group in a sampled household were assessed using the same tool, irrespective of grade or schooling status. The ASER assessment process incorporated various elements aimed at ensuring that it captured the best that each child can do. Volunteers were trained to build rapport with children to create a relaxed and encouraging environment. The test was adapted in 14 Indian languages. The volunteers were trained to speak slowly and clearly to ensure that all children are able to fully understand the expectation from the task. Children were given the time they needed to do each task. The assessment process was adaptive to the child's ability, so that she did not have to attempt all levels. Thus, the child's comfort and the commitment to accurately record her best possible response was at the core of the test design. The following pages describe the testing process for tasks in each domain in ASER 2019.

I. Cognitive development

Cognitive ability helps build problem-solving, memory, logical reasoning, and creative thinking skills in young children. These skills help children think, explore, and make meaning of the world around them. They are fundamental to any kind of learning in school or in life. ASER 2019 tasks for this domain comprised sorting by color, spatial awareness, seriation, pattern recognition, and puzzle.

1. Sorting by color

Children are given four shapes of different sizes and colors. As an example for the child, the volunteer separates the blue shapes from the rest. Then the child is asked to sort the remaining shapes into separate groups by color. This question is administered to children in the age group 4 to 5 only.

2. Spatial awareness

The volunteer shows the picture to the child and asks two questions:

i. Which boy is on top of the tree?

ii. Which boy is farthest from the tree?

This question is administered to children in the age group 4 to 5 only.

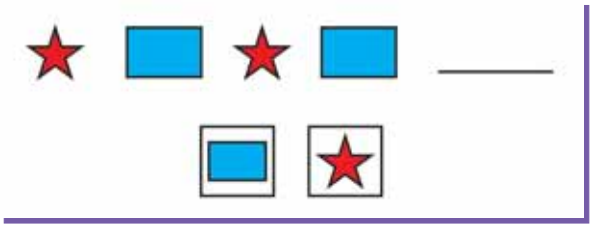
3. Seriation

The volunteer shows the child the four cards and asks her to arrange them in a line from the smallest to the biggest banana. Even if the child correctly arranges the cards from the biggest to the smallest banana, this is considered correct.

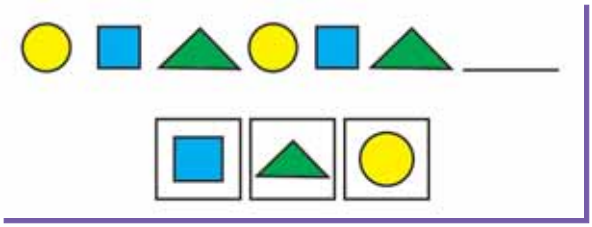
4. Pattern recognition

The volunteer describes a two-picture pattern to the child as an example: "Look, the star comes first, then the box comes next, then the star comes again, and then the box comes again". Then the child is shown the three-item pattern question and asked to point to the shape (from the options given) that should fill the blank space.

Example



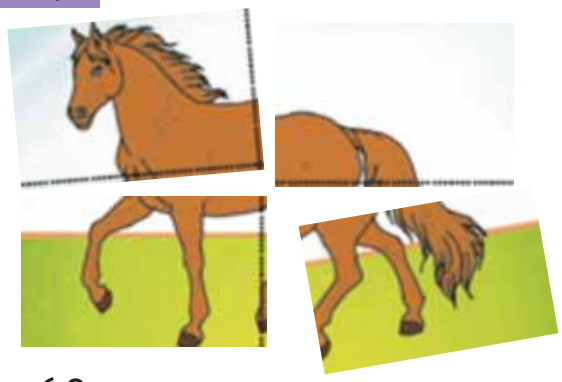
Question



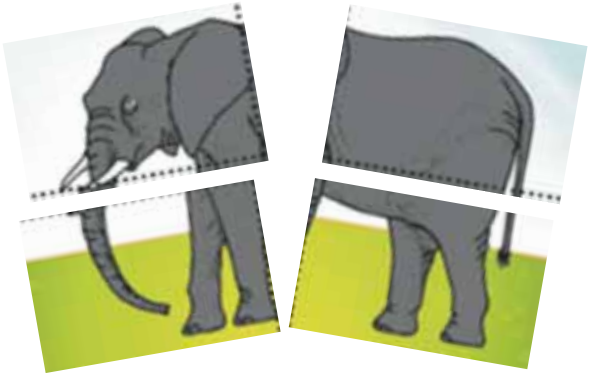
5. Puzzle

The volunteer solves the horse puzzle in front of the child, as an example of how to solve a puzzle. Then the child is given the elephant puzzle to solve. Children in the age group 4 to 5 are given a four-piece puzzle and children in the age group 6 to 8 are given a six-piece puzzle to solve. A separate picture of the elephant remains in front of the child while she is fitting the puzzle pieces together.

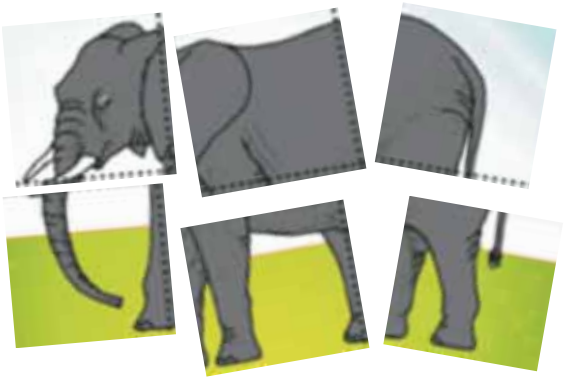
Example



Age 4-5



Age 6-8



II. Early language

Language is an essential skill for communication, needed to express and communicate thoughts, feelings and needs, as well as to understand and have conversations with others. Language is also the foundation for literacy. The ability to read begins when children learn to connect shapes of written letters with their sounds. Comprehension is essential to make meaning of any communication. The following tasks were included in ASER 2019 to provide a snapshot of early language acquisition in young children: picture description, listening comprehension, reading (letters, words, a short paragraph equivalent to a Std I level text), and reading comprehension.

1. Picture description

The volunteer shows a picture to the child and asks her two questions based on it:

i. What are people doing here?

ii. What can you see outside the window?

A comprehensive repository of answer options collated from extensive piloting was available with the volunteer for grading. Correct answers in the local dialect and synonyms were marked as correct.

2. Listening comprehension

The volunteer reads out a four-sentence story. Each sentence is short, comprising about six simple words.

The volunteer then asks two simple questions on the story to the child:

> Geeta wanted to fly a kite. Geeta made a kite with paper.
> Then she tied a thread to the kite. Geeta was happy to fly the kite.

i. Who wanted to fly a kite?

ii. What did Geeta tie to the kite?

In view of the short attention span of young children, the story can be read up to three times to a child. The volunteer is trained to take cues from the child on her comprehension of the task and make decisions about repeating the story.

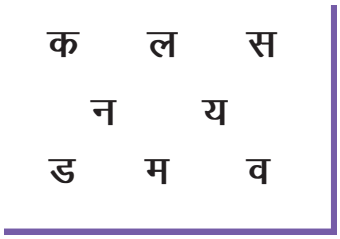
3. Reading

Three types of reading tasks are administered to children.

i. **Letters:** A set of commonly used letters is shown to the child. To be marked correct, she should read at least 5 out of 8 letters correctly.

ii. **Words:** If the child is able to read at least 5 letters correctly, she is asked to read words. Common, familiar words with two letters and one or two matras are shown to the child. To be marked correct, she should read at least 5 out of 8 words correctly.

iii. **Std I level text:** If the child is able to read at least 5 words correctly, she is asked to read a Std I level text. A set of four simple linked sentences, each having no more than six simple words is shown to the child. The words and sentence construction are compatible with the content of Std I textbooks. To be marked correct, she should read the Std I level text fluently and make three or less than three mistakes while reading it.



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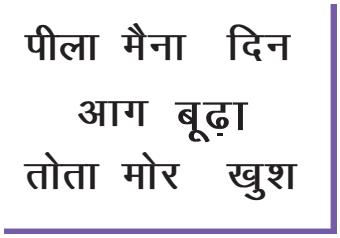

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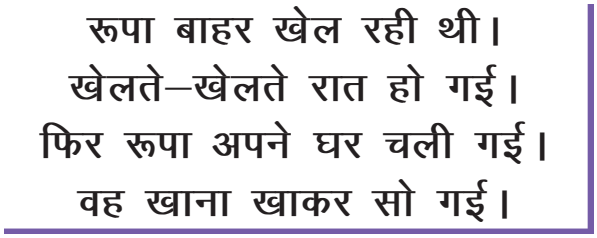


iii

4. Reading comprehension

If the child reads the Std I level text, the volunteer asks two simple comprehension questions to the child. She is free to read the text a second time after listening to the questions.

> बाहर कौन खेल रहा था?
> रूपा ने खाना खाने के बाद क्या किया?

III. Early numeracy

Counting, measurement and sense of quantity are essential early numeracy skills. A strong foundation in early numeracy helps not only in school math but also in everyday life. The following tasks were included in ASER 2019 assessment to provide a snapshot of young children's early numeracy skills: counting objects, relative comparison of objects, oral word problems, single- and double-digit number recognition, relative comparison, and numerical operations.

1a. Counting objects

This question is administered to children in the age group 4 to 5 only.

The volunteer shows the picture to the child and asks her to identify each object. The volunteer names any object that she is unable to name, and then asks four questions:

i. Count how many umbrellas are there?
ii. Count how many balls are there?
iii. Count how many fish are there?

1b. Relative comparison of objects

iv. Which of these objects is the most in number?

2. Oral word problems

One at a time, the volunteer reads out two word problems. These tasks involve simple single-digit addition and single-digit subtraction, so that child can solve them mentally or by using her fingers.

Seema has 3 toffees. Her sister gave her 5 more toffees. Tell me, how many toffees does Seema have in total?

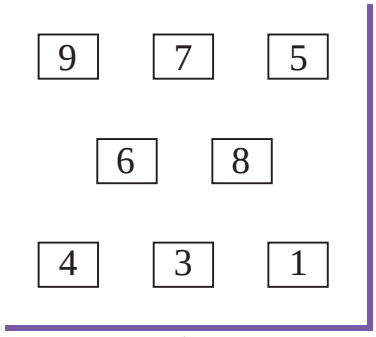
Reena has 7 bananas. She gave 3 bananas to her friend. Tell me, how many bananas are left with Reena?

3. Single-digit arithmetic tasks

i. **Number recognition:** A set of 8 numbers from 1-9 is shown to the child. She is asked to read them aloud. If the child is able to recognize at least 5 numbers correctly, she is asked to do the next two tasks involving single-digit relative comparison and single-digit numerical operations.

ii. **Relative comparison:** The child is asked to look at all the numbers in the question. The volunteer points at the number in the circle on top. He then asks the child to look at the numbers in the box below and point to the number that is smaller than the one in the circle.

iii. **Numerical operations:** One at a time, the volunteer copies each numerical problem onto a sheet of paper and asks the child to add (or subtract) the numbers. Oral answers are also accepted.



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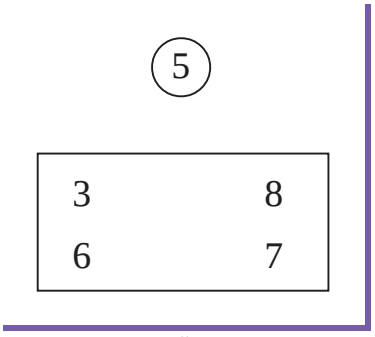

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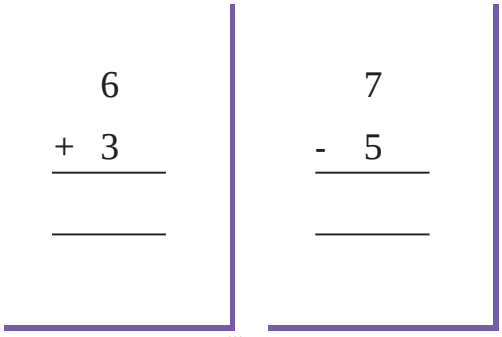


iii

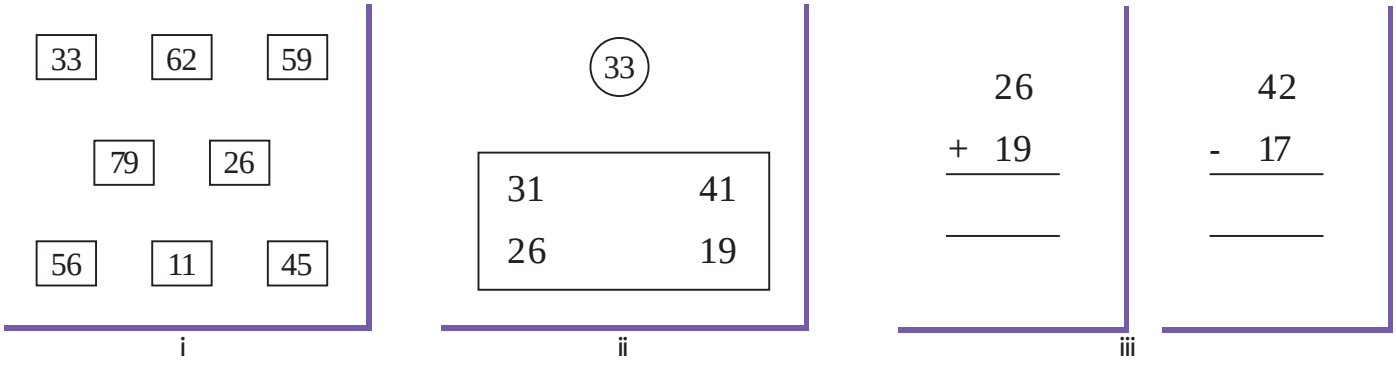
4. Double-digit arithmetic tasks

If the child is able to recognize at least 5 single-digit numbers correctly in task 3(i), she is asked to do the double-digit number recognition task.

i. **Number recognition:** A set of 8 numbers from 11-99 is shown to the child. She is asked to read them aloud. If the child is able to recognize at least 5 numbers correctly, she is asked to do the next two tasks involving double-digit relative comparison and double-digit numerical operations.

ii. **Relative comparison:** The child is asked to look at all the numbers in the question. The volunteer points at the number in the circle on top. He then asks the child to look at the numbers in the box below and point to the number that is greater than the one in the circle.

iii. **Numerical operations:** One at a time, the volunteer copies each numerical problem onto a sheet of paper and asks the child to add (or subtract) the numbers. The addition problem is with carry and the subtraction problem is with borrowing.



IV. Social and emotional development

The ability to identify their own as well as others' emotions and perspectives, establish and maintain relationships, and take responsible decisions are important skills for all human beings. Helping young children develop these skills early gives them important tools for the future. ASER 2019 tasks in this domain consisted of emotion identification, situation to emotion mapping, and situation reaction test.

1. Emotion identification

The child is shown four face cards with different emotions. She is asked to answer four questions by pointing to a card:

i. Which of these girls is sad?

ii. Which of these girls is angry?

iii. Which of these girls is afraid?

iv. Which of these girls is happy?

2. Situation to emotion mapping

Leaving the cards in front of the child, the volunteer reads out four hypothetical situations one-by-one to the child:

i. Your mother/father bought you a new toy. Point to any one of these and show me how you would feel.

ii. Your friend ate all your candy. Point to any one of these and show me how you would feel.

iii. You were sleeping at night. You heard a sound coming from the dark. Point to any one of these and show me how you would feel.

iv. You were about to play with your toy but your father stopped you from playing. Point to any one of these and show me how you would feel.

The volunteer records the code given on the card as the child's answer.

3. Situation reaction test

One by one, the volunteer reads out two hypothetical situations to the child. One situation is based on conflict and one on empathy:

i. You had only one toy. You were playing with your friend. While playing, your friend snatched your toy. What will you do now?

ii. You bought a toffee. You saw that a child was crying because his toffee fell in the mud. What will you do now?

A comprehensive repository of answer options collated from extensive piloting is available with the volunteer for grading.

Sample design of rural ASER 2019 'Early Years'

Wilima Wadhwa, Director ASER Centre

ASER 2019, also referred to as 'Early Years', is an assessment of 4 to 8 year olds in the ASER architecture. In other words, it is a rapid assessment of children, done in households, by ordinary citizens. Each of these elements creates its own challenges for the design of the assessment. The assessment was done simultaneously across the country in October and November 2019.

Like 'basic' ASER, the 'Early Years' survey also has a two-stage sample design. In the first stage, in each surveyed district, villages are randomly selected from the Census 2011 village directory. In the second stage, households are randomly selected in each of the villages selected in the first stage. This sampling strategy generates a representative picture of each district. One rural district has been surveyed in each major state, with the exception of Uttar Pradesh and Madhya Pradesh where two rural districts have been surveyed. While this is not a nationally representative sample, the size and geographical spread of the sample enables the estimates to be aggregated to get an overall picture of the rural population in India.

The ASER 2019 sample consists of 26 districts spread across 24 states[1]. The districts were not sampled randomly and care was taken not to choose districts that were anomalous in terms of their learning outcomes as measured in ASER 2018. First, since the main focus of the survey is on the learning levels of young children, districts where average learning levels were more than 5 percentage points higher or lower than the state average were not considered[2]. Second, in each state, partner organizations were approached in districts that had learning levels close to the state average. Eventually, the final districts to survey were chosen for logistical convenience based on partner availability and their ability to provide volunteers during the survey period.

In each surveyed district, 60 villages[3] are sampled from the Census 2011 frame using the probability proportional to size (PPS) sampling method in the first stage. This method allows villages with larger populations to have a higher chance of being selected in the sample. It is most useful when the first stage sampling units vary considerably in size, because it ensures that households in larger villages have the same probability of getting selected into the sample as those in smaller villages, and vice versa[4]. In the second stage, households/children in the age group of 4-8 years are surveyed in each sampled village.

There are various issues that complicate the second stage sampling. First is the issue of sparse populations. ASER as well as our research studies have shown that simply sampling households in the village may not result in sufficient sample sizes of children in the age group of 4-8 years. For instance, in ASER 2018, where 20 households were randomly selected in a village, only about 8 households had children in the age group of 4-8. The best solution to this problem of sparse populations of interest is to create a listing of the target population (for a particular cluster) and sample from that, thus, employing a stratified sample. However, given the rapid nature of assessment in ASER and several resource constraints (time, people, money), ASER does not stratify at the second stage - there is no houselisting done at the village level.

Second, the absence of a houselisting creates additional problems in surveys that are representative at multiple levels of aggregation. In these surveys estimates have to be weighted with appropriate weights[5] to account for different underlying population sizes - a more populous state like Uttar Pradesh will have a higher weight in the national estimate than a state like Himachal Pradesh. The calculation of these weights requires the underlying population proportion of the target group of interest. So, if the household were the unit of sampling then we would need the number of households in the village to calculate the weights. On the other hand, if children in the age group of 4-8 years were our target population, we would need the total number of such children in the village to calculate the weights. A houselisting of the village would provide not only the frame for sampling these children, but also the total number of such children in the village.

ASER resolves both these problems by sampling households. Household weights are easy to calculate since the Census provides the village population of households. Therefore, the sample in ASER is defined in terms of households and not children. In 'basic' ASER, all children in the age group of 3-16

[1]States and Union Territories not represented in the sample are Chandigarh, Delhi, Sikkim, Jammu and Kashmir, Arunachal Pradesh, Mizoram, Daman and Diu, Dadra and Nagar Haveli, Goa, Lakshadweep, Puducherry, and Andaman and Nicobar Islands.

[2]Estimates from ASER 2018 were used to compare district learning levels of 4- to 6-year-olds with the state average.

[3]We decided to double the number of villages per district as compared to ASER, so as to get a larger district sample since the 'Early Years' survey is being done in only one district per state.

[4]Most large household surveys in India, like the National Sample Survey and the National Family Health Survey also use this two-stage design and use PPS to select villages in the first stage.

[5]The weight associated with each sampling unit, household in ASER, is the inverse of the probability of it being selected in the sample.

years living in the sampled households are surveyed. So as to get a representative sample of the household distribution, even households with no children in the target age group are counted as part of the sample. The number of households and villages in ASER has remained more or less unchanged since 2006, though the number of children surveyed fell by about 25% between 2006 and 2014[6]. However, given the scale of ASER and large household sizes in rural India, this strategy yields large enough samples to do age-wise or grade-wise analysis at the state level.

Given that we wanted to retain as much of the rapid nature of assessment of the ASER architecture[7] as possible in ASER 'Early Years', houselisting at the village level was not an option. Following the ASER sampling strategy would have given us a representative distribution of households but may not have generated a large enough sample size for the target population. ASER 2018 data suggested that we would get about 11 children in the 4-8 year age group by sampling 20 households per village. This is a sample size problem and can be overcome in a number of ways - for example, by sampling more villages per district and/or more households per village[8]. However, both strategies have consequences: increasing the number of villages has cost implications and increasing the household sample in a village does not necessarily result in higher precision if the intra-cluster correlation is high. In any case, going by the ASER numbers to get a reasonable sample size (about 1,000 children per district) would require sampling close to 100 villages in each district and about 40 households in each village.

Another strategy could be to sample only households with members of the target population as is done in the National Family Health Survey. However, as discussed earlier, this would require creating a frame of the target population in the village, which would be used to both sample and calculate weights.

Finally, we adopted a sampling strategy that modified the ASER approach, so as to get sufficient sample sizes and be able to calculate weights without doing a houselisting in the village. The standard ASER sampling approach in the village is to mimic simple random sampling without doing a houselisting. Volunteers walk around the village, make a map, divide the village into four parts, and sample 5 households using the 'every 5th household rule', in each part, to get 20 households in the village. Households with no children in the target age group count as part of the sample since the aim is to get a representative picture of the household distribution.

In the ASER 2019 'Early Years' survey we modified this approach so as to capture sufficient numbers of 4- to 8-year-old children. The process is described below:

1. Walk around the village and make a map and divide the village into four parts.
2. In each part go to a central location and use the 'every 5th household rule' starting from the left to sample households.
3. If the household has children in the 4-8 age group currently residing in the household, record the household number, and the number of such children. Administer the survey to all children in the target age group in the household and collect information about the household. Proceed to the next 5th household.
4. If the household has no children in the 4-8 age group, record the household number and the fact that it has no children in the target age group and move to the next household. Note that unlike 'basic' ASER, we do not record household characteristics in households with 'no children'[9].
5. If the household is locked or does not want to participate in the survey, record the household number and the fact that it was locked or a 'no response' household and move to the next household.
6. Continue this process until you have administered the survey in 5 households with children in the 4-8 age group in each of the four sections of the village.

At the end of the survey in the village, this procedure will yield 20 households with completed survey information, as well as

[6]The drop in the number of sampled children is probably due to the increase in the number of rural households since 2006. Census 2011 notes that there was a 24% increase in rural households since Census 2001. Yet, the rural population increased by only 12% during the same period, implying that the average rural household size has gone down resulting in fewer children per household.

[7]Household based assessment of children; activity based assessment with easy to understand tools; community (volunteer) involvement in the actual survey; quick availability of the estimates; and rigorous methodology yielding reliable estimates at the state level.

[8]For example, in most of our research studies we sample 60 villages per district.

[9]This was done to save time since the survey is much longer as compared to the 'basic' ASER.

the total number of households visited to achieve this. The latter is needed for the calculation of correct weights[10].

To summarize, ASER 2019 'Early Years' employs a two-stage clustered design. In the first stage 60 villages are sampled from the Census 2011 village directory using PPS. In the second stage, 20 households with children in the age group of 4-8 years are surveyed in each sampled village. This gives a sample of at least 1,200 children in each district[11, 12].

The ASER 2019 'Early Years' report presents district report cards for each of the 26 surveyed districts. While the sample size of about 1,200 in each district is sufficient to present estimates for the target population as a whole or disaggregating by two sub-populations like gender or enrollment status, it is not sufficient for reliable estimates of smaller sub-populations. However, with a sample size of at least about 1,200 children per district the full sample is about 7,000 children. Therefore, we also present findings (appropriately weighted) based on the entire sample. Even though the geographical coverage of the ASER 2019 assessment of 'Early Years' competencies for young children is limited, since these districts are spread across the country in every major state, the full sample does give a snapshot of the national picture. So as to get a more balanced sample, two districts were surveyed by design in Uttar Pradesh and Madhya Pradesh, the two states with the largest number of districts in India.

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[10]The probability that household j gets selected in village i (p_{ij}) is the product of the probability that village i gets selected (p_i) and the probability that household j gets selected ($p_{j(i)}$). This is given by:

$p_{ij} = p_i \; p_{j(i)} = \frac{n_v \, vpop_i}{dpop} \frac{n_{hi}}{vpop_i} = \frac{n_v n_{hi}}{dpop}$, where n_v is the number of villages sampled in the district, $vpop_i$ is the household population of village i, $dpop$ is the number of households in the district, and n_{hi} is the number of households visited in the village (to get the 20 sampled households). The weight associated with each sampled household within a district is the inverse of the probability of selection. Note that the sum of the weights of the households will give the district population and the sum of the weights for all children in the sample will approximate to the population of children in the 4-8 year age group in the district.

[11]All children in the target age group are surveyed in the sampled households. Therefore, the sample size in terms of children, by design, is at least 1,200 per district. However, it is possible to get fewer than 1,200 children, if some of the sampled villages do not have 20 households with children in the 4-8 age group– this is possible in smaller villages.

[12]For a two-stage sample design, sample size calculations have to take into account the design effect, which is the increase in variance of estimates due to departure from simple random sampling. This design effect is a function of the intra-cluster correlation. The greater this correlation, the larger is the design effect implying a larger sample size for a given level of precision. For a given margin of error (me), the sample size can be backed out from

$me = \frac{2\sigma}{p} = \frac{2\sqrt{\frac{d\,p(1-p)}{N-1}}}{p}$ where d is the design effect, p is the incidence in the population, σ its standard error and N the sample size. Since learning levels are unknown for the competencies being tested in 'Early Years', one has to start with some assumption about p. The largest uncertainty is around $p = 0.5$, and therefore that yields the largest sample size. Assuming no design effect, a margin of error of 10% and incidence of 0.5, gives a sample size of 400. A design effect of 2 would double that sample size. Therefore, a sample size of at least 1,200 in each district should give reasonable levels of precision. Of course, the combined estimates with a sample size of about 36,000 would be far more reliable.

State: District	Surveyed villages	Surveyed households	Surveyed children (age 4-8)	Surveyed children by age					Surveyed children (age 4-8) by sex	
				Age 4	Age 5	Age 6	Age 7	Age 8	Boys	Girls
Andhra Pradesh: Srikakulam	60	1172	1382	198	224	261	364	335	688	694
Assam: Kamrup (Rural)	60	1212	1308	238	249	264	304	253	704	604
Bihar: Nalanda	60	1202	1665	247	366	355	314	383	837	821
Chhattisgarh: Mahasamund	60	1202	1503	267	286	305	336	309	749	754
Gujarat: Mehsana	60	1200	1442	292	300	259	309	282	750	692
Haryana: Hisar	59	1203	1415	237	300	242	326	310	754	661
Himachal Pradesh: Kangra	60	1076	1334	260	270	279	287	238	679	655
Jharkhand: Ramgarh	59	1189	1456	237	309	275	317	318	728	722
Karnataka: Chamarajanagar	60	1192	1378	178	258	313	308	321	691	687
Kerala: Thrissur	49	1223	1417	250	304	271	305	287	700	715
Madhya Pradesh: Bhopal	60	1208	1568	244	308	316	351	349	827	741
Madhya Pradesh: Satna	60	1097	1365	291	282	252	280	260	662	703
Maharashtra: Nagpur	60	1212	1474	267	337	273	306	291	752	722
Manipur: Bishnupur	35	1202	1305	230	277	259	311	228	663	641
Meghalaya: East Khasi Hills	60	1137	1448	256	281	313	312	286	716	724
Nagaland: Dimapur	56	995	1172	210	251	236	241	234	603	566
Odisha: Khordha	60	1159	1252	227	222	240	282	281	653	599
Punjab: Bathinda	60	1207	1468	240	335	250	336	307	769	699
Rajasthan: Ajmer	60	1191	1660	263	346	368	356	327	813	836
Tamil Nadu: Vellore	60	1183	1550	302	298	291	332	327	760	790
Telangana: Karimnagar	60	1201	1426	230	262	305	308	321	746	679
Tripura: South District	60	1202	1257	198	279	270	268	242	657	600
Uttar Pradesh: Lucknow	60	1207	1494	240	340	290	308	316	793	701
Uttar Pradesh: Varanasi	60	1201	1615	232	397	328	341	317	858	757
Uttarakhand: Dehradun	56	985	1252	238	243	252	246	273	605	647
West Bengal: Bankura	60	1167	1324	250	268	251	299	256	667	657
All districts	1514	30425	36930	6322	7592	7318	8047	7651	18824	18067

ASER 2019 'Early Years' – National picture

ASER 2019 'Early Years' – National findings

ASER 2019 'Early Years' was conducted in 26 districts across 24 states in India, covering a total of 1,514 villages, 30,425 households, and 36,930 children in the age group 4 to 8. Sampled children's enrollment status in pre-school or school was collected. Children did a variety of cognitive, early language, and early numeracy tasks; and activities to assess children's social and emotional development were also conducted. All tasks were done one-on-one with children in their homes.

Overview: Pre-school and school enrollment patterns among young children (age 4-8)

- Overall, more than 90% of young children in the age group 4-8 are enrolled in some type of educational institution.

  The proportion of young children who are enrolled in either pre-school (anganwadi, LKG or UKG class in private or government schools) or school (government, private, or other type of school) increases as children grow older, from 91.3% among 4-year-olds to 99.5% among 8-year-olds.

- Gender gaps are visible even among these young children, with more girls than boys enrolled in government institutions, and more boys than girls enrolled in private institutions.

  Among 4- and 5-year-old children, 56.8% girls and 50.4% boys are enrolled in government pre-schools or schools, while 43.2% girls and 49.6% boys are enrolled in private pre-schools or schools. The gap in enrollment between boys and girls is larger among 6- to 8-year-olds, with 61.1% of all girls versus 52.1% of all boys in this age group going to a government institution.

- Within each cohort of the same age, there is enormous variation in what children are doing.

  For example, at age 5, 70% children are in anganwadis or pre-primary classes, but 21.6% are already enrolled in Std I. At age 6, 32.8% children are in anganwadis or pre-primary classes, while 46.4% are in Std I and 18.7% are in Std II or higher. These enrollment patterns vary substantially across districts.

Children in the pre-school age group (age 4-5 years)

- From age 4 to age 5, children's ability to do all tasks improves substantially, in line with what child development experts expect and other studies have found.

  Regardless of whether or where they are enrolled, young children's ability to do cognitive, early language, early numeracy, and social and emotional learning tasks is higher among 5-year-olds than among 4-year-olds. For example, while 31% of 4-year-olds enrolled in anganwadis or government pre-primary classes were able to do a 4-piece puzzle, 45% of 5-year-olds attending these institutions could do so.

- However, although at age 5, all children should be able to perform most of these tasks with ease, a large proportion is unable to do so. Children from less advantaged homes are affected disproportionately.

  Although almost half of all 4-year-olds (44.2%) and more than a quarter of all 5-year-olds (26.3%) are enrolled in anganwadis, these children have far lower levels of cognitive skill and foundational ability than their counterparts in private LKG/UKG classes.

  Overall in this sample, about half the children have mothers who had completed eight or fewer years of schooling. Among the pre-primary age group, these children are more likely to be attending anganwadis (or, in a small proportion of children, government pre-primary classes); whereas their peers whose mothers studied beyond the elementary stage are more likely to be enrolled in private LKG/UKG classes.

- At both age 4 and age 5, there is a clear relationship between children's cognitive skills and their ability to do early language and early numeracy tasks.

ASER 'Early Years' data shows that children's performance on tasks requiring cognitive skills (such as sorting, seriation, and pattern recognition) is strongly related to their ability to do early language tasks (such as describing what they see in a picture) and early numeracy tasks (such as relative comparison of objects).

This suggests that focusing on play-based activities that build memory, reasoning, and problem-solving abilities is more productive than an early focus on content knowledge.

- At age 5, what we offer to and expect from children varies enormously across the country.

  Different states have different norms for entry to school. As a result, what a 5-year-old is doing depends largely on where she lives. For example, in Thrissur (Kerala), 89.9% of 5-year-olds are in a pre-primary grade and almost all the rest are in Std I. But in East Khasi Hills (Meghalaya), just 65.8% are in pre-school, 9.8% are in Std I, and 16% are in Std II. On the other hand, in Satna (Madhya Pradesh), 47.7% are in pre-school, 40.5% are in Std I, and 4.1% are in Std II.

  Anganwadis, LKG/UKG classes in private schools, the early primary grades in government schools and those in private schools each have different expectations for what children should do, and each offers a different type of structure, environment, and set of inputs to children. This means that we have a different set of expectations for children of the same age, depending on which institution they attend.

Children in Std I

- The Right to Education Act, 2009 (RTE) mandates that children should enter Std I at age 6. Many states allow entry to Std I at age 5+. However, 4 out of every 10 children in Std I are younger than 5 or older than 6.

  Overall, 41.7% of children in Std I are of the RTE-mandated age of 6 years, 36.4% are 7 or 8 years old, and 21.9% are 4 or 5 years old. Because the ASER sample was restricted to the age group of 4-8 years, the true proportion of overage children in Std I may be slightly higher (a small proportion may be 9 or older and were therefore excluded from the ASER 'Early Years' sample).

- Even within Std I, children's performance on cognitive, early language, early numeracy, and social and emotional learning tasks is strongly related to their age. Older children do better on all tasks.

  For example, within the Std I cohort, almost no children age 4 and 5 can read a Std I level text (5.7%). This proportion increases steadily with age, with 12.7% of 6-year-olds and 26% of 7- and 8-year-olds in Std I able to do so.

- Children in Std I in government schools are younger than those in the same grade in private schools.

  A clear difference in the age distribution in Std I is visible between children in government and private schools. More than a quarter of Std I students in government schools are either 4 or 5 years old (26.1%), while the corresponding proportion for private schools is ten percentage points lower at 15.7%. On the other hand, 30.4% students in Std I in government schools are 7-8 years old, while this proportion in private schools is far higher at 45.4%.

  Comparing learning levels in Std I between government and private schools is therefore problematic. Since there is a clear progression in learning with age, the higher learning levels observed in Std I in private schools may be partly due to the fact that Std I in those schools have a higher proportion of older children.

- As seen among the 4- and 5-year olds, a clear relationship is visible between children's cognitive skills and their ability to do early language and early numeracy tasks in Std I.

  For example, children in Std I who could do 3 cognitive tasks correctly (seriation, pattern recognition, and puzzle) had higher reading ability and were also more likely to solve oral word problems than their peers who could not.

- Irrespective of age, children in Std I do better in numeric arithmetic tasks (addition and subtraction problems presented in written numeric form) than oral word problems involving similar operations. For example, while 50.6% of Std I children could solve a 1-digit numeric addition sum correctly, 39.5% could do an oral word problem involving 1-digit addition.

Children in early primary grades (Std I-III)

- The variation in age distribution is widest in Std I and decreases in each subsequent grade. But older children continue to do better than younger ones on every task.

  By Std III, most children in both government and private schools are either 7 or 8 years old. But whereas 53.4% of 8-year-olds in Std III could read Std I level text, 46.1% of 7-year-olds could do so.

- Children's skills and abilities improve in each subsequent grade. But the huge jump between curriculum expectations at each grade means that by Std III, their early language and numeracy outcomes are already well behind curriculum expectations.

  For example, children's ability to read Std I level text improves from 16.2% of children in Std I to 50.8% children in Std III. This means that half of all children in Std III are already at least two years behind where the curriculum expects them to be.

  Similarly, 41.1% of students in Std I can recognize 2-digit numbers, while 72.2% of students in Std III can do so. But according to NCERT's specification of learning outcomes, children are expected to be able to recognize numbers up to 99 in Std I itself.

- As before, there is a strong relationship between children's cognitive skills and their performance on early language and early numeracy tasks.

  For example, in Std III, 63.2% of children who did all 3 cognitive tasks correctly were able to read at Std I level, as compared to 19.9% of children who were able to do one or none of the cognitive tasks correctly.

Implications for policy

Three key implications emerge from ASER 2019 'Early Years':

- *Expand and strengthen the existing network of anganwadi centres.* These institutions cater to large proportions of children well before they can enter pre-primary grades. The already significant scale of this network can be leveraged to reach those children who remain unreached. At the same time, the ability of these centres to implement appropriate school readiness activities for 3- and 4-year-olds needs to be strengthened.

- *Revisit state and national norms for age of entry to school.* Data from ASER 2019 'Early Years' shows clearly that performance on cognitive, early language, early numeracy, and social and emotional learning tasks is closely related to children's age, with older children doing better than younger ones. Permitting underage children into primary grades puts them at a learning disadvantage which is difficult to overcome.

- *Breadth of skills is important, and focusing too early on formal subject learning is counter-productive.* ASER 2019 data shows a clear relationship between children's performance on cognitive tasks and measures of early language and early numeracy, suggesting that a focus on activities that strengthen cognitive skills rather than subject learning in the early years may generate substantial benefits in terms of children's future learning. The entire age band from 4 to 8 needs to be seen as a continuum and curriculum progression across grades and schooling stages should be designed accordingly. For an effective and implementable curriculum, the process of designing, planning, piloting, and finalizing needs to keep ground realities in mind.

All districts RURAL

The ASER 2019 'Early Years' survey was conducted in 26 districts across 24 states in India. One rural district was surveyed in each state, except in Madhya Pradesh and Uttar Pradesh where two districts were surveyed. The survey reached a total of 1,514 villages, 30,425 households, and 36,930 children in the age group 4 to 8. Sampled children's pre-school or school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes.

In the following 'All districts' pages, data is presented in five sub-sections:

- **Overview (age 4-8):** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age, sex, and pre-school/school type (this page).
- **Young children (age 4 and 5):** Ability levels and expectations of children in the pre-primary age group are very different than for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5 (pages 52 and 53). It also provides data on children's ability to identify emotions as a key indicator of social and emotional development.
- **Children in Std I:** Data is presented on the abilities of children in Std I, who have just entered the formal school system, focusing on the relationship between age and performance on early learning tasks (pages 54 and 55).
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school (pages 56 and 57).
- **Mothers:** The relationship between mothers' education and children's performance is presented as an example of the ways in which household exposure to education affects children's performance (page 58).

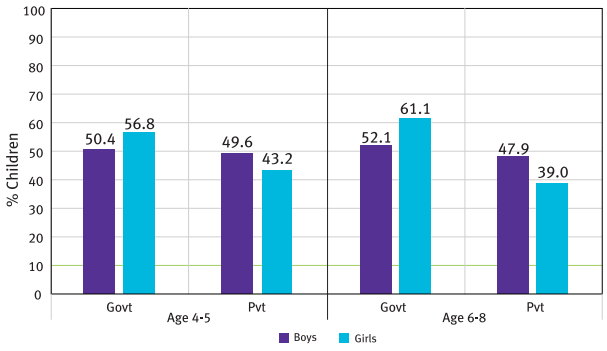
Overview: Pre-school and school enrollment (age 4-8)

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrol-led	Total
	Angan-wadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt	Other		
Age 4	44.2	5.6	36.7	2.9	1.9	0.0	8.7	100
Age 5	26.2	5.3	40.6	16.7	7.2	0.0	4.0	100
Age 6	5.8	4.4	23.2	40.7	23.6	0.1	2.1	100
Age 7	1.0	1.0	8.3	54.3	34.5	0.1	0.8	100
Age 8	0.4	0.5	2.8	59.0	36.7	0.1	0.6	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Chart 1: % Children age 4-8 enrolled in different types of pre-schools and schools by sex 2019



Bars show the proportion of children in the age group 4-5 and 6-8 enrolled in different types of pre-schools and schools, separately for each sex. For example, 50.4% boys age 4-5 are enrolled in government pre-school and schools as compared to 56.8% girls.

Table 2: Schooling status and age-grade distribution
% Children age 4-8 by schooling status and grade 2019

Age	Not enrol-led	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	8.4	83.5	5.9	2.2			100
Age 5	3.9	70.0	21.6	4.5			100
Age 6	2.1	32.8	46.4	16.1	2.6		100
Age 7	0.8	10.2	28.3	44.1	14.6	2.0	100
Age 8	0.6	3.6	8.3	27.1	45.4	15.0	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 8.4% children are not enrolled, 83.5% are in a pre-primary class, 5.9% are in Std I, and 2.2% are in Std II or above.

Data is not presented where sample size is insufficient.

All districts RURAL

Children age 4 to 5 years

National policy stipulates age 4 and 5 as the pre-primary age group. At this stage, children should be encouraged to develop a breadth of skills including cognitive, social and emotional skills as well as the conceptual foundations needed for formal schooling.

Table 3: % Children age 4-5 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt		
Age 4	44.2	5.6	36.7	2.9	1.9	8.7	100
Age 5	26.3	5.3	40.6	16.7	7.2	4.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 4: % Children age 4-5 who can correctly do cognitive tasks by schooling status 2019

Task	Age 4			Age 5		
	Govt pre-school[1]	Pvt LKG/ UKG	Not enrolled	Govt pre-school[1]	Pvt LKG/ UKG	Not enrolled
Sorting	63.8	79.3	44.9	77.5	87.2	62.1
Spatial awareness	51.7	65.5	34.2	62.2	76.7	51.7
Seriation	39.4	49.5	22.6	41.2	58.8	29.7
Pattern recognition	38.8	43.4	30.7	43.4	49.9	30.1
Puzzle	31.0	47.1	16.3	45.0	58.9	23.0

4- and 5-year-olds were administered a 4-piece puzzle.
This table shows the proportion of children who can correctly do cognitive tasks by age and schooling status. For example, of all 4-year-olds enrolled in government pre-school, 63.8% can do a sorting task, 51.7% can do a spatial awareness task, 39.4% can do a seriation task, and so on.

Table 5: % Children age 4-5 who can correctly do early language tasks by schooling status 2019

Task	Age 4			Age 5		
	Govt pre-school[1]	Pvt LKG/ UKG	Not enrolled	Govt pre-school[1]	Pvt LKG/ UKG	Not enrolled
Picture description	53.5	67.2	39.0	63.7	76.6	50.2
Listening comprehension	13.8	24.8	10.0	23.5	40.4	17.4

This table shows the proportion of children who can correctly do early language tasks by age and schooling status. For example, of all 4-year-olds enrolled in government pre-school, 53.5% can do a picture description task and 13.8% can do a listening comprehension task.

[1]'Govt pre-school' includes children enrolled in anganwadis and government pre-primary classes.
Data is not presented where sample size is insufficient.

All districts RURAL

Children age 4 to 5 years

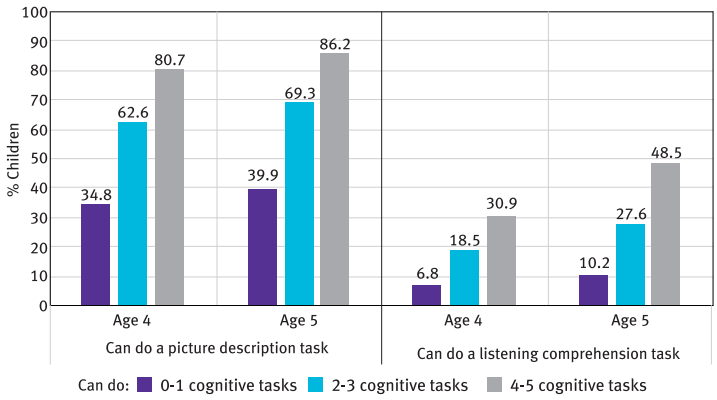
Table 6: % Children age 4-5 who can correctly do early numeracy tasks by schooling status 2019

Task	Age 4			Age 5		
	Govt pre-school	Pvt LKG/ UKG	Not enrolled	Govt pre-school	Pvt LKG/ UKG	Not enrolled
Counting objects	23.1	40.1	8.2	36.8	57.6	20.7
Relative comparison (objects)	37.3	51.3	21.7	53.8	71.2	37.8

'Govt pre-school' includes children enrolled in anganwadis and government pre-primary classes.

This table shows the proportion of children who can correctly do early numeracy tasks by age and schooling status. For example, of all 4-year-olds enrolled in government pre-schools, 23.1% can do a task involving counting of objects and 37.3% can do a task involving relative comparison of objects.

Chart 2: Relationship between performance on cognitive tasks and early language tasks (pre-school going children age 4-5) 2019



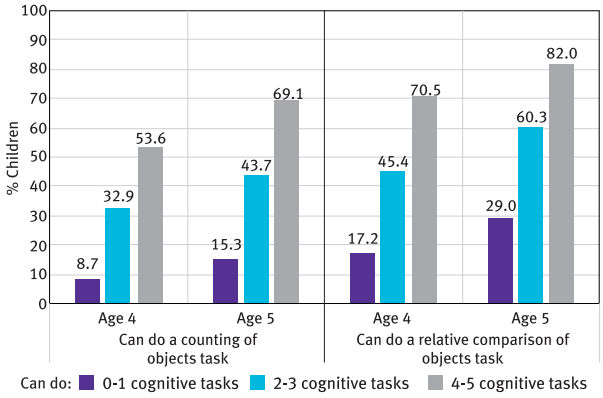
How to read this chart: At age 4, out of all pre-school going children who can correctly do 0-1 cognitive tasks, 34.8% can do a picture description task; of those who can correctly do 2-3 cognitive tasks, 62.6% can do a picture description task; and of those who can correctly do 4-5 cognitive tasks, 80.7% can do a picture description task.

Table 7: % Children age 4-5 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	62.2	43.3	47.7	47.4	24.0
Age 5	72.3	50.1	57.4	55.8	33.6

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Chart 3: Relationship between performance on cognitive tasks and early numeracy tasks (pre-school going children age 4-5) 2019



How to read this chart: At age 4, out of all pre-school going children who can correctly do 0-1 cognitive tasks, 8.7% can count objects; of those who can correctly do 2-3 cognitive tasks, 32.9% can count objects; and of those who can correctly do 4-5 cognitive tasks, 53.6% can count objects.

Key takeaways:

- As expected, children's performance on all tasks improves substantially between age 4 and age 5, regardless of schooling status.
- However, although 5-year-old children should be able to perform these simple tasks with ease, large proportions are not able to do so, especially among children who are not enrolled anywhere or enrolled in government pre-schools (anganwadis or government pre-primary classes).
- 5-year-olds are exposed to a very wide variety of environments and inputs, depending on where they are enrolled: 26.3% children are in anganwadis, 40.6% children are in private LKG or UKG classes, and 23.9% are in government or private school.
- At both age 4 and age 5, there is a clear relationship between pre-school going children's ability to do cognitive tasks and their performance on both early language and early numeracy tasks.

Data is not presented where sample size is insufficient.

All districts RURAL

Children in Std I

Std I is children's point of entry to primary school, with the associated curriculum expectations for formal subject-specific learning. Although the Right to Education Act (2009) refers to age 6 as the first year of formal schooling, significant proportions of both younger and older children are enrolled in Std I.

Table 8: % Children in Std I by age and school type 2019

Age	Govt	Pvt	All
Age 4	3.1	2.6	2.9
Age 5	23.0	13.1	19.0
Age 6	43.5	38.9	41.7
Age 7	25.3	32.8	28.3
Age 8	5.1	12.6	8.1
Total	100	100	100

This table shows the age distribution of children enrolled in Std I in different types of schools. For example, of all children enrolled in Std I in government schools, 3.1% are 4 years old, 23% are 5, 43.5% are 6, 25.3% are 7, and 5.1% are 8 years old.

Table 9: % Children in Std I who can correctly do cognitive tasks by age 2019

Age	Seriation	Pattern recognition	Puzzle
Age 4 and 5	50.6	49.6	53.5
Age 6	67.3	59.6	51.7
Age 7 and 8	74.5	63.7	57.5
All Std I	66.5	59.0	54.3

4- and 5-year-olds were administered a 4-piece puzzle and 6- to 8-year-olds were administered a 6-piece puzzle.
Within Std I, children's performance on cognitive tasks varies by age. For example, of all children in Std I, 50.6% children age 4 and 5, 67.3% children age 6, and 74.5% children age 7 and 8 can do a seriation task.

Table 10: % Children in Std I who can correctly do early language tasks by age 2019

Age	Picture description	Listening comprehension
Age 4 and 5	70.7	41.0
Age 6	80.1	55.2
Age 7 and 8	86.8	63.4
All Std I	80.6	55.3

Within Std I, children's performance on early language tasks varies by age. For example, of all children in Std I, 70.7% children age 4 and 5, 80.1% children age 6, and 86.8% children age 7 and 8 can do a picture description task.

Table 11: Distribution of children's reading ability in Std I by age 2019

Age	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Age 4 and 5	62.6	25.4	6.3	5.7	100	
Age 6	40.9	31.5	14.9	12.7	100	74.6
Age 7 and 8	23.5	29.8	20.7	26.0	100	80.3
All Std I	39.0	29.6	15.2	16.2	100	77.9

Early language tasks are progressive. Each row shows the variation in children's reading levels among Std I children of a given age. For example, among 4- and 5-year-olds in Std I, 62.6% children cannot even read letters, 25.4% can read letters but not words or higher, 6.3% can read words but not a Std I level text, and 5.7% can read a Std I level text or higher.

Data is not presented where sample size is insufficient.

All districts RURAL

Children in Std I

Table 12: % Children in Std I who can correctly do 1-digit numeracy tasks by age 2019

Age	1-digit					
	Oral word problem addition	Oral word problem subtraction	Number recognition (1-9)	Relative comparison (1-9)	Numeric addition	Numeric subtraction
Age 4 and 5	22.2	21.1	51.9	30.3	25.6	18.0
Age 6	35.6	30.5	74.0	50.9	48.1	35.4
Age 7 and 8	53.5	44.2	86.5	67.2	66.9	55.4
All Std I	39.5	33.7	74.1	52.8	50.6	39.4

The performance of children in Std I on 1-digit numeracy tasks varies by age. For example, of all 4- and 5-year-olds in Std I, 22.2% can do an oral word addition problem, 21.1% can do an oral word subtraction problem, 51.9% can recognize numbers up to 9, and so on.

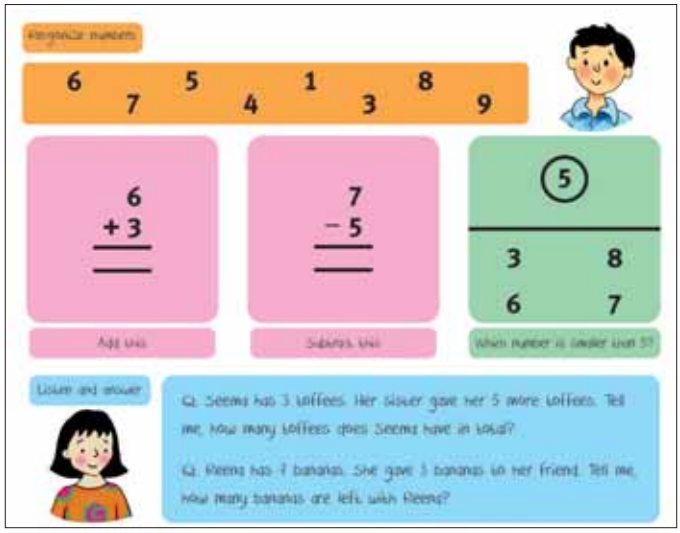
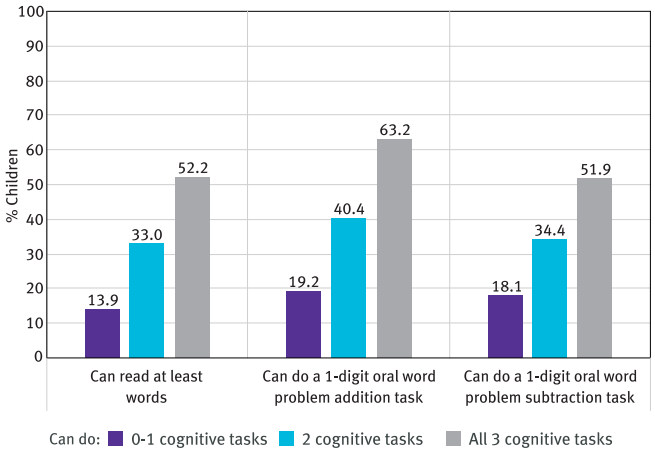


Chart 4: Relationship between performance on cognitive tasks and early language and numeracy tasks (Std I) 2019



How to read this chart: In Std I, out of all children who can correctly do 0-1 cognitive tasks, 13.9% can read at least words; of those who can correctly do 2 cognitive tasks, 33% can read at least words; and of those who can correctly do all 3 cognitive tasks, 52.2% can read at least words.

Table 13: % Children in Std I who can correctly do early language and early numeracy tasks by age and school type 2019

Age	At least words		1-digit			
			Oral word problem addition		Oral word problem subtraction	
	Govt	Pvt	Govt	Pvt	Govt	Pvt
Age 4 and 5	6.7	24.1	16.5	35.3	16.8	31.1
Age 6	18.9	41.5	28.2	47.4	25.0	39.3
Age 7 and 8	39.1	54.3	45.9	61.0	35.8	52.5

Key takeaways:

- Across this sample, 41.7% children in Std I are at the RTE-mandated age of 6 years old. 21.9% are younger and 36.4% are older. Children in Std I in private school are significantly older than those in the same class in government school.
- Age makes a substantial difference to learning. Even within a given school type, older children in Std I perform better than younger ones on every task.
- A clear relationship is visible between children's ability to do tasks measuring cognitive skills and those assessing early language and early numeracy.
- Irrespective of age, children in Std I do better in numeric arithmetic tasks (addition and subtraction problems presented in written numeric form) than oral word problems involving similar operations.

Data is not presented where sample size is insufficient.

All districts RURAL

Children in early primary grades (Std I-III)

In the first few years of primary school, children's progress towards developing foundational reading and arithmetic abilities should be consolidated, giving them a solid base on which to build. It is important that curriculum expectations and classroom activities are developed with this progression in mind.

Table 14: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	21.9	41.7	28.3	8.1	100
Std II	4.0	15.8	50.3	29.9	100
Std III	0.4	3.3	24.0	72.3	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 21.9% children are 4 and 5 years old, 41.7% children are 6, 28.3% children are 7, and 8.1% are 8 years old.

Table 15: % Children who can correctly do all 3 cognitive tasks (seriation, pattern recognition, and puzzle) by age and grade 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	All
Std I	22.5	31.1	36.7	37.2	31.4
Std II	19.5	35.1	46.7	50.9	45.1
Std III		35.3	50.2	60.0	56.7

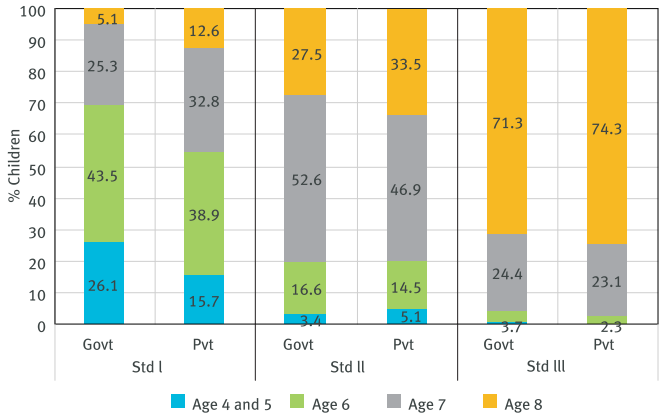
4- and 5-year-olds were administered a 4-piece puzzle and 6- to 8-year-olds were administered a 6-piece puzzle.
This table shows the proportion of children who can correctly do all 3 cognitive tasks by age and grade. For example, in Std I, 22.5% children age 4 and 5, 31.1% children age 6, 36.7% children age 7, and 37.2% children age 8 can do all 3 cognitive tasks.

Table 17: % Children who can read at least a Std I level text by age and grade 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	All
Std I	5.7	12.7	24.4	31.6	16.2
Std II	8.6	26.0	34.5	43.1	34.8
Std III		29.4	46.1	53.4	50.8

This table shows the proportion of children who can read at least a Std I level text by age and grade. For example, in Std I, 5.7% children age 4 and 5, 12.7% children age 6, 24.4% children age 7, and 31.6% children age 8 can read at least a Std I level text.

Chart 5: Age-grade distribution
% Children enrolled in each grade by age and school type 2019



This chart shows the proportion of children enrolled in different grades by age and school type. For example, of all children enrolled in Std I in government schools, 26.1% are 4 and 5 years old, 43.5% are 6, 25.3% are 7, and 5.1% are 8 years old.

Table 16: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	39.0	29.6	15.2	16.2	100	77.9
Std II	22.3	23.5	19.4	34.8	100	80.5
Std III	14.7	18.1	16.5	50.8	100	85.1

Early language tasks are progressive. Each row shows the variation in children's reading levels within a given grade. For example, among children in Std I, 39% cannot even read letters, 29.6% can read letters but not words or higher, 15.2% can read words but not a Std I level text or higher, and 16.2% can read a Std I level text or higher.

Data is not presented where sample size is insufficient.

All districts RURAL

Children in early primary grades (Std I-III)

Table 18: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	26.9	32.0	41.1	100
Std II	11.6	27.1	61.3	100
Std III	5.6	22.2	72.2	100

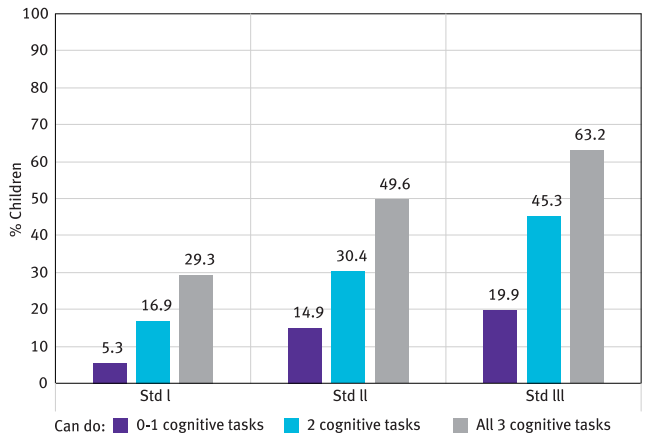
Early numeracy tasks are progressive. Each row shows the variation in children's number recognition ability within a given grade. For example, among children in Std I, 26.9% children cannot even recognize numbers 1-9, 32% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 41.1% can recognize numbers up to 99.

Table 19: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit		2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	39.5	33.7	29.1	11.3	7.6
Std II	58.8	51.4	49.0	28.0	18.4
Std III	74.5	66.0	63.8	44.0	30.6

This table shows the proportion of children in each grade who can do selected numeracy tasks (1-digit and 2-digit). For example, among children in Std I, 39.5% children can do a 1-digit oral word addition problem task, 33.7% can do a 1-digit oral word subtraction problem task, 29.1% can do relative comparison (11-99) task, and so on.

Chart 6: Relationship between performance on cognitive tasks and ability to read a Std I level text by grade 2019



How to read this chart: In Std I, out of all children who can correctly do 0-1 cognitive tasks, 5.3% can read a Std I level text; of those who can correctly do 2 cognitive tasks, 16.9% can read a Std I level text; and of those who can correctly do all 3 cognitive tasks, 29.3% can read a Std I level text.

Table 20: % Children age 6-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 6	77.6	56.7	67.2	66.1	44.6
Age 7	82.0	62.8	73.7	73.3	54.0
Age 8	83.8	68.2	78.0	78.6	60.5

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Key takeaways:

- Children's early language and early numeracy skills improve in each subsequent grade; but even in Std III, 49.2% children cannot read text at Std I level of difficulty and 27.8% children are unable to recognize 2-digit numbers. However, within each grade older children do better than younger ones.
- As in the case of Std I, there is a clear relationship between children's ability to do cognitive tasks and their performance on early language and early numeracy tasks.

Data is not presented where sample size is insufficient.

All districts RURAL

Mothers' education and children's performance

Reducing equity gaps require extra support for children from less advantaged homes. This page shows the relationship between mothers' education level and children's performance in cognitive, early language, and early numeracy tasks.

Table 21: % Mothers by education level 2019

Education level	% Mothers
No schooling	22.7
Std I-V	12.2
Std VI-VIII	18.3
Std IX-X	24.2
Std XI or more	22.7
Total	100

Table 22: % Children age 4-8 enrolled in different types of pre-schools and schools by mothers' education 2019

Mothers' education level	Pre-school		School		Not enrolled	Total
	Govt pre-school	Pvt LKG/ UKG	Govt	Pvt		
No schooling	18.7	11.2	53.2	11.8	5.1	100
Std I-V	20.8	12.3	48.7	14.4	3.7	100
Std VI-VIII	19.8	17.9	40.9	18.1	3.3	100
Std IX-X	18.6	22.9	31.4	25.5	1.6	100
Std XI or more	11.1	37.8	14.3	35.3	1.5	100

'Govt pre-school' includes children enrolled in anganwadis and government pre-primary classes.
'Not enrolled' includes children who never enrolled or have dropped out.
This table shows the enrollment patterns of children by mothers' education. For example, among children whose mothers never went to school, 18.7% go to government pre-school, 11.2% go to private LKG/UKG, 53.2% go to government schools, 11.8% go to private schools, and 5.1% are not enrolled anywhere.

Table 23: % Children who can correctly do all 3 cognitive tasks (seriation, pattern recognition, and puzzle) by age and mothers' education 2019

Mothers' education level	Age 4	Age 5	Age 6	Age 7	Age 8
No schooling	7.9	12.6	17.5	27.5	38.5
Std I-V	7.3	11.7	24.9	32.2	48.4
Std VI-VIII	11.8	15.5	24.6	39.7	52.3
Std IX-X	16.0	20.2	33.5	51.5	64.1
Std XI or more	18.9	29.7	41.3	57.1	70.3

4- and 5-year-olds were administered a 4-piece puzzle and 6- to 8-year-olds were administered a 6-piece puzzle.
This table shows the performance of children in all 3 cognitive tasks by age and mothers' education. For example, 7.9% of all 4-year-olds whose mothers never went to school can do all 3 cognitive tasks as compared to 16% of all children in the same age group whose mothers had completed Std XI or more.

Table 24: % Children who can correctly do early language and early numeracy tasks by grade and mothers' education 2019

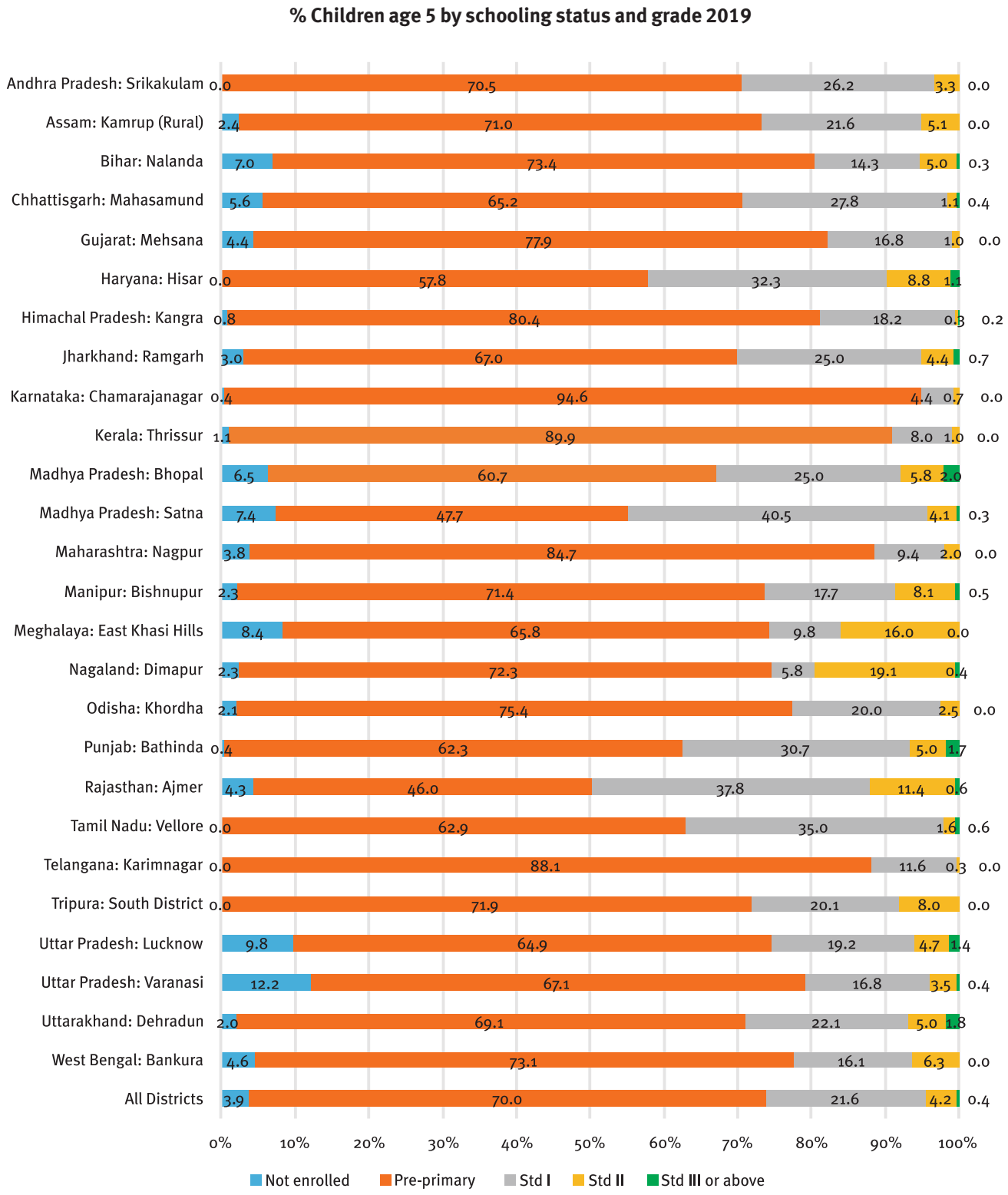
Mothers' education level	Children in Std I			Children in Std III			
	At least words	1-digit		At least Std I level text	2-digit		
		Oral word problem addition	Oral word problem subtraction		Number recognition (11-99)	Numeric addition	Numeric subtraction
No schooling	14.7	28.6	24.5	35.6	53.1	29.2	20.5
Std I-V	22.3	27.5	25.8	41.9	63.6	34.0	23.6
Std VI-VIII	27.4	35.9	30.1	49.8	70.7	39.6	27.1
Std IX-X	37.9	43.7	37.1	60.1	84.6	54.0	37.8
Std XI or more	49.3	52.5	46.2	69.1	91.8	63.7	43.6

Each row shows the variation in children's ability to do early language and early numeracy tasks by grade and mothers' education. For example, among children in Std I whose mothers never went to school, 14.7% can read at least words, 28.6% can do a 1-digit oral word addition problem, 24.5% can do a 1-digit oral word subtraction problem, and so on.

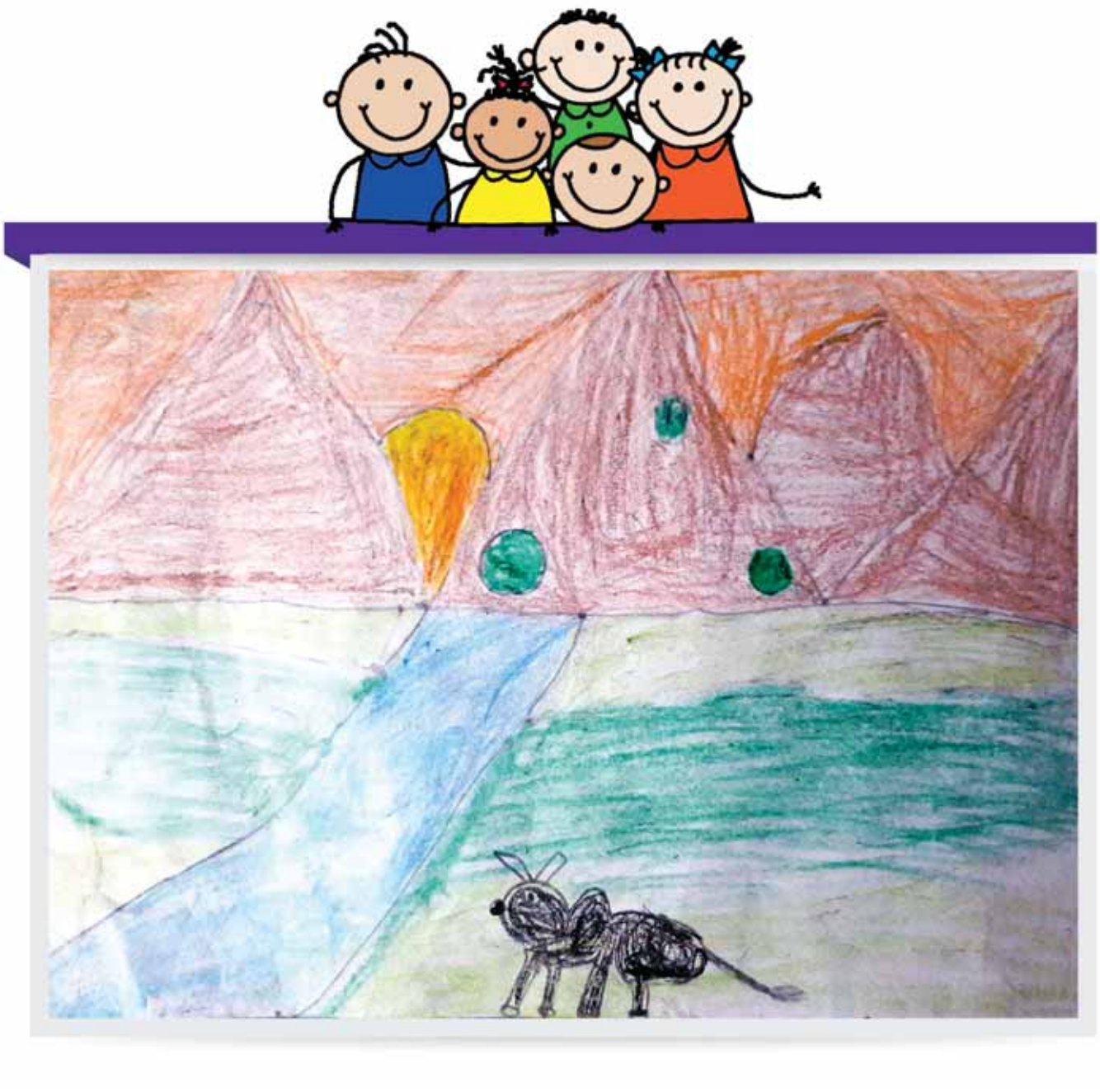
Data is not presented where sample size is insufficient.

All districts RURAL

Schooling status and grade distribution for 5-year-old children



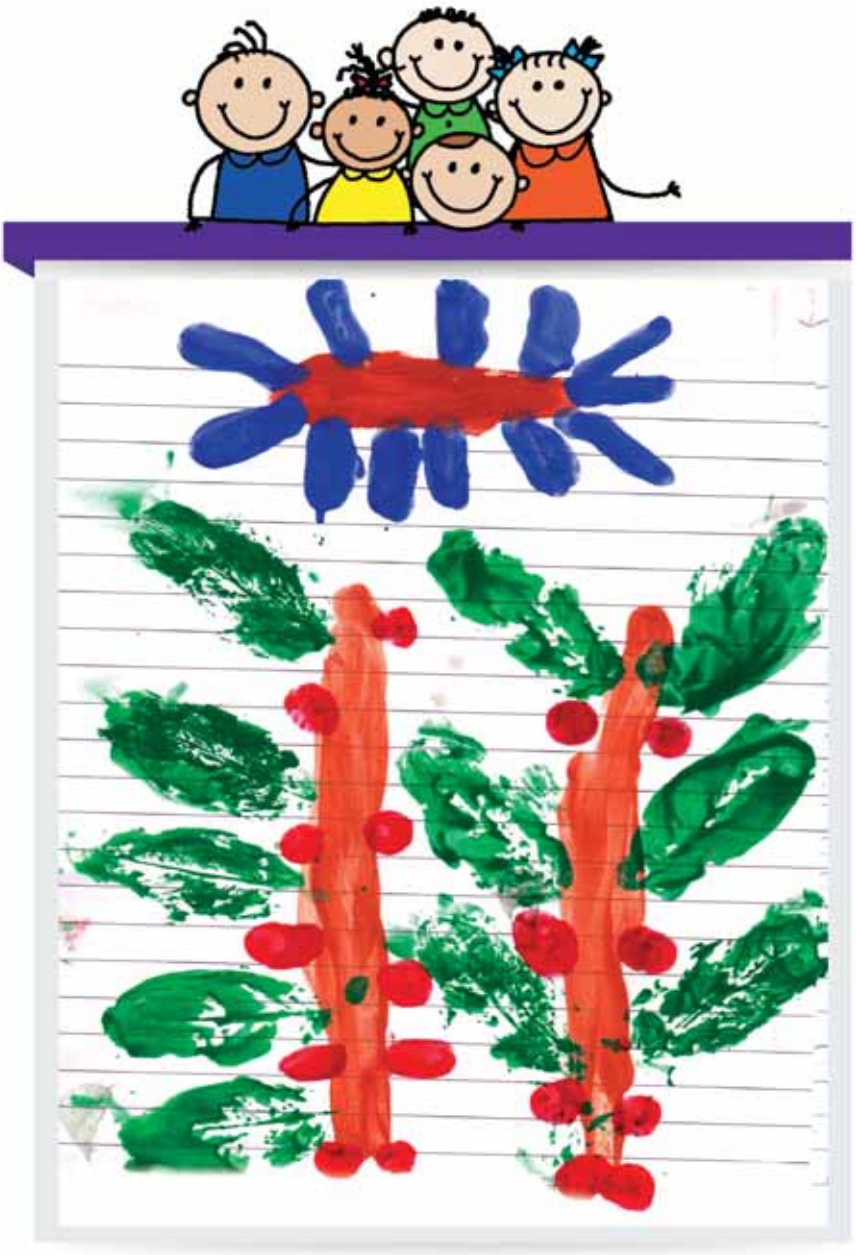
This chart shows the schooling status and grade distribution for 5-year-olds in each surveyed district. For example, in Srikakulam in Andhra Pradesh all children age 5 are enrolled in some institution: 70.5% children are enrolled in an anganwadi or any other pre-primary class, 26.2% are in Std I, and 3.3% are in Std II.



मेरे घर में एक गाय है। वह चारा चरने के लिए रोज जंगल जाती है और शाम को घर वापस आती है। मैं शाम को उसके आने का इंतजार करती हूँ।

Yashasvi, Age 4

Andhra Pradesh: Srikakulam
Assam: Kamrup (Rural)
Bihar: Nalanda
Chhattisgarh: Mahasamund



यह एक पेड़ है। पेड़ में पत्तियाँ और सेब भी हैं। एक चींटी भी है। चींटी सेब खाने जा रही है।

Aaradhya Yadav, Age 5

Andhra Pradesh: Srikakulam

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Andhra Pradesh. The survey reached a total of 60 villages, 1,172 households, and 1,382 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	72.6	1.5	20.2	2.9	1.4	0.0	1.4	100
Age 5	42.7	5.5	23.3	23.8	4.7	0.0	0.0	100
Age 6	2.4	0.0	15.6	67.6	14.1	0.0	0.4	100
Age 7	0.5	0.0	4.2	72.7	22.6	0.0	0.0	100
Age 8	0.3	0.3	0.3	79.2	19.4	0.3	0.2	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution
% Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	1.4	94.3	4.3				100
Age 5	0.0	70.5	26.2	3.3			100
Age 6	0.4	17.9	62.4	17.7	1.6		100
Age 7	0.0	4.7	14.0	64.6	15.6	1.2	100
Age 8	0.2	0.9	2.9	16.7	63.9	15.4	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 1.4% children are not enrolled anywhere, 94.3% children are in a pre-primary class, and 4.3% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	66.7	46.3	55.5	48.8	42.7	50.9	29.6	22.1	37.7
Age 5	83.9	60.7	58.0	50.6	58.4	67.3	35.3	46.6	59.8

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 66.7% can do a sorting task, 46.3% can do a spatial awareness task, 55.5% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	52.7	42.0	40.0	49.2	26.8
Age 5	66.3	55.8	59.2	59.8	34.9
Age 6	68.6	54.8	68.1	74.3	47.1
Age 7	75.7	64.9	72.0	79.4	59.0
Age 8	76.6	65.7	75.9	81.8	61.6

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Andhra Pradesh: Srikakulam

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	73.8	26.2	100
Std II	79.4	20.6	100
Std III	83.4	16.6	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	21.8	57.4	17.4	3.5	100
Std II	2.9	13.4	67.1	16.6	100
Std III	0.0	1.5	20.1	78.4	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 21.8% children are 4 and 5 years old, 57.4% are 6, 17.4% are 7, and 3.5% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	70.8	64.4	60.8	58.2
Std II	83.8	72.3	73.9	71.6
Std III	91.3	81.3	79.8	81.8

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 70.8% can do a seriation task, 64.4% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	42.7	33.4	12.4	11.6	100	
Std II	17.6	20.1	25.1	37.2	100	73.3
Std III	10.1	11.2	19.3	59.4	100	84.0

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 42.7% children cannot even read letters, 33.4% can read letters but not words or higher, 12.4% can read words but not a Std I level text or higher, and 11.6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	31.5	24.2	44.3	100
Std II	8.5	11.9	79.6	100
Std III	4.0	8.1	88.0	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 31.5% children cannot even recognize numbers up to 9, 24.2% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 44.3% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	44.1	39.2	51.8	47.1	40.6	31.7	16.6	9.0
Std II	63.5	53.0	79.9	81.4	68.3	61.3	40.0	24.7
Std III	73.6	65.6	87.8	88.4	80.6	78.2	55.8	46.0

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 44.1% can do a 1-digit oral word addition problem, 39.2% can do a 1-digit oral word subtraction problem, 51.8% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Assam: Kamrup (Rural)

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Assam. The survey reached a total of 60 villages, 1,212 households, and 1,308 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt		
Age 4	63.0	3.5	20.0	3.7	0.0	9.8	100
Age 5	26.9	6.1	42.2	18.0	4.4	2.5	100
Age 6	7.5	2.7	32.1	39.2	17.8	0.8	100
Age 7	1.7	1.0	10.3	52.1	34.7	0.3	100
Age 8	0.4	0.0	1.4	52.1	46.2	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	9.2	81.9	7.4	1.6			100
Age 5	2.4	71.0	21.6	5.1	0.0		100
Age 6	0.7	40.7	38.7	17.7	2.2		100
Age 7	0.3	12.9	46.6	31.8	7.4	1.1	100
Age 8	0.0	1.7	17.1	40.5	30.9	9.9	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 9.2% children are not enrolled anywhere, 81.9% children are in a pre-primary class, 7.4% are in Std I, and 1.6% are in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	71.9	57.4	53.8	51.5	46.3	60.7	13.1	28.0	46.3
Age 5	85.7	68.2	59.3	59.4	58.7	65.8	26.5	46.5	66.1

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 71.9% can do a sorting task, 57.4% can do a spatial awareness task, 53.8% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	59.2	41.9	49.0	44.5	19.5
Age 5	57.5	56.0	50.9	60.4	29.5
Age 6	60.1	53.8	58.8	69.5	37.8
Age 7	66.3	59.9	62.9	70.2	44.4
Age 8	71.5	66.2	67.5	78.9	53.2

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Assam: Kamrup (Rural)

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	58.9	41.1	100
Std II	58.6	41.4	100
Std III	69.3	30.7	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	16.1	30.5	41.4	12.0	100
Std II	2.4	15.6	40.6	41.4	100
Std III	0.0	4.6	21.9	73.5	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 16.1% children are 4 and 5 years old, 30.5% are 6, 41.4% are 7, and 12% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	73.0	62.8	64.6	45.2
Std II	80.0	74.5	79.5	62.6
Std III	89.0	75.8	83.3	68.6

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 73% can do a seriation task, 62.8% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	47.0	18.1	18.1	16.9	100	
Std II	25.1	15.0	16.7	43.3	100	82.4
Std III	18.0	16.1	12.6	53.3	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 47% children cannot even read letters, 18.1% can read letters but not words or higher, 18.1% can read words but not a Std I level text or higher, and 16.9% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	33.6	42.6	23.9	100
Std II	16.1	38.5	45.4	100
Std III	4.4	49.9	45.8	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 33.6% children cannot even recognize numbers up to 9, 42.6% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 23.9% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	43.3	35.6	47.6	47.4	36.9	18.2	5.9	5.9
Std II	58.9	59.0	73.4	70.5	59.5	38.7	24.5	18.8
Std III	66.1	67.1	80.0	78.5	70.8	39.1	25.6	20.7

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 43.3% can do a 1-digit oral word addition problem, 35.6% can do a 1-digit oral word subtraction problem, 47.6% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Bihar: Nalanda

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Bihar. The survey reached a total of 60 villages, 1,202 households, and 1,665 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	60.7	0.0	19.0	2.3	1.9	16.1	100
Age 5	50.3	0.9	22.8	15.4	3.6	7.0	100
Age 6	21.5	0.2	25.0	37.2	5.8	10.2	100
Age 7	5.7	0.0	24.5	49.0	15.0	5.8	100
Age 8	1.7	1.0	12.1	60.9	21.5	2.9	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	16.1	79.7	4.2				100
Age 5	7.0	73.4	14.3	5.0	0.3		100
Age 6	10.1	46.4	29.7	11.7	2.1		100
Age 7	5.8	30.1	26.7	23.9	10.0	3.6	100
Age 8	2.9	14.6	15.3	23.1	31.1	13.0	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 16.1% children are not enrolled anywhere, 79.7% children are in a pre-primary class, and 4.2% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	56.1	40.9	28.2	30.3	20.5	41.1	15.1	22.7	39.7
Age 5	80.4	57.4	38.1	41.8	34.4	56.0	30.1	48.0	62.1

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 56.1% can do a sorting task, 40.9 % can do a spatial awareness task, 28.2% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	53.5	29.7	34.5	32.4	9.8
Age 5	70.8	40.3	49.2	53.4	25.1
Age 6	78.1	49.1	63.7	59.2	36.7
Age 7	86.2	59.6	72.6	73.0	53.3
Age 8	86.2	61.4	79.1	72.7	56.6

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Bihar: Nalanda

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	75.3	24.7	100
Std II	65.9	34.1	100
Std III	90.0	10.0	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	18.9	34.0	27.3	19.9	100
Std II	9.5	18.5	33.1	38.9	100
Std III	0.7	3.0	19.5	76.8	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 18.9% children are 4 and 5 years old, 34% are 6, 27.3% are 7, and 19.9% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	59.8	57.7	38.1	53.6
Std II	61.7	62.1	38.7	67.3
Std III	67.6	59.4	48.2	77.9

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 59.8% can do a seriation task, 57.7% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	58.9	17.7	4.1	19.3	100	Data Insufficient
Std II	46.2	21.4	4.3	28.2	100	
Std III	29.4	27.3	4.4	38.9	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 58.9% children cannot even read letters, 17.7% can read letters but not words or higher, 4.1% can read words but not a Std I level text or higher, and 19.3% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	25.8	42.7	31.6	100
Std II	8.1	45.1	46.8	100
Std III	7.1	38.6	54.3	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 25.8% children cannot even recognize numbers up to 9, 42.7% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 31.6% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	51.8	41.8	51.9	52.0	42.3	28.8	24.9	19.5
Std II	64.4	54.3	73.7	73.4	53.2	36.6	32.9	29.3
Std III	76.6	71.1	82.4	81.0	64.4	46.3	43.0	28.7

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 51.8% can do a 1-digit oral word addition problem, 41.8% can do a 1-digit oral word subtraction problem, 51.9% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Chhattisgarh: Mahasamund

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Chhattisgarh. The survey reached a total of 60 villages, 1,202 households, and 1,503 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt		
Age 4	65.6	0.0	21.3	2.1	3.6	7.4	100
Age 5	39.5	0.0	25.8	19.3	10.0	5.6	100
Age 6	7.3	0.0	8.3	65.5	17.1	1.8	100
Age 7	1.1	0.0	0.7	77.9	19.6	0.8	100
Age 8	0.0	0.0	0.3	76.7	22.6	0.4	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	7.4	86.9	5.7				100
Age 5	5.6	65.2	27.8	1.5			100
Age 6	1.8	15.6	65.0	15.5	2.1		100
Age 7	0.8	1.8	13.9	63.6	17.6	2.5	100
Age 8	0.4	0.3	2.1	21.2	58.9	17.1	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 7.4% children are not enrolled anywhere, 86.9% children are in a pre-primary class, and 5.7% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	62.5	39.6	25.5	41.5	24.0	41.1	10.0	18.9	41.1
Age 5	81.9	50.8	33.7	39.6	45.0	59.0	37.2	39.8	57.0

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 62.5% can do a sorting task, 39.6% can do a spatial awareness task, 25.5% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	68.2	40.1	38.4	42.4	17.1
Age 5	73.6	46.7	51.6	55.0	30.8
Age 6	82.1	49.1	68.5	60.4	40.2
Age 7	83.7	59.4	70.6	75.4	53.9
Age 8	88.2	69.4	83.2	77.2	62.4

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Chhattisgarh: Mahasamund

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	74.7	25.3	100
Std II	77.9	22.1	100
Std III	78.1	21.9	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	25.8	58.5	13.7	2.0	100
Std II	2.8	14.1	63.4	19.7	100
Std III	0.4	2.0	23.7	74.0	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 25.8% children are 4 and 5 years old, 58.5% are 6, 13.7% are 7, and 2% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	51.7	48.8	42.0	44.1
Std II	68.5	54.8	56.2	60.1
Std III	78.3	68.1	67.2	78.4

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 51.7% can do a seriation task, 48.8% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	62.1	29.2	4.6	4.0	100	
Std II	32.5	39.6	9.6	18.3	100	
Std III	21.3	24.2	14.0	40.4	100	80.7

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 62.1% children cannot even read letters, 29.2% can read letters but not words or higher, 4.6% can read words but not a Std I level text or higher, and 4% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	39.5	45.5	15.0	100
Std II	13.8	51.2	35.1	100
Std III	5.9	44.7	49.5	100

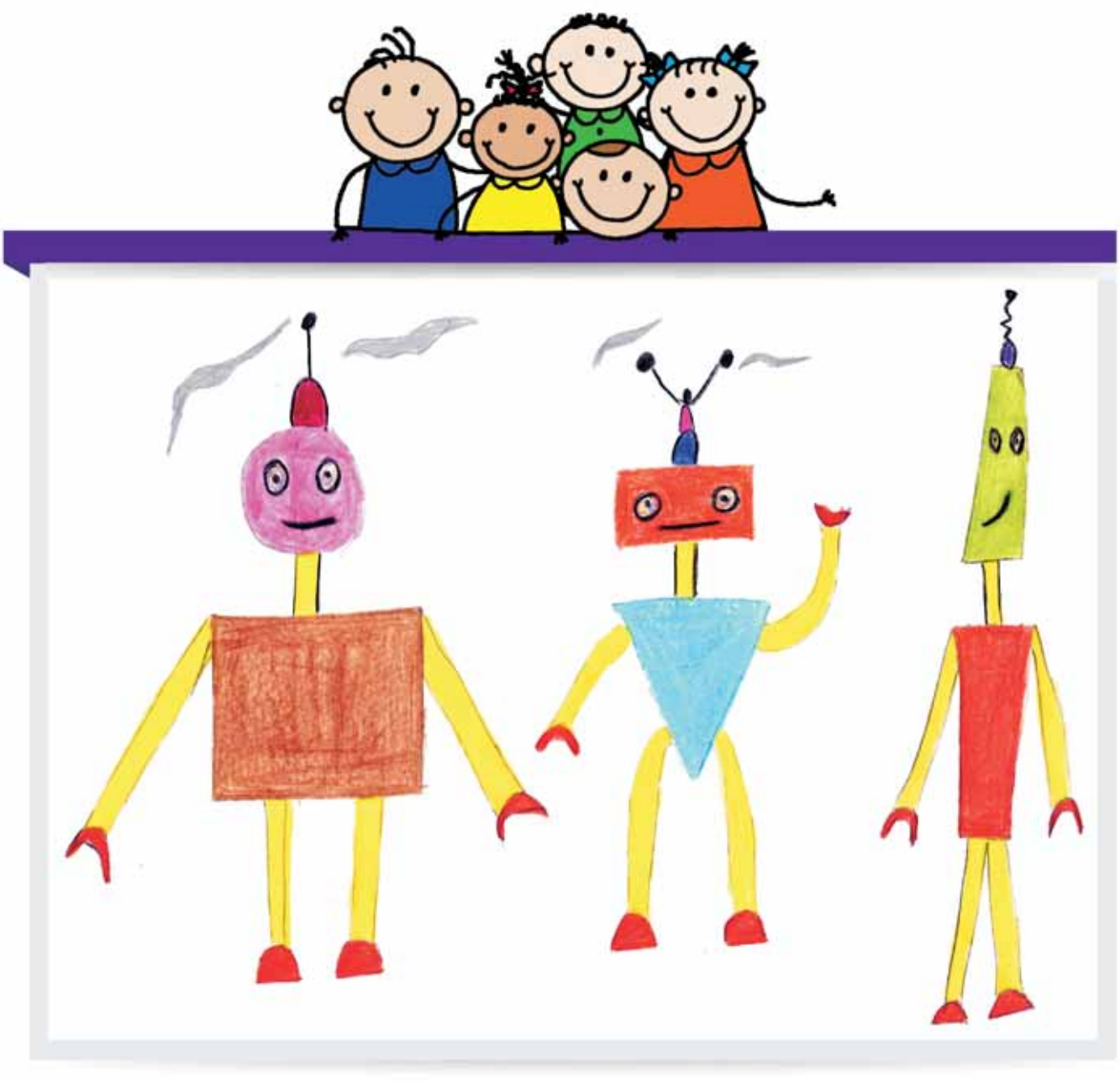
Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 39.5% children cannot even recognize numbers up to 9, 45.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 15% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	18.8	23.7	36.1	26.4	16.0	10.8	3.5	1.6
Std II	48.0	37.7	66.6	60.1	36.6	26.6	6.6	4.0
Std III	66.6	59.1	80.3	76.9	52.6	38.8	19.8	11.6

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 18.8% can do a 1-digit oral word addition problem, 23.7% can do a 1-digit oral word subtraction problem, 36.1% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.



मैंने बहुत बार रोबोट नाम की मूवी देखी है। रोबोट का काम करना मुझे बहुत अच्छा लगता है। मैं भी बहुत सारे रोबोट बनाऊँगा। मेरा सारा काम रोबोट करेगा और घर का सारा काम भी रोबोट से करवाऊँगा। मेरे घर का नाम भी रोबोट हाउस रहेगा।

Rabbani, Age 7

Gujarat: Mehsana
Haryana: Hisar
Himachal Pradesh: Kangra
Jharkhand: Ramgarh

आसमान में सूरज छोटे&छोटे तारों के बीच रहता है। सभी तारे फूलों की तरह दिखते हैं।

Bhagyashree, Age 6

Gujarat: Mehsana

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Gujarat. The survey reached a total of 60 villages, 1,200 households, and 1,442 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	90.9	0.9	5.8	0.4	0.0	2.0	100
Age 5	58.1	2.2	17.5	16.7	1.0	4.4	100
Age 6	8.1	0.0	8.9	76.2	6.6	0.3	100
Age 7	0.6	0.3	0.7	86.7	11.4	0.4	100
Age 8	0.0	0.0	0.3	89.6	9.5	0.6	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	2.0	97.6	0.4				100
Age 5	4.4	77.9	16.8	1.0			100
Age 6	0.3	17.0	69.4	13.0	0.3		100
Age 7	0.4	1.8	25.8	58.9	13.2	0.0	100
Age 8	0.6	0.3	3.7	23.1	56.6	15.7	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 2% children are not enrolled anywhere, 97.6% children are in a pre-primary class, and 0.4% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	60.0	50.8	39.4	36.8	36.9	51.5	5.0	22.0	36.7
Age 5	75.3	62.9	39.6	42.3	59.0	61.9	16.0	31.3	53.9

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 60% can do a sorting task, 50.8% can do a spatial awareness task, 39.4% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	48.9	31.6	34.8	32.2	9.6
Age 5	52.6	38.7	45.5	40.8	17.0
Age 6	63.2	43.2	51.0	48.9	25.7
Age 7	76.0	53.7	59.9	56.7	37.7
Age 8	77.5	53.3	68.2	61.2	42.8

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Gujarat: Mehsana

Annual Status of Education Report
ASER 2019 RURAL AGE 4-8
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	88.3	11.7	100
Std II	89.6	10.4	100
Std III	94.0	6.0	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	16.4	55.1	25.0	3.5	100
Std II	1.1	11.4	63.3	24.2	100
Std III	0.0	0.4	19.2	80.4	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 16.4% children are 4 and 5 years old, 55.1% are 6, 25% are 7, and 3.5% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	58.5	55.6	53.6	42.8
Std II	72.1	65.7	62.7	62.4
Std III	80.4	71.9	73.5	69.3

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 58.5% can do a seriation task, 55.6% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	38.0	38.9	12.6	10.6	100	
Std II	13.2	16.8	19.8	50.3	100	56.1
Std III	10.4	6.9	15.3	67.5	100	82.2

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 38% children cannot even read letters, 38.9% can read letters but not words or higher, 12.6% can read words but not a Std I level text or higher, and 10.6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	37.3	49.3	13.5	100
Std II	14.9	31.8	53.2	100
Std III	15.6	21.8	62.6	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 37.3% children cannot even recognize numbers up to 9, 49.3% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 13.5% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	27.3	20.3	42.2	42.1	30.4	7.3	3.7	2.1
Std II	51.0	41.1	63.7	69.2	50.0	42.0	13.7	7.8
Std III	68.8	60.1	77.0	77.4	67.4	58.4	39.3	24.0

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 27.3% can do a 1-digit oral word addition problem, 20.3% can do a 1-digit oral word subtraction problem, 42.2% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Haryana: Hisar

ASER 2019 'Early Years' was conducted in one district in Haryana. The survey reached a total of 59 villages, 1,203 households, and 1,415 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	20.3	5.6	56.9	7.7	9.1	0.5	100
Age 5	2.7	2.5	52.7	26.8	15.4	0.0	100
Age 6	1.6	0.0	28.3	28.1	42.0	0.0	100
Age 7	0.2	0.2	5.0	38.3	56.3	0.0	100
Age 8	0.3	0.0	1.0	45.7	52.6	0.3	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	0.5	82.8	13.9	2.9			100
Age 5	0.0	57.8	32.3	8.8	1.1		100
Age 6	0.0	29.8	36.4	25.5	8.3	0.0	100
Age 7	0.0	5.5	19.2	42.4	29.2	3.8	100
Age 8	0.3	1.3	5.1	22.4	45.5	25.3	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 0.5% children are not enrolled anywhere, 82.8% children are in a pre-primary class, 13.9% are in Std I, and 2.9% are in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	65.3	58.7	47.9	34.9	50.8	57.7	18.1	35.4	39.4
Age 5	83.1	81.4	70.3	50.3	67.8	78.5	44.7	60.1	64.8

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 65.3% can do a sorting task, 58.7% can do a spatial awareness task, 47.9% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	38.0	34.5	36.9	37.8	15.4
Age 5	48.5	33.6	49.8	47.0	21.3
Age 6	56.5	44.8	55.4	58.4	31.8
Age 7	65.8	52.0	61.5	67.1	44.4
Age 8	63.8	55.3	68.9	70.0	46.7

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Haryana: Hisar

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	35.9	64.1	100
Std II	37.3	62.7	100
Std III	58.4	41.6	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	43.4	30.3	20.9	5.4	100
Std II	10.2	21.1	45.4	23.4	100
Std III	1.3	8.0	36.0	54.8	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 43.4% children are 4 and 5 years old, 30.3% are 6, 20.9% are 7, and 5.4% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	80.6	67.6	74.3	62.9
Std II	85.9	77.4	75.2	79.2
Std III	89.0	81.8	83.9	82.3

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 80.6% can do a seriation task, 67.6% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	24.5	23.4	22.6	29.5	100	
Std II	8.5	15.0	18.2	58.3	100	83.6
Std III	11.5	6.8	10.8	71.0	100	89.6

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 24.5% children cannot even read letters, 23.4% can read letters but not words or higher, 22.6% can read words but not a Std I level text or higher, and 29.5% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	15.8	29.8	54.5	100
Std II	5.9	25.3	68.9	100
Std III	5.3	16.4	78.3	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 15.8% children cannot even recognize numbers up to 9, 29.8% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 54.5% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	49.8	42.1	64.4	63.4	52.0	38.3	19.3	14.3
Std II	68.4	61.5	78.6	73.5	66.8	61.9	39.3	29.9
Std III	79.0	73.2	85.4	85.5	80.4	71.7	57.9	50.9

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 49.8% can do a 1-digit oral word addition problem, 42.1% can do a 1-digit oral word subtraction problem, 64.4% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Himachal Pradesh: Kangra

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Himachal Pradesh. The survey reached a total of 60 villages, 1,076 households, and 1,334 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	9.2	18.6	70.0	0.8	0.7	0.7	100
Age 5	2.8	9.8	67.8	8.2	10.6	0.8	100
Age 6	0.0	1.3	16.8	23.2	52.7	6.0	100
Age 7	0.0	0.0	2.4	28.3	69.3	0.0	100
Age 8	0.0	0.0	0.0	33.9	66.2	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	0.7	97.5	1.8				100
Age 5	0.8	80.4	18.2	0.5			100
Age 6	6.0	18.1	46.3	29.0	0.7		100
Age 7	0.0	2.4	15.2	47.2	34.0	1.2	100
Age 8	0.0	0.0	1.0	11.8	63.7	23.6	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 0.7% children are not enrolled anywhere, 97.5% children are in a pre-primary class, and 1.8% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	75.8	67.0	37.2	34.8	38.1	72.3	21.4	42.6	43.2
Age 5	85.6	86.1	61.6	45.8	60.7	87.4	54.5	48.3	72.1

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 75.8% can do a sorting task, 67% can do a spatial awareness task, 37.2% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	80.7	56.7	62.2	58.2	39.1
Age 5	89.5	54.6	75.1	59.2	40.7
Age 6	85.9	57.9	79.8	64.6	50.3
Age 7	90.1	71.8	80.5	77.9	65.1
Age 8	91.4	80.9	88.5	88.2	75.9

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Himachal Pradesh: Kangra

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	28.6	71.5	100
Std II	28.1	71.9	100
Std III	31.4	68.7	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	26.2	54.3	18.5	1.0	100
Std II	0.4	32.5	55.0	12.1	100
Std III	0.2	0.7	37.3	61.8	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 26.2% children are 4 and 5 years old, 54.3% are 6, 18.5% are 7, and 1% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	64.4	65.4	57.6	68.1
Std II	78.8	79.4	68.4	72.6
Std III	88.1	81.3	81.2	77.5

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 64.4% can do a seriation task, 65.4% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	13.9	34.1	21.1	30.9	100	
Std II	6.1	14.2	9.5	70.2	100	77.3
Std III	3.2	12.5	7.3	77.0	100	76.9

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 13.9% children cannot even read letters, 34.1% can read letters but not words or higher, 21.1% can read words but not a Std I level text or higher, and 30.9% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	8.2	18.5	73.4	100
Std II	1.9	10.5	87.6	100
Std III	1.3	11.5	87.3	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 8.2% children cannot even recognize numbers up to 9, 18.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 73.4% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	36.8	28.4	62.7	78.3	64.8	44.9	8.7	15.8
Std II	66.1	60.0	88.4	89.3	76.6	66.2	46.1	38.7
Std III	85.1	68.2	88.5	88.1	82.2	80.9	66.2	40.7

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 36.8% can do a 1-digit oral word addition problem, 28.4% can do a 1-digit oral word subtraction problem, 62.7% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Jharkhand: Ramgarh

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Jharkhand. The survey reached a total of 59 villages, 1,189 households, and 1,456 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	36.3	5.5	40.4	6.5	0.9	10.4	100
Age 5	16.9	5.9	44.6	24.9	4.8	3.0	100
Age 6	2.6	2.8	44.9	38.4	10.7	0.7	100
Age 7	1.2	2.3	23.2	50.3	22.7	0.3	100
Age 8	0.3	0.5	10.5	48.9	38.7	1.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution
% Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	10.1	81.8	7.7	0.4			100
Age 5	3.0	67.0	25.0	5.1			100
Age 6	0.7	49.9	27.2	17.5	4.7		100
Age 7	0.3	26.7	22.1	32.2	14.4	4.4	100
Age 8	1.0	11.3	17.9	25.0	23.3	21.5	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 10.1% children are not enrolled anywhere, 81.8% children are in a pre-primary class, 7.7% are in Std I, and 0.4% are in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	69.8	50.0	44.2	35.5	33.4	49.7	19.7	26.8	44.3
Age 5	80.6	70.1	55.7	46.0	51.8	65.1	42.3	57.1	61.2

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 69.8% can do a sorting task, 50% can do a spatial awareness task, 44.2% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	63.1	36.9	33.3	42.9	15.0
Age 5	74.4	44.4	51.6	54.5	29.2
Age 6	84.3	55.2	61.9	68.4	42.6
Age 7	83.9	58.4	66.2	74.4	48.7
Age 8	87.1	66.2	78.9	77.8	57.7

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Jharkhand: Ramgarh

Annual Status of Education Report
ASER 2019 RURAL AGE 4-8
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	56.4	43.6	100
Std II	69.5	30.5	100
Std III	74.9	25.1	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	31.4	24.6	24.4	19.6	100
Std II	5.5	19.1	42.3	33.2	100
Std III	1.5	6.6	34.9	57.1	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 31.4% children are 4 and 5 years old, 24.6% are 6, 24.4% are 7, and 19.6% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	67.0	51.6	61.3	59.4
Std II	79.8	60.9	60.1	68.9
Std III	83.9	66.6	73.9	73.1

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 67% can do a seriation task, 51.6% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	47.4	26.5	7.2	18.9	100	Data Insufficient
Std II	27.0	36.7	9.5	26.8	100	
Std III	23.0	36.1	9.5	31.4	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 47.4% children cannot even read letters, 26.5% can read letters but not words or higher, 7.2% can read words but not a Std I level text or higher, and 18.9% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	37.7	22.1	40.2	100
Std II	12.0	36.7	51.3	100
Std III	6.4	43.5	50.1	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 37.7% children cannot even recognize numbers up to 9, 22.1% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 40.2% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	44.4	37.3	52.9	48.5	33.8	33.6	8.6	7.3
Std II	59.8	43.9	71.5	66.5	54.3	39.9	19.5	12.8
Std III	67.2	61.9	78.3	76.2	62.4	43.5	29.5	19.1

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 44.4% can do a 1-digit oral word addition problem, 37.3% can do a 1-digit oral word subtraction problem, 52.9% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

मेरी किताब में अलग&अलग आकार हैं और मेरे घर में अलग&अलग आकार के खिलौने हैं।

Ovee, Age 4

Karnataka: Chamarajanagar
Kerala: Thrissur
Madhya Pradesh: Bhopal
Madhya Pradesh: Satna
Maharashtra: Nagpur

भगवान के ऊपर फूल चढ़ाया जाता है।

Kritikesh Shaurya, Age 4

Karnataka: Chamarajanagar

ASER 2019 'Early Years' was conducted in one district in Karnataka. The survey reached a total of 60 villages, 1,192 households, and 1,378 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt		
Age 4	58.2	0.9	35.1	1.1	1.8	3.0	100
Age 5	44.6	0.8	49.8	3.0	1.4	0.4	100
Age 6	9.2	0.0	21.2	41.4	27.8	0.4	100
Age 7	1.1	0.0	1.3	58.1	39.5	0.0	100
Age 8	0.0	0.0	0.0	60.5	38.8	0.7	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	3.0	94.2	2.9				100
Age 5	0.4	94.6	5.1				100
Age 6	0.4	30.4	65.7	3.6			100
Age 7	0.0	2.4	29.9	65.8	1.9		100
Age 8	0.7	0.0	3.6	42.9	52.5	0.4	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 3% children are not enrolled anywhere, 94.2% children are in a pre-primary class, and 2.9% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	77.2	59.6	52.6	40.7	48.0	62.8	8.9	19.6	43.7
Age 5	86.6	68.3	59.0	49.4	59.1	70.3	18.8	42.2	62.0

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 77.2% can do a sorting task, 59.6% can do a spatial awareness task, 52.6% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	63.2	68.8	40.1	47.8	27.0
Age 5	79.2	72.7	55.9	62.6	40.3
Age 6	81.9	78.0	63.8	71.4	53.8
Age 7	90.5	86.0	78.5	82.5	69.2
Age 8	87.1	86.6	78.2	84.4	70.7

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Karnataka: Chamarajanagar

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	59.5	40.5	100
Std II	60.0	40.0	100
Std III	61.3	38.7	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	3.7	63.6	29.2	3.6	100
Std II	1.4	2.8	56.9	38.9	100
Std III	0.0	0.6	3.3	96.1	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 3.7% children are 4 and 5 years old, 63.6% are 6, 29.2% are 7, and 3.6% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	71.9	55.8	61.4	44.9
Std II	85.5	69.5	75.5	58.9
Std III	88.1	68.7	75.9	71.2

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 71.9% can do a seriation task, 55.8% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	40.5	38.4	15.4	5.6	100	Data Insufficient
Std II	16.8	25.5	31.3	26.5	100	
Std III	10.6	15.2	25.4	48.9	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 40.5% children cannot even read letters, 38.4% can read letters but not words or higher, 15.4% can read words but not a Std I level text or higher, and 5.6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	20.3	42.7	37.1	100
Std II	6.7	15.0	78.4	100
Std III	3.2	9.2	87.6	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 20.3% children cannot even recognize numbers up to 9, 42.7% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 37.1% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	36.0	30.0	56.4	49.1	37.1	23.4	6.5	3.9
Std II	57.3	51.5	82.0	76.8	63.0	59.2	23.6	14.9
Std III	71.7	64.9	87.6	85.5	75.9	70.1	41.1	29.5

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 36% can do a 1-digit oral word addition problem, 30% can do a 1-digit oral word subtraction problem, 56.4% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Kerala: Thrissur

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Kerala. The survey reached a total of 49 villages, 1,223 households, and 1,417 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	14.9	36.2	44.8	0.9	0.3	0.0	3.0	100
Age 5	0.5	34.3	55.9	3.6	4.7	0.0	1.1	100
Age 6	0.0	8.7	10.2	43.2	37.5	0.0	0.4	100
Age 7	0.0	0.0	0.0	50.6	48.5	0.5	0.5	100
Age 8	0.0	0.0	0.0	56.9	42.7	0.0	0.4	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	3.0	95.5	1.5				100
Age 5	1.1	89.9	8.0	1.0			100
Age 6	0.4	18.9	71.9	8.8	0.0		100
Age 7	0.5	0.0	17.9	70.5	11.1	0.2	100
Age 8	0.4	0.0	1.1	22.8	65.7	9.9	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 3% children are not enrolled anywhere, 95.5% children are in a pre-primary class, and 1.5% are in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	89.4	45.7	45.5	56.5	51.4	65.2	29.6	28.1	52.2
Age 5	97.7	59.3	52.7	58.5	73.2	81.5	45.2	51.5	78.3

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 89.4% can do a sorting task, 45.7% can do a spatial awareness task, 45.5% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	92.0	82.4	84.3	71.7	65.0
Age 5	95.3	85.4	90.7	81.6	76.6
Age 6	96.0	89.7	93.6	88.1	83.6
Age 7	97.3	92.1	96.2	91.0	87.9
Age 8	94.6	93.5	94.8	97.4	91.6

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Kerala: Thrissur

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	49.1	50.9	100
Std II	50.9	49.1	100
Std III	63.3	36.7	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	8.0	71.7	19.1	1.2	100
Std II	1.7	8.0	69.2	21.1	100
Std III	0.0	0.0	15.1	84.9	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 8% children are 4 and 5 years old, 71.7% are 6, 19.1% are 7, and 1.2% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	79.6	78.7	76.0	61.3
Std II	92.9	91.0	86.6	76.4
Std III	96.4	94.4	94.6	83.6

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 79.6% can do a seriation task, 78.7% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	6.9	35.2	45.2	12.7	100	
Std II	4.6	11.1	29.5	54.8	100	90.0
Std III	1.2	7.4	17.9	73.6	100	93.4

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 6.9% children cannot even read letters, 35.2% can read letters but not words or higher, 45.2% can read words but not a Std I level text or higher, and 12.7% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	2.1	18.7	79.3	100
Std II	1.0	4.9	94.2	100
Std III	1.1	2.1	96.8	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 2.1% children cannot even recognize numbers up to 9, 18.7% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 79.3% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	43.6	46.0	77.3	62.9	56.2	49.9	3.8	1.4
Std II	64.7	62.1	93.3	86.0	73.5	77.5	35.5	16.2
Std III	73.8	72.5	95.7	93.5	81.1	86.9	67.1	33.3

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 43.6% can do a 1-digit oral word addition problem, 46% can do a 1-digit oral word subtraction problem, 77.3% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Madhya Pradesh: Bhopal

Annual Status of Education Report
असर ASER 2019 RURAL AGE 4-8
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in two districts in Madhya Pradesh, one of which is Bhopal. The survey reached a total of 60 villages, 1,208 households, and 1,568 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	24.4	1.1	41.1	9.4	6.2	0.0	17.9	100
Age 5	12.9	1.7	46.0	22.5	10.5	0.0	6.5	100
Age 6	3.5	0.9	27.4	36.0	28.4	0.3	3.5	100
Age 7	0.0	0.0	12.8	43.2	43.0	0.2	0.7	100
Age 8	0.6	0.0	3.2	47.4	48.5	0.0	0.3	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	17.7	66.5	13.9	1.9			100
Age 5	6.5	60.7	25.0	5.8	2.0		100
Age 6	3.5	31.8	40.9	19.6	4.2		100
Age 7	0.7	12.8	29.1	36.8	15.6	5.1	100
Age 8	0.3	3.8	9.7	29.5	37.7	19.1	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 17.7% children are not enrolled anywhere, 66.5% children are in a pre-primary class, 13.9% are in Std I, and 1.9% in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	59.3	52.2	22.1	38.4	25.7	41.4	21.0	13.7	34.1
Age 5	70.9	67.0	34.8	46.5	34.9	55.6	31.9	39.4	53.4

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 59.3% can do a sorting task, 52.2% can do a spatial awareness task, 22.1% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	60.1	35.1	40.5	40.6	15.8
Age 5	75.4	45.6	50.7	51.5	29.3
Age 6	77.1	44.8	60.1	57.8	32.1
Age 7	83.0	56.7	72.5	68.9	45.3
Age 8	82.3	60.3	72.4	71.4	49.8

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Madhya Pradesh: Bhopal

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	50.3	49.7	100
Std II	48.4	51.6	100
Std III	54.9	45.2	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	29.0	34.5	27.3	9.2	100
Std II	6.6	19.6	40.6	33.2	100
Std III	3.7	4.1	26.3	65.9	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 29% children are 4 and 5 years old, 34.5% are 6, 27.3% are 7, and 9.2% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	50.3	49.7	41.6	53.8
Std II	66.4	56.6	48.8	64.7
Std III	80.5	59.8	62.8	74.2

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 50.3% can do a seriation task, 49.7% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	54.9	35.1	4.0	6.0	100	Data Insufficient
Std II	32.9	44.7	8.2	14.2	100	
Std III	22.7	42.2	9.8	25.3	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 54.9% children cannot even read letters, 35.1% can read letters but not words or higher, 4% can read words but not a Std I level text or higher, and 6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	40.2	30.3	29.6	100
Std II	22.3	33.0	44.8	100
Std III	8.6	34.2	57.2	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 40.2% children cannot even recognize numbers up to 9, 30.3% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 29.6% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	27.1	29.3	44.5	35.1	23.9	21.5	4.9	2.1
Std II	47.4	41.5	63.3	53.7	34.9	31.2	11.7	9.1
Std III	67.5	47.6	79.3	70.8	54.2	50.0	29.1	18.2

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 27.1% can do a 1-digit oral word addition problem, 29.3% can do a 1-digit oral word subtraction problem, 44.5% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Madhya Pradesh: Satna

Annual Status of Education Report
असर ASER 2019 RURAL AGE 4-8
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in two districts in Madhya Pradesh, one of which is Satna. The survey reached a total of 60 villages, 1,097 households, and 1,365 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt		
Age 4	40.1	1.8	32.5	4.1	4.3	17.2	100
Age 5	19.5	0.3	27.9	31.5	13.4	7.4	100
Age 6	4.4	0.0	15.5	45.4	32.4	2.3	100
Age 7	0.3	0.0	4.7	62.5	31.1	1.4	100
Age 8	0.8	0.0	0.3	63.0	35.6	0.4	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	17.1	74.5	7.0	1.4			100
Age 5	7.4	47.7	40.5	4.4			100
Age 6	2.3	19.8	47.8	21.5	7.8	0.8	100
Age 7	1.4	4.9	17.1	42.8	28.9	4.9	100
Age 8	0.4	1.0	6.8	14.8	49.7	27.4	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 17.1% children are not enrolled anywhere, 74.5% children are in a pre-primary class, 7% are in Std I, and 1.4% in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	60.0	49.0	29.5	36.1	28.6	49.1	18.4	28.6	38.9
Age 5	72.5	59.1	36.0	40.5	39.0	58.1	29.0	48.6	53.9

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 60% can do a sorting task, 49% can do a spatial awareness task, 29.5% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	44.3	31.1	30.8	36.5	10.0
Age 5	57.7	32.1	31.5	34.8	12.6
Age 6	60.1	41.2	46.7	51.7	27.4
Age 7	69.1	42.3	52.4	57.4	29.5
Age 8	75.5	50.7	59.7	67.0	35.1

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Madhya Pradesh: Satna

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	57.1	43.0	100
Std II	65.1	34.9	100
Std III	67.2	32.8	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	42.2	37.3	15.0	5.5	100
Std II	6.9	23.8	52.2	17.1	100
Std III	0.4	8.4	35.3	56.0	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 42.2% children are 4 and 5 years old, 37.3% are 6, 15% are 7, and 5.5% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	49.8	47.5	45.1	42.8
Std II	65.8	55.4	50.9	59.2
Std III	73.9	64.8	54.7	68.8

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 49.8% can do a seriation task, 47.5% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	44.4	42.0	3.0	10.6	100	Data Insufficient
Std II	26.8	48.7	4.7	19.8	100	
Std III	16.0	35.1	10.5	38.4	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 44.4% children cannot even read letters, 42% can read letters but not words or higher, 3% can read words but not a Std I level text or higher, and 10.6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	44.9	30.8	24.3	100
Std II	24.2	40.9	35.0	100
Std III	10.4	32.7	56.9	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 44.9% children cannot even recognize numbers up to 9, 30.8% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 24.3% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	27.7	25.2	36.4	31.1	25.4	16.3	8.9	6.4
Std II	40.7	33.7	55.0	49.8	39.7	27.1	16.1	7.4
Std III	60.6	51.6	72.9	65.3	55.0	45.8	31.1	22.8

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 27.7% can do a 1-digit oral word addition problem, 25.2% can do a 1-digit oral word subtraction problem, 36.4% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Maharashtra: Nagpur

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Maharashtra. The survey reached a total of 60 villages, 1,212 households, and 1,474 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	32.3	6.9	58.3	0.9	0.4	0.0	1.2	100
Age 5	30.8	3.2	50.7	6.7	4.8	0.0	3.8	100
Age 6	5.4	1.6	10.6	51.9	30.1	0.4	0.0	100
Age 7	0.2	0.0	1.4	61.8	36.6	0.0	0.0	100
Age 8	0.0	0.0	0.4	64.9	34.3	0.0	0.5	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	1.2	97.5	1.3				100
Age 5	3.8	84.7	9.4	2.0			100
Age 6	0.0	17.9	64.1	14.9	3.1		100
Age 7	0.0	1.6	23.2	54.9	19.4	1.0	100
Age 8	0.5	0.4	1.8	19.4	52.0	26.0	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 1.2% children are not enrolled anywhere, 97.5% children are in a pre-primary class, and 1.3% in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	79.1	60.7	37.1	44.8	36.3	62.2	22.7	32.4	50.3
Age 5	89.4	74.9	51.3	48.3	55.6	73.1	41.6	53.3	60.2

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 79.1% can do a sorting task, 60.7% can do a spatial awareness task, 37.1% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	72.4	44.7	45.0	44.8	26.0
Age 5	77.4	47.6	50.1	48.1	30.3
Age 6	83.5	60.5	66.1	68.2	46.2
Age 7	83.9	57.5	68.2	67.5	47.5
Age 8	88.6	69.4	73.2	75.9	60.1

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Maharashtra: Nagpur

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	58.7	41.3	100
Std II	64.9	35.2	100
Std III	64.5	35.5	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	11.9	61.4	24.9	1.8	100
Std II	2.8	15.0	61.4	20.8	100
Std III	0.0	3.3	27.3	69.4	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 11.9% children are 4 and 5 years old, 61.4% are 6, 24.9% are 7, and 1.8% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	68.9	59.6	44.8	67.2
Std II	78.0	64.7	54.9	78.4
Std III	90.8	76.1	74.2	91.1

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 68.9% can do a seriation task, 59.6% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	21.1	53.2	14.0	11.7	100	
Std II	13.4	24.5	18.0	44.1	100	73.6
Std III	3.1	17.1	10.7	69.1	100	84.2

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 21.1% children cannot even read letters, 53.2% can read letters but not words or higher, 14% can read words but not a Std I level text or higher, and 11.7% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	16.9	36.5	46.5	100
Std II	8.7	20.3	71.0	100
Std III	1.6	12.2	86.2	100

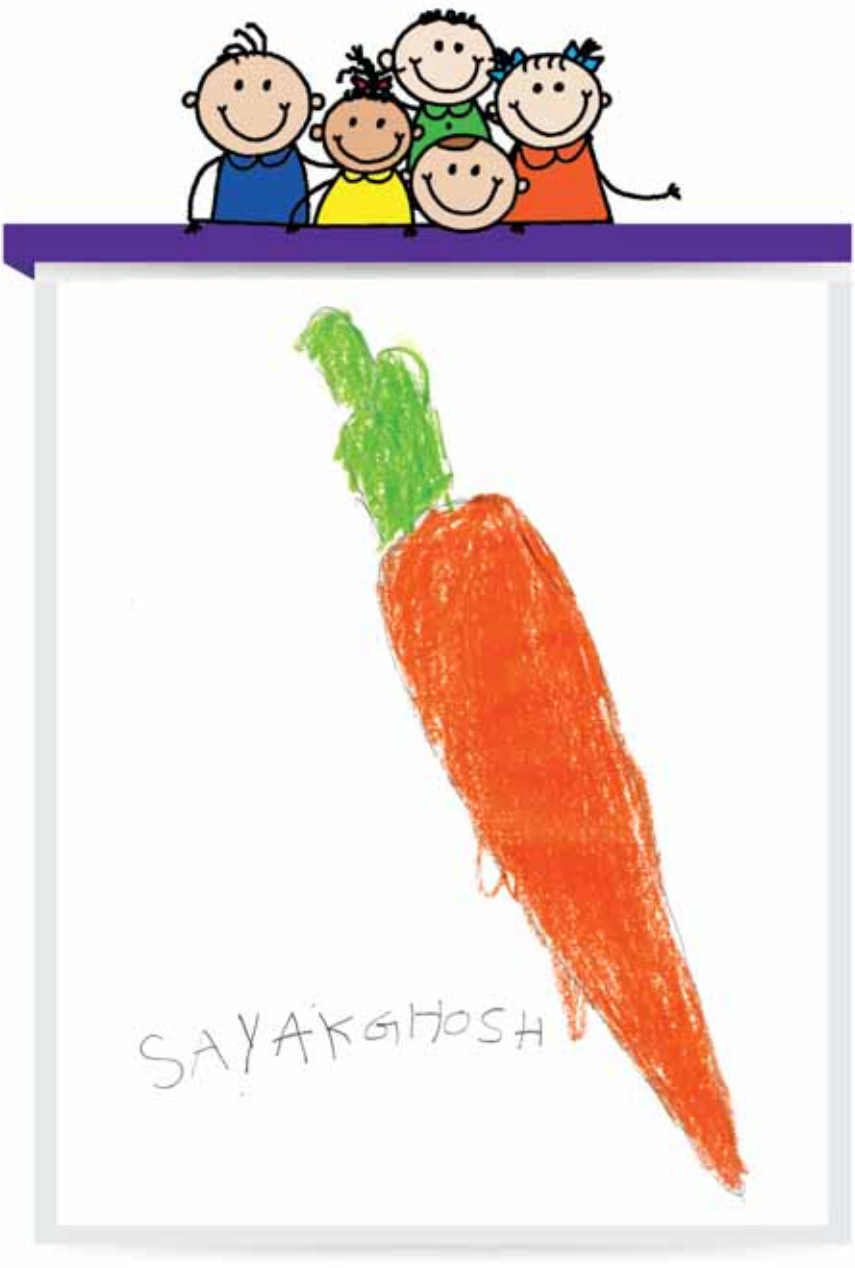
Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 16.9% children cannot even recognize numbers up to 9, 36.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 46.5% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	31.1	31.9	45.9	52.0	34.4	26.1	4.8	2.0
Std II	59.2	48.2	73.8	65.4	55.2	43.6	17.8	9.9
Std III	73.9	62.1	90.5	88.4	78.1	70.8	46.4	32.3

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 31.1% can do a 1-digit oral word addition problem, 31.9% can do a 1-digit oral word subtraction problem, 45.9% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.



I like the color orange and I love to eat carrots. Once I saw carrots growing on our land. Sometimes, my father buys carrots from the market and I enjoy eating them.

Sayak, Age 4

Manipur: Bishnupur
Meghalaya: East Khasi Hills
Nagaland: Dimapur
Odisha: Khordha

मैंने घर का चित्र बनाया है। हमें घर को सुंदर रखने के लिए साफ़–सुथरा रखना चाहिए। कूड़ा–कचरा हमेशा कूड़ेदान में ही डालना चाहिए। गंदगी से बीमारी होती है।

Tanish, Age 8

Manipur: Bishnupur

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Manipur. The survey reached a total of 35 villages, 1,202 households, and 1,305 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	13.2	8.5	55.1	2.2	2.2	0.0	18.9	100
Age 5	1.2	4.3	71.9	1.6	18.6	0.0	2.5	100
Age 6	0.6	0.6	62.5	12.7	22.9	0.0	0.8	100
Age 7	0.1	0.4	31.6	3.8	63.5	0.2	0.4	100
Age 8	0.0	0.2	11.3	4.5	83.4	0.5	0.2	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	17.3	70.5	4.4	7.8	0.0		100
Age 5	2.3	71.4	17.7	8.1	0.5		100
Age 6	0.8	60.3	21.2	17.0	0.8		100
Age 7	0.4	31.3	41.0	23.7	3.6		100
Age 8	0.2	11.4	24.0	35.0	17.4	12.0	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 17.3% children are not enrolled anywhere, 70.5% children are in a pre-primary class, 4.4% are in Std I, 7.8% are in Std II, and no children are enrolled in Std III or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	71.4	37.6	47.7	46.6	48.0	56.2	1.0	20.1	39.5
Age 5	92.9	64.0	73.5	56.3	84.2	70.2	0.6	48.4	76.7

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 71.4% can do a sorting task, 37.6% can do a spatial awareness task, 47.7% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	39.3	60.2	63.2	58.1	19.7
Age 5	46.5	80.2	86.7	80.3	34.7
Age 6	56.4	70.3	75.4	89.8	50.6
Age 7	51.2	81.6	77.9	92.6	39.8
Age 8	50.0	82.9	94.7	94.5	47.2

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Manipur: Bishnupur

Annual Status of Education Report
ASER 2019 RURAL AGE 4-8
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	13.9	86.1	100
Std II	7.0	93.0	100
Std III			

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	17.8	19.7	41.4	21.2	100
Std II	1.8	17.1	33.9	47.1	100
Std III					

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 17.8% children are 4 and 5 years old, 19.7% are 6, 41.4% are 7, and 21.2% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	91.0	79.8	94.2	4.5
Std II	97.0	91.2	96.1	5.4
Std III				

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 91% can do a seriation task, 79.8% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	7.4	53.6	21.3	17.7	100	Data Insufficient
Std II	1.0	37.6	41.8	19.6	100	
Std III						

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 7.4% children cannot even read letters, 53.6% can read letters but not words or higher, 21.3% can read words but not a Std I level text or higher, and 17.7% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	4.0	10.6	85.4	100
Std II	0.0	12.9	87.1	100
Std III				

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 4% children cannot even recognize numbers up to 9, 10.6% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 85.4% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	78.7	31.4	93.9	81.7	63.8	69.0	21.3	17.3
Std II	58.5	46.5	97.3	84.0	70.1	83.1	39.0	23.0
Std III								

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 78.7% can do a 1-digit oral word addition problem, 31.4% can do a 1-digit oral word subtraction problem, 93.9% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Meghalaya: East Khasi Hills

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Meghalaya. The survey reached a total of 60 villages, 1,137 households, and 1,448 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	7.8	15.0	51.1	0.4	1.7	0.0	23.9	100
Age 5	0.3	19.4	63.1	2.6	3.9	0.0	10.7	100
Age 6	0.7	15.9	46.2	9.5	21.9	0.0	5.8	100
Age 7	0.0	8.5	20.4	22.4	47.6	0.0	1.1	100
Age 8	0.4	5.3	5.9	22.6	62.7	0.2	2.8	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	19.0	59.0	5.2	16.5	0.3		100
Age 5	8.4	65.8	9.8	16.0	0.0		100
Age 6	4.7	51.0	26.0	17.8	0.5		100
Age 7	1.0	27.0	39.0	30.1	2.9		100
Age 8	2.7	11.1	26.4	40.2	17.5	2.2	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 19% children are not enrolled anywhere, 59% children are in a pre-primary class, 5.2% are in Std I, 16.5% are in Std II, and 0.3% in Std III or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	61.3	26.7	32.9	38.4	32.9	47.6	11.8	17.7	39.9
Age 5	79.2	44.6	36.3	49.2	49.6	67.6	15.7	36.2	71.5

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 61.3% can do a sorting task, 26.7% can do a spatial awareness task, 32.9% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	66.4	45.1	54.8	54.8	30.0
Age 5	76.6	50.0	64.6	57.8	38.6
Age 6	80.3	53.1	65.1	60.5	41.2
Age 7	86.2	74.4	78.0	76.9	61.7
Age 8	86.0	72.8	79.6	77.7	64.6

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Meghalaya: East Khasi Hills

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	32.0	68.1	100
Std II	26.1	73.9	100
Std III			

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	3.6	25.0	43.7	27.8	100
Std II	3.9	6.4	38.3	51.4	100
Std III					

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 3.6% children are 4 and 5 years old, 25% are 6, 43.7% are 7, and 27.8% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	62.4	56.0	66.2	49.3
Std II	82.2	67.1	78.6	64.3
Std III				

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 62.4% can do a seriation task, 56% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	10.9	28.4	36.0	24.7	100	
Std II	8.4	13.2	30.5	48.0	100	Data Insufficient
Std III						

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 10.9% children cannot even read letters, 28.4% can read letters but not words or higher, 36% can read words but not a Std I level text or higher, and 24.7% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	6.7	17.5	75.8	100
Std II	5.7	8.4	85.9	100
Std III				

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 6.7% children cannot even recognize numbers up to 9, 17.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 75.8% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	26.0	30.9	72.4	70.5	54.8	42.5	11.7	7.0
Std II	46.6	47.4	86.3	82.2	68.9	65.2	19.3	11.1
Std III								

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 26% can do a 1-digit oral word addition problem, 30.9% can do a 1-digit oral word subtraction problem, 72.4% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Nagaland: Dimapur

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Nagaland. The survey reached a total of 56 villages, 995 households, and 1,172 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	0.5	18.7	60.9	0.0	1.2	18.7	100
Age 5	0.5	11.5	79.2	0.0	5.9	2.9	100
Age 6	0.5	14.6	38.5	3.8	42.0	0.7	100
Age 7	0.4	5.8	7.6	15.8	69.3	1.2	100
Age 8	0.0	3.7	0.8	22.5	71.9	1.2	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	14.7	63.3	1.8	18.9	1.3		100
Age 5	2.3	72.3	5.8	19.1	0.4		100
Age 6	0.6	47.3	38.4	13.8	0.0		100
Age 7	1.1	13.5	45.7	38.3	1.5		100
Age 8	1.2	4.4	16.1	47.2	29.3	1.9	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 14.7% children are not enrolled anywhere, 63.3% children are in a pre-primary class, 1.8% are in Std I, 18.9% are in Std II, and 1.3% in Std III or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	79.0	40.9	42.2	40.9	60.3	62.8	5.1	36.8	43.6
Age 5	89.8	59.9	52.4	46.8	77.3	77.0	13.7	64.5	69.5

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 79% can do a sorting task, 40.9% can do a spatial awareness task, 42.2% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	83.3	63.1	73.6	71.2	51.5
Age 5	87.7	72.7	82.7	77.0	65.9
Age 6	88.4	75.0	86.3	81.9	69.7
Age 7	89.9	79.8	87.3	90.1	76.6
Age 8	88.6	77.2	87.9	84.7	75.5

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Nagaland: Dimapur

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	19.1	80.9	100
Std II	19.7	80.4	100
Std III			

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	4.0	36.9	43.7	15.4	100
Std II	0.5	3.0	44.2	52.4	100
Std III					

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 4% children are 4 and 5 years old, 36.9% are 6, 43.7% are 7, and 15.4% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	78.4	74.7	84.5	33.3
Std II	87.6	77.6	89.3	36.2
Std III				

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 78.4% can do a seriation task, 74.7% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	4.6	29.9	43.3	22.2	100	
Std II	0.5	16.2	30.9	52.3	100	83.1
Std III						

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 4.6% children cannot even read letters, 29.9% can read letters but not words or higher, 43.3% can read words but not a Std I level text or higher, and 22.2% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	0.9	8.9	90.1	100
Std II	0.0	7.0	93.0	100
Std III				

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 0.9% children cannot even recognize numbers up to 9, 8.9% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 90.1% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	54.9	56.0	85.4	69.8	60.7	64.1	13.6	8.1
Std II	73.8	65.7	91.2	87.6	80.6	73.8	37.6	24.4
Std III								

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 54.9% can do a 1-digit oral word addition problem, 56% can do a 1-digit oral word subtraction problem, 85.4% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Odisha: Khordha

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Odisha. The survey reached a total of 60 villages, 1,159 households, and 1,252 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	63.1	1.8	28.5	1.7	2.4	0.0	2.5	100
Age 5	37.3	1.3	37.3	14.5	7.5	0.0	2.1	100
Age 6	9.4	1.5	22.0	49.4	17.6	0.0	0.3	100
Age 7	1.4	1.3	2.8	60.0	33.3	0.3	1.0	100
Age 8	0.0	0.0	0.3	71.0	28.8	0.0	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Other' includes children going to any other kind of school.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	2.4	91.8	5.8				100
Age 5	2.1	75.4	20.0	2.5			100
Age 6	0.3	32.7	58.1	8.0	1.0		100
Age 7	1.0	5.4	35.2	48.7	9.7	0.0	100
Age 8	0.0	0.3	4.5	27.7	54.7	12.8	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 2.4% children are not enrolled anywhere, 91.8% children are in a pre-primary class, and 5.8% in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	73.6	55.1	40.6	31.0	29.9	66.2	21.1	30.7	41.3
Age 5	89.3	72.1	55.7	45.6	43.4	79.5	36.3	60.0	65.4

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 73.6% can do a sorting task, 55.1% can do a spatial awareness task, 40.6% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	57.6	48.1	48.4	53.9	35.9
Age 5	71.8	60.7	67.0	63.1	48.4
Age 6	74.9	66.5	68.5	74.1	53.0
Age 7	79.8	70.3	76.1	82.5	61.6
Age 8	82.8	74.6	80.8	84.7	68.0

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Odisha: Khordha

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	67.3	32.7	100
Std II	63.5	36.5	100
Std III	75.7	24.3	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	16.4	47.3	31.9	4.4	100
Std II	3.2	8.2	54.7	34.0	100
Std III	0.0	1.3	14.1	84.6	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 16.4% children are 4 and 5 years old, 47.3% are 6, 31.9% are 7, and 4.4% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	73.6	64.8	57.5	66.0
Std II	88.4	75.1	69.6	81.3
Std III	89.7	84.3	74.2	86.5

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 73.6% can do a seriation task, 64.8% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	23.1	26.1	14.0	36.8	100	91.3
Std II	10.8	11.2	22.5	55.5	100	92.2
Std III	7.3	4.8	7.5	80.4	100	92.7

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 23.1% children cannot even read letters, 26.1% can read letters but not words or higher, 14% can read words but not a Std I level text or higher, and 36.8% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	25.2	29.9	45.0	100
Std II	6.8	31.5	61.7	100
Std III	2.6	14.8	82.6	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 25.2% children cannot even recognize numbers up to 9, 29.9% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 45% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	52.3	46.4	64.2	62.5	53.3	36.5	22.2	16.2
Std II	78.7	66.4	83.7	84.9	74.7	52.5	48.2	36.3
Std III	86.8	79.8	95.5	89.5	86.7	78.4	67.3	51.3

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 52.3% can do a 1-digit oral word addition problem, 46.4% can do a 1-digit oral word subtraction problem, 64.2% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

मुझे पहाड़ बहुत पसंद हैं। मैं अपना घर पहाड़ पर बनाऊँगा। इस चित्र में मेरा घर है। मैं खिड़की पर धूप सेक रहा हूँ। पहाड़ों पर सफ़ेद&सफ़ेद बर्फ भी गिरी हुई है।

Shivaansh, Age 5

Punjab: Bathinda
Rajasthan: Ajmer
Tamil Nadu: Vellore
Telangana: Karimnagar

मैंने फूलों का एक बगीचा बनाया है जिसमें रंग&बिरंगे फूल हैं। तितलियाँ उड़ रही हैं, बादल छाए हैं और बारिश होने वाली है। रंग&बिरंगे फूल देखकर हमें खुशी होती है।

Bhavya Chandel, Age 6

Punjab: Bathinda

ASER 2019 'Early Years' was conducted in one district in Punjab. The survey reached a total of 60 villages, 1,207 households, and 1,468 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt		
Age 4	5.3	20.9	61.6	7.7	1.9	2.7	100
Age 5	2.0	10.6	49.6	23.4	14.1	0.4	100
Age 6	0.0	1.3	23.0	30.0	45.8	0.0	100
Age 7	0.0	0.3	3.1	41.2	55.3	0.2	100
Age 8	0.0	0.9	0.6	44.5	53.7	0.3	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	2.7	87.7	6.1	3.5			100
Age 5	0.4	62.3	30.7	5.0	1.7		100
Age 6	0.0	24.2	45.6	26.1	4.2		100
Age 7	0.2	3.3	23.6	44.4	23.8	4.8	100
Age 8	0.3	1.4	4.3	23.5	41.2	29.3	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 2.7% children are not enrolled anywhere, 87.7% children are in a pre-primary class, 6.1% are in Std I, and 3.5% in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	81.2	64.5	44.1	48.8	41.5	57.8	14.4	40.7	48.0
Age 5	88.0	79.2	54.1	58.7	64.6	74.8	36.1	56.9	59.6

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 81.2% can do a sorting task, 64.5% can do a spatial awareness task, 44.1% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	66.2	39.2	40.9	43.6	20.0
Age 5	76.7	46.3	55.7	53.4	30.1
Age 6	83.7	59.4	68.9	71.2	48.9
Age 7	81.1	68.4	76.0	76.7	59.0
Age 8	81.1	64.3	74.7	81.8	60.3

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Punjab: Bathinda

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	40.9	59.2	100
Std II	40.3	59.7	100
Std III	54.4	45.6	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	36.7	34.8	24.5	4.0	100
Std II	8.0	20.8	48.9	22.4	100
Std III	2.2	4.7	36.9	56.2	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 36.7% children are 4 and 5 years old, 34.8% are 6, 24.5% are 7, and 4% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	61.1	65.5	58.0	44.6
Std II	78.5	75.6	69.6	65.0
Std III	89.8	78.5	70.9	76.6

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 61.1% can do a seriation task, 65.5% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	25.5	40.9	22.8	10.8	100	
Std II	10.6	18.3	19.5	51.6	100	85.0
Std III	4.6	15.5	7.5	72.4	100	94.7

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 25.5% children cannot even read letters, 40.9% can read letters but not words or higher, 22.8% can read words but not a Std I level text or higher, and 10.8% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	20.4	27.4	52.2	100
Std II	5.3	16.4	78.3	100
Std III	3.2	9.7	87.1	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 20.4% children cannot even recognize numbers up to 9, 27.4% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 52.2% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	31.5	32.0	60.7	60.8	49.3	35.5	6.5	2.3
Std II	60.4	58.8	81.7	84.4	74.2	62.4	39.7	29.8
Std III	77.3	76.1	91.4	89.4	83.9	76.5	65.0	45.4

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 31.5% can do a 1-digit oral word addition problem, 32% can do a 1-digit oral word subtraction problem, 60.7% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Rajasthan: Ajmer

Annual Status of Education Report
ASER 2019 RURAL AGE 4-8
असर ASER 2019
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Rajasthan. The survey reached a total of 60 villages, 1,191 households, and 1,660 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	18.9	1.9	36.4	12.1	8.9	21.8	100
Age 5	9.3	0.2	36.4	33.6	16.2	4.3	100
Age 6	1.3	0.0	20.6	46.2	30.7	1.2	100
Age 7	1.3	0.2	7.1	55.9	34.1	1.3	100
Age 8	0.0	0.0	2.4	56.8	39.8	0.9	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	21.7	57.5	18.0	2.9			100
Age 5	4.3	46.0	37.8	11.4	0.6		100
Age 6	1.2	21.8	38.1	32.0	6.4	0.5	100
Age 7	1.3	8.6	18.4	45.9	21.5	4.2	100
Age 8	0.9	2.4	9.3	21.9	33.6	31.9	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 21.7% children are not enrolled anywhere, 57.5% children are in a pre-primary class, 18% are in Std I, and 2.9% in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	42.4	46.4	25.8	36.5	16.0	45.2	14.1	10.9	23.2
Age 5	64.0	65.4	35.5	40.8	28.0	63.3	29.3	33.6	47.8

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 42.4% can do a sorting task, 46.4% can do a spatial awareness task, 25.8% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	48.5	33.4	46.6	44.3	18.5
Age 5	62.9	40.5	51.0	43.5	22.9
Age 6	71.2	46.5	62.3	60.2	36.6
Age 7	74.0	50.0	71.6	68.3	42.4
Age 8	78.1	58.2	73.9	74.8	51.8

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Rajasthan: Ajmer

Annual Status of Education Report
ASER 2019 RURAL AGE 4-8
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	57.7	42.3	100
Std II	57.5	42.5	100
Std III	70.6	29.5	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	43.2	33.3	15.9	7.5	100
Std II	11.6	29.0	41.6	17.8	100
Std III	0.0	11.0	36.5	52.5	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 43.2% children are 4 and 5 years old, 33.3% are 6, 15.9% are 7, and 7.5% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	47.3	46.7	31.3	41.5
Std II	53.0	53.2	36.7	50.6
Std III	74.5	59.9	45.9	69.6

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 47.3% can do a seriation task, 46.7% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	59.1	28.9	4.5	7.6	100	Data Insufficient
Std II	44.8	31.2	9.1	14.8	100	
Std III	24.9	36.9	8.4	29.8	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 59.1% children cannot even read letters, 28.9% can read letters but not words or higher, 4.5% can read words but not a Std I level text or higher, and 7.6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	52.1	28.9	19.0	100
Std II	31.1	45.5	23.4	100
Std III	13.4	50.1	36.5	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 52.1% children cannot even recognize numbers up to 9, 28.9% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 19% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	22.2	18.3	26.7	28.5	16.2	10.0	2.9	2.0
Std II	34.6	33.0	45.7	41.0	32.0	15.4	8.4	5.0
Std III	52.5	42.7	69.7	58.7	42.1	26.4	17.1	12.4

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 22.2% can do a 1-digit oral word addition problem, 18.3% can do a 1-digit oral word subtraction problem, 26.7% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Tamil Nadu: Vellore

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Tamil Nadu. The survey reached a total of 60 villages, 1,183 households, and 1,550 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	42.9	7.1	48.0	1.0	0.4	0.7	100
Age 5	19.3	5.1	38.4	23.8	13.3	0.0	100
Age 6	1.5	0.7	4.1	49.4	44.3	0.0	100
Age 7	0.0	0.6	0.2	57.4	41.8	0.0	100
Age 8	0.0	0.0	0.0	60.6	39.4	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution
% Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	0.7	98.0	1.3				100
Age 5	0.0	62.9	35.0	2.2			100
Age 6	0.0	6.6	72.6	19.0	1.8		100
Age 7	0.0	0.8	7.1	75.4	16.5	0.3	100
Age 8	0.0	0.0	0.6	7.7	85.4	6.4	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 0.7% children are not enrolled anywhere, 98% children are in a pre-primary class, and 1.3% in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	92.1	79.5	66.7	45.1	57.3	78.9	26.4	45.6	60.1
Age 5	94.4	88.8	73.2	53.7	68.5	84.9	50.4	65.2	76.1

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 92.1% can do a sorting task, 79.5% can do a spatial awareness task, 66.7% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	60.8	40.1	53.7	53.5	26.4
Age 5	69.5	50.5	63.4	65.0	40.0
Age 6	81.6	51.6	69.9	65.5	42.6
Age 7	85.3	57.8	79.2	73.3	55.4
Age 8	88.5	70.1	85.1	80.8	65.4

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Tamil Nadu: Vellore

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	54.9	45.1	100
Std II	56.9	43.1	100
Std III	63.5	36.6	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	30.3	62.3	6.8	0.5	100
Std II	1.9	16.6	74.1	7.5	100
Std III	0.0	0.8	16.2	83.0	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 30.3% children are 4 and 5 years old, 62.3% are 6, 6.8% are 7, and 0.5% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	81.6	68.4	73.6	63.9
Std II	87.1	81.0	80.6	81.2
Std III	95.2	88.7	86.8	90.6

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 81.6% can do a seriation task, 68.4% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	75.4	10.9	10.1	3.7	100	
Std II	40.4	14.5	33.2	11.9	100	
Std III	26.6	8.6	33.1	31.8	100	88.3

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 75.4% children cannot even read letters, 10.9% can read letters but not words or higher, 10.1% can read words but not a Std I level text or higher, and 3.7% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	32.9	38.4	28.7	100
Std II	14.3	22.8	62.9	100
Std III	4.8	13.2	81.9	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 32.9% children cannot even recognize numbers up to 9, 38.4% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 28.7% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	38.8	32.6	49.9	40.9	31.8	19.4	4.2	1.1
Std II	63.5	55.6	77.2	68.2	57.3	51.9	18.9	12.1
Std III	83.2	76.8	90.3	82.5	73.7	73.8	34.0	19.2

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 38.8% can do a 1-digit oral word addition problem, 32.6% can do a 1-digit oral word subtraction problem, 49.9% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Telangana: Karimnagar

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Telangana. The survey reached a total of 60 villages, 1,201 households, and 1,426 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	41.5	6.5	48.4	0.2	0.9	0.0	2.5	100
Age 5	17.0	6.9	64.1	10.3	1.7	0.0	0.0	100
Age 6	2.6	4.7	54.4	24.4	14.0	0.0	0.0	100
Age 7	0.3	1.9	15.7	29.3	52.8	0.0	0.0	100
Age 8	0.3	1.3	2.6	41.5	54.2	0.2	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.
'Other' includes children going to any other kind of school.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	2.5	96.0	1.5				100
Age 5	0.0	88.1	11.6	0.3			100
Age 6	0.0	61.8	30.1	7.6	0.6		100
Age 7	0.0	17.9	38.9	33.8	9.3	0.2	100
Age 8	0.0	4.2	10.5	38.0	36.2	11.8	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 2.5% children are not enrolled anywhere, 96% children are in a pre-primary class, and 1.5% in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	77.4	56.9	68.9	46.6	44.5	53.7	13.0	28.6	38.7
Age 5	89.6	72.2	73.9	49.2	61.1	72.5	25.4	56.5	62.3

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 77.4% can do a sorting task, 56.9% can do a spatial awareness task, 68.9% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	68.9	50.7	53.3	57.6	30.7
Age 5	79.0	64.1	63.6	67.7	47.9
Age 6	82.1	68.7	77.1	75.0	59.2
Age 7	86.9	74.8	82.2	77.3	65.6
Age 8	84.9	76.1	83.4	84.4	70.8

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Telangana: Karimnagar

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	41.2	58.8	100
Std II	40.7	59.3	100
Std III	55.7	44.3	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	12.0	32.4	43.5	12.1	100
Std II	0.3	8.6	41.9	49.2	100
Std III	0.0	1.2	19.5	79.4	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 12% children are 4 and 5 years old, 32.4% are 6, 43.5% are 7, and 12.1% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	80.9	66.0	61.7	62.8
Std II	89.2	77.6	75.3	73.0
Std III	90.7	84.6	83.2	81.1

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 80.9% can do a seriation task, 66% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	19.5	44.1	32.6	3.8	100	Data Insufficient
Std II	8.1	29.6	45.7	16.6	100	
Std III	3.7	26.9	43.4	26.1	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 19.5% children cannot even read letters, 44.1% can read letters but not words or higher, 32.6% can read words but not a Std I level text or higher, and 3.8% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	9.0	20.5	70.5	100
Std II	4.1	6.8	89.2	100
Std III	1.9	2.6	95.5	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 9% children cannot even recognize numbers up to 9, 20.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 70.5% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	37.7	30.2	63.7	51.6	36.4	48.9	8.0	3.8
Std II	66.9	53.0	84.9	78.1	59.7	74.1	38.0	16.2
Std III	81.3	72.3	90.6	84.7	75.7	84.9	57.3	43.9

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 37.7% can do a 1-digit oral word addition problem, 30.2% can do a 1-digit oral word subtraction problem, 63.7% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

The basketball team has finally come! I saw that there were 8 players in the team. I asked why are there only 8 players in the team? He said, “no there should be 10 players (5 on each side). My friend, Lakshman, and I will play on the team!”

Ayan, Age 5

Tripura: South District
Uttar Pradesh: Lucknow
Uttar Pradesh: Varanasi
Uttarakhand: Dehradun
West Bengal: Bankura

हमारे स्कूल में क्रिसमस डे बहुत धूम&धाम से मनाया जाता है।

Shreshtha Saksham, Age 7

Tripura: South District

ASER 2019 'Early Years' was conducted in one district in Tripura. The survey reached a total of 60 villages, 1,202 households, and 1,257 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	65.4	4.8	29.0	0.0	0.8	0.0	100
Age 5	54.9	1.8	40.5	0.7	2.1	0.0	100
Age 6	31.9	2.2	28.5	31.2	5.7	0.5	100
Age 7	3.4	0.7	7.8	79.2	8.5	0.4	100
Age 8	0.0	1.9	6.5	82.8	8.8	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	0.0	79.5	17.0	3.5			100
Age 5	0.0	71.9	20.1	8.0	0.0		100
Age 6	0.4	55.3	37.7	6.6	0.0		100
Age 7	0.4	11.6	60.8	25.2	2.1		100
Age 8	0.0	8.3	7.5	61.8	22.3	0.0	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 79.5% children are in a pre-primary class, 17% are in Std I, and 3.5% in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	74.3	72.6	58.6	38.4	48.0	71.6	11.7	59.8	56.4
Age 5	87.4	79.7	70.8	56.9	63.9	82.5	22.1	76.7	69.6

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 74.3% can do a sorting task, 72.6% can do a spatial awareness task, 58.6% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	58.9	47.7	49.3	45.5	26.5
Age 5	72.2	62.0	58.3	58.1	37.5
Age 6	79.5	66.1	70.1	69.3	50.9
Age 7	83.4	72.0	74.6	81.8	61.5
Age 8	88.5	77.3	84.3	87.4	71.4

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Tripura: South District

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	88.3	11.7	100
Std II	87.9	12.2	100
Std III			

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	1.6	31.6	59.8	7.0	100
Std II	1.3	2.3	28.0	68.4	100
Std III					

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 1.6% children are 4 and 5 years old, 31.6% are 6, 59.8% are 7, and 7% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	85.6	73.3	66.7	59.7
Std II	88.4	79.4	82.2	69.0
Std III				

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 85.6% can do a seriation task, 73.3% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	21.2	26.1	19.0	33.8	100	
Std II	15.6	20.3	15.6	48.5	100	87.6
Std III						

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 21.2% children cannot even read letters, 26.1% can read letters but not words or higher, 19% can read words but not a Std I level text or higher, and 33.8% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	27.9	37.3	34.9	100
Std II	13.0	26.5	60.5	100
Std III				

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 27.9% children cannot even recognize numbers up to 9, 37.3% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 34.9% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	49.5	44.9	58.7	62.9	54.5	30.5	15.4	9.4
Std II	58.4	53.9	78.2	76.7	71.2	50.7	37.6	26.0
Std III								

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 49.5% can do a 1-digit oral word addition problem, 44.9% can do a 1-digit oral word subtraction problem, 58.7% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Uttar Pradesh: Lucknow

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in two districts of Uttar Pradesh, one of which is Lucknow. The survey reached a total of 60 villages, 1,207 households, and 1,494 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	13.7	0.0	49.8	3.4	0.0	0.0	33.1	100
Age 5	10.4	1.8	52.9	17.7	7.4	0.0	9.8	100
Age 6	4.7	0.7	42.2	28.9	18.8	0.0	4.8	100
Age 7	1.9	0.0	20.5	33.1	42.3	0.0	2.2	100
Age 8	0.8	0.2	7.7	38.2	52.1	0.4	0.6	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.
'Other' includes children going to any other kind of school.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	33.1	63.5	3.4				100
Age 5	9.8	64.9	19.2	6.1			100
Age 6	4.8	47.5	31.6	11.3	4.8		100
Age 7	2.2	22.4	27.8	31.9	11.0	4.8	100
Age 8	0.6	8.8	17.1	30.9	27.4	15.3	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 33.1% children are not enrolled anywhere, 63.5% children are in a pre-primary class, and 3.4% in Std I or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	58.4	56.2	28.4	37.3	25.0	48.4	25.0	20.0	32.4
Age 5	78.1	70.6	35.3	44.5	43.6	65.7	37.8	46.6	61.3

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 58.4% can do a sorting task, 56.2% can do a spatial awareness task, 28.4% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	76.4	38.2	44.7	45.9	22.0
Age 5	79.5	46.3	56.2	57.6	31.9
Age 6	80.6	52.8	59.6	64.7	38.5
Age 7	83.8	55.7	68.1	71.1	47.0
Age 8	88.4	61.8	72.1	75.7	54.9

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Uttar Pradesh: Lucknow

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	41.9	58.1	100
Std II	50.1	49.9	100
Std III	56.3	43.8	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	23.0	30.0	28.7	18.2	100
Std II	5.7	13.2	40.4	40.6	100
Std III	2.0	6.6	25.8	65.6	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 23% children are 4 and 5 years old, 30% are 6, 28.7% are 7, and 18.2% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	58.5	50.7	41.0	61.5
Std II	71.0	56.8	52.7	71.1
Std III	79.4	60.5	64.0	81.2

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 58.5% can do a seriation task, 50.7% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	41.1	32.9	7.4	18.6	100	Data Insufficient
Std II	31.3	39.6	5.2	23.9	100	
Std III	23.6	23.9	6.3	46.1	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 41.1% children cannot even read letters, 32.9% can read letters but not words or higher, 7.4% can read words but not a Std I level text or higher, and 18.6% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	28.1	29.5	42.4	100
Std II	14.7	38.6	46.7	100
Std III	6.7	39.5	53.8	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 28.1% children cannot even recognize numbers up to 9, 29.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 42.4% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	43.2	36.0	54.4	52.8	38.5	29.9	8.2	7.5
Std II	57.8	48.7	68.9	68.6	52.0	38.6	15.6	9.9
Std III	74.8	65.7	79.8	80.2	53.1	47.1	28.5	19.9

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 43.2% can do a 1-digit oral word addition problem, 36% can do a 1-digit oral word subtraction problem, 54.4% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Uttar Pradesh: Varanasi

Annual Status of Education Report
असर ASER 2019
AGE 4-8 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in two districts in Uttar Pradesh, one of which is Varanasi. The survey reached a total of 60 villages, 1,201 households, and 1,615 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/ UKG	Govt	Pvt	Other		
Age 4	27.1	2.0	36.4	7.0	0.5	0.6	26.4	100
Age 5	20.2	2.0	45.7	15.6	4.1	0.0	12.4	100
Age 6	5.9	1.1	34.4	33.7	22.2	0.0	2.7	100
Age 7	0.6	0.0	19.1	39.8	39.1	0.4	1.0	100
Age 8	1.3	1.0	7.2	40.1	49.6	0.3	0.6	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.
'Other' includes children going to any other kind of school.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	25.5	63.9	7.6	3.0			100
Age 5	12.2	67.1	16.8	3.9			100
Age 6	2.6	40.6	34.5	18.2	4.1		100
Age 7	1.0	19.5	31.5	28.0	15.9	4.2	100
Age 8	0.6	10.3	13.4	30.1	31.0	14.6	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 25.5% children are not enrolled anywhere, 63.9% children are in a pre-primary class, 7.6% are in Std I, and 3% are in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	54.8	58.0	28.9	34.7	24.5	58.0	26.0	17.2	33.6
Age 5	76.7	69.7	33.1	38.5	39.8	69.7	40.7	39.5	58.5

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 54.8% can do a sorting task, 58% can do a spatial awareness task, 28.9% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	77.0	41.0	46.5	45.6	21.2
Age 5	76.5	43.4	55.6	53.0	31.7
Age 6	82.5	58.4	66.4	64.6	42.3
Age 7	88.6	57.0	76.2	68.5	48.5
Age 8	90.4	69.1	80.6	77.0	62.1

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Uttar Pradesh: Varanasi

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	48.1	51.9	100
Std II	50.6	49.4	100
Std III	63.4	36.6	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	22.4	33.6	31.8	12.2	100
Std II	6.6	21.5	36.4	35.4	100
Std III	1.0	7.4	31.5	60.1	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 22.4% children are 4 and 5 years old, 33.6% are 6, 31.8% are 7, and 12.2% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	58.6	43.8	43.6	65.1
Std II	65.2	54.8	50.7	76.7
Std III	81.3	63.0	58.4	81.9

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 58.6% can do a seriation task, 43.8% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	41.9	31.5	7.9	18.7	100	
Std II	26.3	24.1	8.1	41.6	100	79.0
Std III	16.8	25.3	4.4	53.5	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 41.9% children cannot even read letters, 31.5 % can read letters but not words or higher, 7.9% can read words but not a Std I level text or higher, and 18.7% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	31.2	30.5	38.3	100
Std II	9.8	38.5	51.6	100
Std III	4.2	39.7	56.1	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 31.2% children cannot even recognize numbers up to 9, 30.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 38.3% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	47.3	37.0	48.9	51.7	37.7	23.9	8.4	4.8
Std II	64.1	54.6	73.8	70.5	56.3	43.8	31.4	24.2
Std III	74.5	66.8	83.5	84.7	64.4	51.9	38.7	32.5

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 47.3% can do a 1-digit oral word addition problem, 37% can do a 1-digit oral word subtraction problem, 48.9% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

Uttarakhand: Dehradun

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in Uttarakhand. The survey reached a total of 56 villages, 985 households, and 1,252 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School			Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt	Other		
Age 4	27.7	1.5	58.2	2.4	5.5	0.0	4.7	100
Age 5	9.4	2.0	57.2	17.7	9.6	2.2	2.0	100
Age 6	1.0	1.3	31.1	29.5	33.6	3.6	0.0	100
Age 7	0.0	0.0	7.7	32.4	55.8	3.0	1.2	100
Age 8	0.0	0.0	1.5	42.6	52.9	3.0	0.0	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.
'Other' includes children going to any other kind of school.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	4.6	87.4	5.5	2.4			100
Age 5	2.0	69.1	22.1	5.0	1.8		100
Age 6	0.0	33.2	43.3	18.2	5.3		100
Age 7	1.2	8.0	26.8	47.0	13.0	4.1	100
Age 8	0.0	1.5	7.1	26.5	42.6	22.3	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 4.6% children are not enrolled anywhere, 87.4% children are in a pre-primary class, 5.5% are in Std I, and 2.4% are in Std II or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	54.8	53.9	35.3	32.4	33.3	52.9	23.9	28.1	41.2
Age 5	72.4	66.0	44.3	38.5	47.3	67.7	39.4	42.5	54.9

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 54.8% can do a sorting task, 53.9% can do a spatial awareness task, 35.3% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	68.1	43.2	52.5	55.3	32.5
Age 5	76.4	52.1	64.6	60.0	38.2
Age 6	79.5	56.0	68.6	60.9	45.7
Age 7	85.3	64.8	76.5	75.3	57.6
Age 8	86.0	66.1	75.9	82.5	59.6

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

Uttarakhand: Dehradun

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	40.3	59.7	100
Std II	32.5	67.5	100
Std III	56.2	43.8	100

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	24.2	44.6	23.6	7.5	100
Std II	6.9	19.2	43.7	30.2	100
Std III	2.6	4.4	18.7	74.3	100

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 24.2% children are 4 and 5 years old, 44.6% are 6, 23.6% are 7, and 7.5% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	66.0	52.2	48.9	64.7
Std II	77.0	68.0	67.3	67.0
Std III	85.8	74.3	74.5	77.7

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 66% can do a seriation task, 52.2% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	35.9	28.3	16.8	19.0	100	
Std II	15.0	31.9	11.7	41.4	100	82.6
Std III	6.2	22.1	6.0	65.7	100	

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 35.9% children cannot even read letters, 28.3% can read letters but not words or higher, 16.8% can read words but not a Std I level text or higher, and 19% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	23.2	20.8	56.0	100
Std II	10.2	21.0	68.9	100
Std III	1.2	24.9	73.9	100

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 23.2% children cannot even recognize numbers up to 9, 20.8% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 56% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	42.9	35.7	57.7	56.3	41.6	33.6	6.1	6.1
Std II	62.5	56.6	81.1	79.9	66.6	54.7	29.0	15.4
Std III	83.4	71.8	88.9	88.3	75.2	66.2	48.1	35.1

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 42.9% can do a 1-digit oral word addition problem, 35.7% can do a 1-digit oral word subtraction problem, 57.7% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

West Bengal: Bankura

Annual Status of Education Report
AGE 4-8 असर ASER 2019 RURAL
Facilitated by PRATHAM

ASER 2019 'Early Years' was conducted in one district in West Bengal. The survey reached a total of 60 villages, 1,167 households, and 1,324 children in the age group 4 to 8. Sampled children's pre-school and school enrollment status was recorded. Children did a variety of cognitive, early language, and early numeracy tasks. Activities to assess children's social and emotional development were also undertaken. All tasks were done one-on-one with children in their homes. In the following pages, data is presented in three sub-sections:

- **Pre-school and school enrollment:** This section provides a snapshot of all children in the ASER 'Early Years' sample in terms of their pre-school and school enrollment status, separately by age and pre-school/school type.
- **Early learning tasks:** Ability levels and expectations of children in the pre-primary age group are very different than those for older children. This section presents data on cognitive skills, early language, and early numeracy ability for children age 4 and 5. It also provides data on children's ability to identify emotions as a key indicator of their social and emotional development.
- **Children in early primary grades:** This section presents data on children's performance by grade for children in Std I, II and III, in order to look at the progression of children's ability levels over the first three years of primary school.

Pre-school and school enrollment

Table 1: % Children age 4-8 enrolled in different types of pre-schools and schools 2019

Age	Pre-school			School		Not enrolled	Total
	Anganwadi	Govt pre-primary	Pvt LKG/UKG	Govt	Pvt		
Age 4	77.8	6.4	10.1	0.0	0.0	5.7	100
Age 5	58.6	16.1	13.1	6.8	0.0	5.5	100
Age 6	5.5	40.2	11.1	38.6	3.1	1.5	100
Age 7	0.7	5.5	4.8	83.7	5.3	0.0	100
Age 8	0.0	0.6	0.7	90.6	7.7	0.4	100

'Govt pre-primary' refers to pre-primary classes in government schools.
'Not enrolled' includes children who never enrolled or have dropped out.

Table 2: Schooling status and age-grade distribution % Children age 4-8 by schooling status and grade 2019

Age	Not enrolled	Pre-primary	Std I	Std II	Std III	Std IV and above	Total
Age 4	4.5	74.1	15.1	6.3	0.0		100
Age 5	4.6	73.1	16.1	6.3	0.0		100
Age 6	1.3	48.9	43.7	6.1	0.0		100
Age 7	0.0	10.8	60.8	25.1	3.2		100
Age 8	0.4	1.3	12.6	53.6	28.3	3.8	100

'Pre-primary' includes children going to anganwadis, government pre-primary classes, and private LKG/UKG.
This table shows the schooling status and grade distribution at each age. For example, of all 4-year-olds, 4.5% children are not enrolled anywhere, 74.1% children are in a pre-primary class, 15.1% are in Std I, 6.3% are in Std II, and no children are enrolled in Std III or above.

Early learning tasks

Table 3: % Children age 4-5 who can correctly do cognitive, early language, and early numeracy tasks 2019

Age	Cognitive					Early language		Early numeracy	
	Sorting	Spatial awareness	Seriation	Pattern recognition	Puzzle	Picture description	Listening comprehension	Counting objects	Relative comparison (objects)
Age 4	66.8	56.4	35.9	48.6	35.7	64.0	22.9	27.5	44.3
Age 5	80.9	76.3	43.2	51.0	56.5	73.1	31.9	52.8	67.2

This table shows the proportion of children who can correctly do cognitive, early language, and early numeracy tasks at each age. For example, of all 4-year-olds, 66.8% can do a sorting task, 56.4% can do a spatial awareness task, 35.9% can do a seriation task, and so on.

Table 4: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid	All 4 emotions
Age 4	65.0	52.3	59.4	50.9	27.3
Age 5	81.5	55.6	64.2	57.4	38.6
Age 6	88.5	67.1	76.6	72.8	54.7
Age 7	88.8	70.9	83.6	76.8	63.2
Age 8	89.4	76.5	81.2	81.2	66.0

The ability to identify emotions is an important part of social and emotional development. In this task, the child is shown 4 face cards, each showing a different emotion. She is asked to point to the card that corresponds to each emotion. This table shows the proportion of children who can correctly identify each emotion and those who can correctly identify all 4 emotions.

Data is not presented where sample size is insufficient.

West Bengal: Bankura

Children in Std I, II and III

Table 5: Enrollment status by grade and school type 2019

Std	Govt	Pvt	Total
Std I	93.4	6.6	100
Std II	93.6	6.4	100
Std III			

This table shows the proportion of children enrolled in each grade by school type.

Table 6: Age-grade distribution
% Children enrolled in each grade by age 2019

Std	Age 4 and 5	Age 6	Age 7	Age 8	Total
Std I	4.9	27.0	57.8	10.3	100
Std II	0.0	2.4	34.4	63.3	100
Std III					

This table shows the age distribution within each grade. For example, of all children enrolled in Std I, 4.9% children are 4 and 5 years old, 27% are 6, 57.8% are 7, and 10.3% are 8 years old.

Table 7: % Children who can correctly do cognitive and early language tasks by grade 2019

Std	Cognitive			Early language
	Seriation	Pattern recognition	Puzzle	Listening comprehension
Std I	66.7	59.2	49.8	53.9
Std II	72.5	66.0	61.8	59.0
Std III				

This table shows the proportion of children in each grade who can correctly do cognitive and early language tasks. For example, in Std I, 66.7% can do a seriation task, 59.2% can do a pattern recognition task, and so on.

Table 8: Distribution of children's reading ability within each grade 2019

Std	Not even letter	Letter	Word	Std I level text	Total	Of those who can read a Std I level text, % children who can answer both comprehension questions
Std I	18.8	23.5	27.7	30.1	100	
Std II	10.6	18.9	23.9	46.6	100	86.5
Std III						

Early language tasks are progressive. Each row shows the distribution of children's reading ability within each grade. For example, among children in Std I, 18.8% children cannot even read letters, 23.5% can read letters but not words or higher, 27.7% can read words but not a Std I level text or higher, and 30.1% can read a Std I level text or more.

Table 9: Distribution of children's ability to recognize numbers within each grade 2019

Std	Not even 1-9	Number recognition (1-9)	Number recognition (11-99)	Total
Std I	18.0	34.5	47.5	100
Std II	8.5	28.0	63.4	100
Std III				

Early numeracy tasks are progressive. Each row shows the distribution of children's ability to recognize numbers within each grade. For example, among children in Std I, 18% children cannot even recognize numbers up to 9, 34.5% children can recognize numbers up to 9 but cannot recognize numbers up to 99, and 47.5% can recognize numbers up to 99.

Table 10: % Children who can correctly do 1-digit and 2-digit numeracy tasks by grade 2019

Std	1-digit					2-digit		
	Oral word problem addition	Oral word problem subtraction	Relative comparison (1-9)	Numeric addition	Numeric subtraction	Relative comparison (11-99)	Numeric addition	Numeric subtraction
Std I	46.0	39.9	62.6	61.6	52.1	40.5	27.3	13.9
Std II	58.5	56.0	79.3	73.1	62.2	55.3	41.5	23.5
Std III								

Each row shows the variation in children's ability to do 1-digit and 2-digit numeracy tasks within a grade. For example, among children in Std I, 46% can do a 1-digit oral word addition problem, 39.9% can do a 1-digit oral word subtraction problem, 62.6% can do a 1-digit relative comparison task, and so on.

Data is not presented where sample size is insufficient.

ASER 2019 'Early Years' – Survey process documents

ASER 2019 'Early Years' – Survey preparation and roll-out timeline

February 2019 onwards

Reviews of existing international and national research and assessments in the early years, policy guidelines, government pre-school materials and early grade primary school textbooks were undertaken over a six-month period.

March 2019

A list of common objects was collated from pictures used in Std 1 and Std 2 textbooks across all states. A field pilot was conducted to assess children's familiarity with these objects. This helped in developing a tool which could be used in diverse contexts.

April 2019

Instruments to collect data on anganwadi, pre-school, and school availability and facilities were piloted in 250+ units. Field research on roll-out of pre-primary classes in government schools under Samagra Shiksha Abhiyan was conducted in all states.

A variety of assessment tasks were field tested for ease of administration. Domains were shortlisted after these exploratory pilots.

May – June 2019

Within selected domains, numerous iterations of a range of assessment tasks were piloted. Methods of administration were refined. Competencies for each domain were selected to formalize a complete assessment tool. A first version of the complete assessment (comprising select competencies from all domains) was piloted with approximately 4,500 children across all states.

July – August 2019

A first version of the complete survey instrument was piloted by ASER state teams in one district as a rehearsal for the national training. Both technical and logistical aspects of the package were further improved. Thereafter, to ensure feasibility as a citizen-led assessment, volunteers from local partners were trained to conduct the survey in two districts in two states.

September 2019

National workshop: ASER central and state teams were trained on the final ASER 2019 survey instruments and process.

October – November 2019

- District trainings: ASER teams trained volunteers in each district selected for the ASER 2019 survey.
- Survey roll-out: Survey was conducted in 26 districts across 24 states.
- Phone monitoring: ASER teams monitored the survey via phone calls to volunteers to identify any problems being faced in the villages that could be rectified immediately.
- Field monitoring: Survey was supervised on-site in selected villages.
- Recheck: Desk, phone, and field recheck was conducted on the data collected.
- ASER Centre recheck: ASER teams rechecked villages in some districts selected both randomly and purposively to ensure survey quality.

December 2019 – January 2020

- Surveyed data was entered in data centres across India and analyzed in Delhi.
- ASER 2019 'Early Years' report released.

Evolution of ASER 2019 'Early Years'

ASER 'Early Years' was developed over eight months using a multi-faceted approach: review of literature, exploratory research, field pilots, and external consultations. In the beginning, the preparation involved a broad enquiry into not only the readiness of young children for school, but also the readiness of pre-schools/schools, anganwadi workers/school teachers, and parents/caregivers in terms of providing quality early childhood education and care to these young children. The initial age range proposed for the assessment was 3 to 8 years. After numerous rounds of pilots, interactions with children and other stakeholders mentioned above and aligning questions and tasks to fit the ASER survey architecture, the final instrument was designed to focus on activities and abilities of children age 4 to 8, as well as collecting information about their household environment. The major stages of this process are described briefly below.

Literature review

From the very outset, the findings from the India Early Childhood Education Impact study[1] along with experiences and learnings from its field work were a guiding frame for developing ASER 2019 'Early Years'. A review of the tools and questionnaires used in IECEI was undertaken along with other assessments for young children like IDELA, ISELA, MELQO, ELDA;[2] and numerous other diagnostic assessments for development of motor skills and cognitive ability as well as those measuring health and nutrition status. Research to understand the development of skills in children in the early years was conducted to create a learning trajectory from 0 to 8 years. This helped understand the different domains of development and the competencies within each domain.

Each stage of development was looked at separately to map the provisions outlined in policy, curricular frameworks, expected learning outcomes and pedagogical processes in pre-schools and schools.[3] A study of anganwadi workbooks and government school textbooks for early primary grades was conducted to understand the progression of cognitive, pre-language and language, and pre-numeracy and arithmetic tasks. Several tasks from the assessments mentioned above and those appearing in workbooks were piloted in the field to understand children's approach to solving these, and also evaluate the possibility of adapting these to the ASER survey architecture.

Exploratory research and field pilots

After the review of existing assessments on different aspects of early childhood development, we created our own instruments to collect information on aspects such as: immunization, health and nutrition through dietary intake, and water and sanitation facilities and practices in the household for assessing hygiene. It soon became evident that a study of these aspects would not be compatible with an exercise in the ASER architecture that focused on learning in the early years.

We interviewed parents/caregivers, anganwadi workers, pre-school and school teachers to understand their awareness, role and participation in what young children need in order to thrive in the early years. We also explored collecting data on pre-school history for school going children during these interactions. Overall, these interviews required extensive probing to get meaningful and relevant answers from respondents. It is difficult to train volunteers to conduct these interviews in a standardized manner in the ASER architecture. The ASER calendar also does not allow time for post-coding of interviews at the time of data analysis. Hence, these aspects were excluded from the final survey.

We observed facilities in 250+ anganwadis and schools across the country to understand how well these environments are equipped to cater to young children as well as facilitate the anganwadi workers/school teachers to provide appropriate care to children. Field research on roll out/status of pre-primary class in government schools under Samagra Shiksha Abhiyan was conducted in all states. School observation is a regular part of the nationwide 'basic' ASER. However, because ASER 2019 is being conducted in one district per state rather than in all rural districts, data on institutional availability or characteristics was not collected during the survey. Data and feedback from this pilot, nonetheless provided valuable background information on children's learning environments.

Since ASER is a nationwide survey, each part of the survey must be applicable to and easily understood in any context in the country. To ensure that pictures and stories used in the tool were familiar to children across the country, all pictures and text in Std I and II language and arithmetic textbooks were reviewed. 100+ pictures were field-tested in villages in all states, where children had to simply

[1] Kaul, V., Bhattacharjea, S., Chaudhary, A. B., Ramanujan, P., Banerji, M., & Nanda, M. (2017). The India Early Childhood Education Impact Study. New Delhi: UNICEF.
[2] See ASER 2019 'Early Years' and other early learning assessment tools, page 159
[3] See ASER 2019 and curricular expectations, page 152

identify the object in the picture. Common objects across the country were selected from the pilot data and included in the testing tool, either as objects in stories or as pictures for different types of cognitive and numeracy tasks. A separate pilot to identify all letters in the regional alphabet and English, and all numbers from 1 to 99 was also conducted to understand children's familiarity with letters and numbers across the age 4 to 8 age group and also by grade if enrolled in anganwadi, pre-school or school. This pilot was conducted with each child over 4-5 sittings, covering a total of such 2,500 children in 18 states in the country. This data was used to empirically set the complexity of the language and numeracy tasks in the ASER 2019 assessment.

Field work to pilot assessment tasks

Each year the 'basic' ASER survey collects enrollment information for children age 3 to 16 and assesses foundational reading and arithmetic abilities of children age 5 to 16. Interactions with children in the early stages of ASER 2019 pilots showed that in the volunteer-led model, where the child is asked questions by a person she is meeting for the first time, an assessment was feasible only for children age 4 and above. In view of this, children age 3 were excluded from the final survey.

Tasks were designed for field testing with children based on domains and competencies shortlisted from the review of literature. In this process, assessment of physical development (gross and fine motor skills), sensory and perceptual development, and creative development were dropped, though important aspects of early childhood learning. Activities for these domains are not feasible in the ASER framework, which requires the assessment to be rapid and easy to grade in a standardized manner at the time of the survey. Within other selected domains – language, numeracy and cognitive development, numerous iterations of a range of tasks were piloted. In addition to a paper-based tool as is used in the 'basic' ASER, activities were designed using a variety of common objects, such as letter, picture and story cards, audio recordings, puppets, etc for language activities and worksheets, pebbles, straws, currency, etc for numeracy activities. Cognitive development activities were piloted using shape cards, picture cards, worksheets and colors, puzzles, etc. At this stage, all pilots with 4- to 8-year-olds focused on understanding how to best to deliver the instruction for a task to the child, by testing iterations of both tasks and instructions. For instance, a task on classifying objects was given in two iterations: using picture cards and using worksheets, with different instructions for each. Observations of the time taken for a task and children's level of interest in specific tasks were also made. Social and emotional learning was added as a new domain in the ASER 2019 assessment.

Over the next couple of months, more tasks were shortlisted and methods of administration were refined. Competencies for each domain were selected to formalize a complete assessment tool. Thereafter, a first version of the complete assessment (comprising select competencies from all domains) was piloted with approximately 4,500 children across all states. This large-scale evidence helped understand the complexity of the tasks for children of different ages and also how tasks were functioning in relation to each other. Revisions were made to adjust the complexity of tasks within a domain and across domains.

A first version of the complete child assessment tool and household questionnaire were piloted in one district as a rehearsal for the national training.[4] Both technical and logistical aspects of the package were further improved after feedback from ASER teams. All tasks were reviewed again and some were dropped in order to reduce the overall assessment time per child.

Using examples of some tasks, important learnings during tool development in each domain are described below.

- **Cognitive:**

a) At the outset, we noticed children did not have the vocabulary for color and shape names. Hence, any task involving the use of such words had to be administered without using the actual words. For example, for sorting by color, an example was added and instead of sorting on the basis of the name of the color, children were simply asked to put all pieces of the same color together. For pattern recognition as well, an example was added to ease the instruction load. Answer options were given so that the child could point to a shape instead of saying its name to convey her answer.

b) For the classification task, questions on classification on the basis of birds and animals worked well. It was doable in the form of cards and also worksheets wherein children had to classify and group the cards or point to indicate their answer on the worksheet.

[4] See ASER 2019 'Early Years' - Training, page 130

Unfortunately, no equivalent category that would be applicable across the country such as fruits or vegetables, land and air/water transport, etc. with enough items could be found to create a second sample for this task.

c) For time-based sequencing tasks, we tested a few basic sequences using picture cards of commonly known events such as a bucket filling with water from a hand pump, a boy putting on his shoes, a child getting ready for school, etc. It was seen that despite trying several variations in our instructions, most children were unable to comprehend what they were expected to do. Also, children had their own interpretations of the events and sequences which were not technically wrong. Sequences that would have only one correct order and be applicable across the country were difficult to create.

d) While creating the puzzle task, we learnt that composite 3D images (images having several elements set in a background, middle-ground and foreground) confuse young children; they are able to work with 2D or flat images more easily. For this reason, the format of the puzzle was changed to a simple picture of an animal. We also found that younger children's performance fell drastically when the number of puzzle pieces were increased. Hence, after looking at the pilot data carefully, the number of pieces were separated for 4-5 and 6-8-year-olds. Puzzle shapes were cut in a straight line compared to a jigsaw pattern which is more difficult.

e) We also tried to create a kit with several shapes that could be used to administer 3-4 different tasks, such as sorting, seriation, and puzzle. However, to avoid confusion for the child and the volunteer, separate material was created for each task. This was also done to align our tasks with those in other assessments. For instance, in seriation and puzzle, picture cards are closer to real-life scenarios than shape cut-outs which can be manipulated as individual objects.

- **Early language:**

a) Phonological awareness is an important indicator of language acquisition in young children. However, in the ASER framework, it was not feasible to create a standardized question on this competency due to the variety of languages used across the country and dialects used within a district as well. Hence, neither matching the first and/or last sounds of two pictures (objects) with each other nor matching the first and/or last sounds of pictures (objects) with letters could be worked out.

b) Our experience of piloting the picture description task in terms of illustration was similar to puzzles. One added complication was that for all children to describe a picture, it had to be relatable in every corner of the country. We used our analysis of pictures in textbooks to come up with the current item. Picture description was also attempted as events where children were shown three pictures which were part of the same story. This was difficult to grade as each child had her own interpretation and there is no scope for recording open-ended answers in ASER.

c) Both listening and reading comprehension tasks were field-tested using pictures along with text. Children who did not pay attention to the story or could not read were found being able to answer the comprehension questions by looking at the picture. Since the length of text in both the tasks is short and the questions are quite direct, pictures were removed to create an authentic 'listening' and 'reading' comprehension assessment item.

- **Early numeracy:**

Perhaps the most interesting learning while administering early numeracy tasks was the framing of the oral word problems. From data we understood that oral word problems with names of two characters were more difficult for children to solve compared to those with name of a single character. Therefore, the name of the second character was replaced with the name of a relation (sister, mother, etc).

- **Social and emotional development:**

a) Out of the three types of assessments for this domain (questionnaires, classroom observation, and direct assessments), the latter was the most suitable for ASER 2019. Given the time limit for the activities to be done with children, three key competencies - self-awareness, self-regulation and social awareness - were selected. Emotion identification was assessed as part of the first competency by asking children to point to different emotion cards. To indicate their responses to volunteer's on the next set of questions - on how they woul feel in particular situations, children pointed to the emotion cards again. Several field pilots revealed that young children lack the emotional vocabulary to convey their exact responses in words, hence the aforementioned mechanism was adopted. Several types of emotion cards (illustration and photograph, with variation in expression of emotions) were piloted to finalize the current tool.

b) To assess the second and third competencies, several hypothetical situations to be narrated to the child were piloted. This helped finalize situations that were relatable for all children across varied geographic and cultural contexts in the country.[5]

Further in the tool development cycle, to ensure feasibility as a citizen-led assessment, volunteers from local partner organizations were trained to conduct the survey in 2 districts in 2 states with the revised package. Here for the first time the tool was administered by actual volunteers. Detailed feedback was taken on handling of all survey and testing material, ease and time of administration, grading of answers, interest of children and community, etc. and relevant changes were made to the survey package. A pilot examining the comparability of the two samples being used for each task in the assessment was also conducted. In a household with two or more children in the 4 to 8 age group, two samples are required to ensure children do not copy each other's answers. After making the required changes to the samples, the package was finalized.

For the final assessment four key domains: early language, early numeracy, cognitive development, and social and emotional development broadly seek to address four key questions: Do children have early language skills? Do children have a sense of numbers and quantity? Can children do simple problem-solving tasks? Are children able to identify emotions? On average, four competencies within a domain were retained to provide an overview of what young children in India can and cannot do. The complexity of tasks within each domain is varied to accommodate expectations from the youngest child (age 4) to the oldest (age 8) in the survey age group. Additionally, wherever possible the test has been made adaptive to the child's ability, so that she does not have to attempt all levels.[6] The child's comfort and the commitment to accurately record her best possible response is at the core of the final test design.

External consultations on assessment tasks

At different stages of the development of the testing tool, the tasks and learnings from field pilots were shared with experts in early childhood education. These experts comprised academicians, researchers, and consultants working in this sector. Interactions with these experts were very useful to revise items and enhance the rigor of the instrument.

Sampling pilot

ASER 2019 survey has been conducted in 60 villages in one rural district in a state. 20 households with children in the 4 to 8 age group are sampled and surveyed in each village. A field pilot was conducted in all states to ascertain that the sampling strategy would ensure representative data at the district level.

Questionnaire for mothers

A questionnaire to understand awareness and participation of mothers in their children's learning in school and at home was developed and piloted. In this, the mother was asked questions such as name of the child's teacher, awareness about daily activities being conducted in child's class/school, her participation in parent-teacher meetings, extent of supervision in child's homework, conducting teaching-learning activities with her child at home, etc. The mother's education level was also recorded. Additionally, the mother was asked to read a short paragraph and answer a question based on it. In the final survey format, however, besides recording the mother's education level, only one task was retained due to shortage of survey time - the mother was asked to read a short paragraph and answer a question based on it.

Duration of complete survey in a village

Overall, the administration time of the assessment was reduced from an hour and half to about 20-25 minutes per child over multiple pilots. In addition, each pair of volunteers spent 15-20 minutes collecting information about the household and talking to/building rapport with the child; bringing the total time spent in a household with one child in the age group 4-8 years for the complete survey to about 45 minutes. Given this much time per household, the survey was spread over three days in a village as compared to two days in 'basic' ASER. Volunteers surveyed 20 households with children in the age group 4 to 8 in a village over the weekend and an extra weekday, that is Fri/Sat/Sun or Sat/Sun/Mon.

[5] See Measurement of social and emotional learning in ASER 2019, page 146
[6] See ASER 2019 'Early Years' - Early learning tasks, page 36

ASER 2019 'Early Years' – Training

The ASER survey is conducted with the help of local organizations and institutions including universities and colleges, non-governmental organizations, self-help groups, youth clubs, government departments, District Institutes of Education and Training (DIETs), etc. This year ASER 2019 'Early Years' reached 26 districts, surveying 36,930 children in more than 1,500 villages across the country. For ASER volunteers to succeed in this endeavour, they need to be trained rigorously. The ASER training process gives volunteers the skills needed to survey a village, assess children's learning levels reliably and record the information accurately.

A notable feature this year was ASER's partnership with universities and colleges offering courses in social work in several districts. More than 1,100 undergraduate and post graduate students surveyed 26 districts of India. ASER provides a unique opportunity to university and college students to understand and apply simple methods of assessment, survey and research, as well as an important exposure to the current realities of children's learning in the Indian education system.

This year ASER 2019 'Early Years' survey trainings followed a two-tier model that consisted of:

National training:
ASER state team members are trained by the ASER central team

↓

District level training:
Volunteers are trained by ASER state teams

Standardization in training and survey is extremely important in order to ensure that the data collected is reliable and valid across districts and states. For this purpose, ASER Centre ensures that the guidelines and instructions for the trainings delivered at both tiers are kept clear and consistent so that each participant is able to conduct the survey accurately. The two-tiered structure is detailed below:

Tier I: National training: Each year ASER survey begins with a week-long national training. It brings together 100+ people - ASER central team, ASER state teams from across the country, participants from other countries, external guests, independent researchers, and others. The main objective of the national training is to thoroughly train teams on all survey tools and processes.

This year, the national training was held in Indore, Madhya Pradesh from 28 August to 5 September 2019. Around 130 participants attended 7 days of classroom sessions and 2 days of field visits to villages to pilot ASER 2019 'Early Years' survey instruments.

Key features of the national training include:

- **Classroom sessions:** These are designed to provide a theoretical understanding of the survey process, quality control processes, sampling, financial planning for the survey, etc. Instruction manuals, role plays, group work, energizers, videos and presentations are used to make the classroom sessions effective and engaging. Energizers are used to enhance audience engagement during or in between classroom sessions. They make for good icebreakers for people attending the national training for the first time, creating a more participative and positive learning environment.
- **Field visits:** One day of the national training is devoted to practicing the actual survey. An additional field day is devoted to rechecking[1] the villages surveyed on the first field visit day. The two field visit days are extremely useful for the participants to get hands-on experience of doing the survey and recheck.
- **Quizzes:** Quizzes are administered in order to ensure that every participant understands the survey content and other processes thoroughly. Post training, additional sessions are organized to fill learning gaps identified through the quiz results.
- **Mock training:** An entire day in the national training is devoted to mock trainings. Participants prepare on given topics after which each of them conducts a training session. Mock training sessions are organized to gauge participants' training ability and assist them in improving the same. Participants are assessed by experienced ASER trainers and personalized feedback is given to each participant. This session prepares the participants to lead and deliver trainings in the next tier more efficiently and confidently.
- **Clarification and feedback:** Short feedback and clarification rounds are conducted to provide additional support, close any gaps and ensure participants' complete understanding of the survey processes.

[1]Rechecks are conducted in the surveyed villages to ensure that the survey was conducted properly.

- **District planning:** The national training is also a time to finalize the survey roll-out plans for each district, including identification of partners, plans for district level trainings and calendars for execution of the survey. Experience of the previous years' ASER survey is reviewed, manpower requirements are identified, partner lists are drawn up, tentative timelines are made, and detailed budgeting is done.

Tier II: District level training: District level trainings usually span 3-4 days. ASER state teams train the volunteers to carry out the survey in their allotted villages. Like national training, key elements of district trainings include classroom sessions, field practice sessions, and a quiz. In most districts, volunteers who score low on the quiz are either replaced or are paired with stronger volunteers to carry out the survey. After the district level training, the survey is conducted by a team of two volunteers in each village. It is mandatory for all participants to be present on all days of the training. Approximately 1,770 volunteers participated in ASER 2019.

Monitoring of trainings: Specific steps are taken to ensure that key aspects of training are implemented across all district level trainings:

- District level trainings are usually attended and monitored by the head of the Pratham programs in the state as well as members of the central ASER team.
- In all district level trainings, records are maintained for each ASER volunteer. These records contain attendance for each day of training and quiz marks of all volunteers. The data in this sheet is used for volunteer selection and pairing of volunteers for the ASER survey.

ASER 2019 'Early Years' – Village process

The following process explanations are excerpts from the ASER 2019 'Early Years' instruction manual, used by our volunteers during trainings. The sections covered are: talking to the Sarpanch, how to collect village information, how to make a map and divide it into sections, what to do in each hamlet/section, what to do in each household, and what to do with children. Sample English versions of the survey formats have been provided in between sections. All formats are translated into regional languages for the survey along with the instruction manual.

Talking to the Sarpanch

Purpose: Inform the Sarpanch about the ASER survey process and request cooperation for the survey.

Go to the village assigned to you. Two volunteers will survey one village. Once you are in the village, meet the Sarpanch and give him the 'Letter for Sarpanch'. Explain the purpose and importance of conducting the ASER survey and the activities you will be doing in the village. If the Sarpanch is not present, then meet a village representative, such as the Panchayat Secretary. People may come up to you and ask what you are doing. Use the same points to explain the purpose of your visit.

How to collect village information?

Purpose: To note the presence or absence of some basic facilities in the village.

Write the name of the state, district, block/taluk, village, volunteers, and date and day of the survey on the Village Information Sheet.

As you are walking around the village, look out for the basic facilities and schools listed on the Village Information Sheet and tick the 'Yes' box if they are available. If you are unable to locate these facilities and schools, ask the villagers and then observe yourself. While observing educational facilities in the village, go inside the facility to verify the information required before ticking the appropriate box. After you have walked around the entire village, if there are facilities on the Village Information Sheet that you could not observe, tick 'No' in the appropriate box. Every facility should be ticked either 'Yes' or 'No'.

Refer to page 135 for the Village Information Sheet.

How to make a map and divide it into sections?

Purpose: To divide the village into hamlets/sections and to randomly select households. The map is also used later for the recheck process.

Get to know the village: Walk around the village and talk to the local people. Ask them how many hamlets/sections are there in the village and where are they located? Where are the starting and ending points of the village? You could ask the villagers/village children to take you around as well.

Make a rough map: As you walk around, draw a rough map of how the village is laid out. The rough map will help you understand the pattern of habitations in the village. Use the help of local people to show you the main landmarks, such as places of worship, river, schools, bus stops, panchayat bhavans, anganwadis, ponds, clinics, ration shops, etc. Mark the main roads/streets/pathways through the village prominently on the map. Mark each government school for which you have recorded the information in the Village Information Sheet on the map.

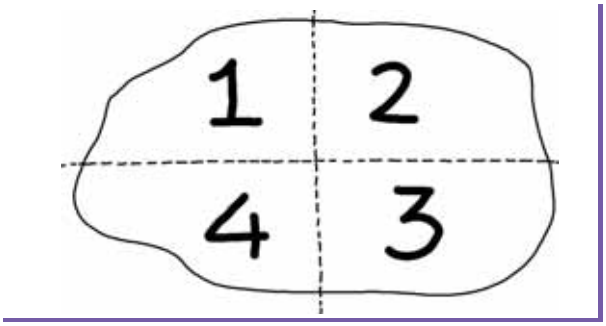
Verify the rough map: Get the Sarpanch or any other person who knows the village well to verify your rough map. Once everyone agrees that the map is a good representation of the village, finalize it.

Make the final map: Copy the final version of your rough map onto the map sheet given in the survey booklet (see page 136 for an example).

Once the final map has been made, make and number the sections as explained below:

Case 1: Continuous village

- Divide the entire village into 4 sections geographically.
- Assign each section a number. Write the number on the map (see the example given below).
- Select 5 households from each section.

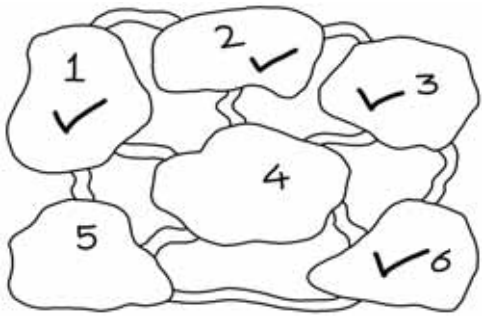


Case 2: Village with hamlets/sections

If the village has discontinuous hamlets/sections, assign each hamlet/section a number. Write the number on the map.

If the village has:

- 2 hamlets/sections: Divide each hamlet/section in 2 parts so that now you have 4 parts in all. Select 5 households from each part.
- 3 hamlets/sections: Take 7, 7 and 6 households from the 3 hamlets, respectively.
- 4 hamlets/sections: Select 5 households from each hamlet/section.
- More than 4 hamlets/sections: Randomly pick 4 hamlets/sections and then select 5 households from each of the 4 hamlets/sections. On the map, tick the hamlets/sections chosen for the survey on the map.



What to do in each hamlet/section?

You need to select 5 households from each of the 4 hamlets/sections that you have selected with children in the age group of 4-8 years, using the following procedure:

- Go to the selected hamlet/section. Try to find the central point in that hamlet/section. Standing in the centre of the hamlet/section, select the first household on your left. If there is a child in the age group of 4-8 years in this household, begin the survey from here.
- Thereafter, you must select every 5th household. This means that after you have surveyed the first household, skip the next 4 households and select the 5th one. While selecting households, count only those dwellings that are residential. 'Household' refers to every 'door or entrance to a house from the street'.
- If you have reached the end of the hamlet/section before surveying 5 households, go around the same hamlet/section again using the 'every 5th household rule'.
- If a surveyed household gets selected again, go to the next/adjacent household, and continue till you have 5 households from the hamlet/section.
- If the hamlet/section has less than 5 households, then survey all the households. Survey the remaining households from other hamlets/sections.
- If the village has 20 or fewer households, then survey all the households in the village.

Some special cases

- **Locked household:** If the selected household is locked, then record this household in the Household Log Sheet. This household will not be counted in the 20 surveyed households. Go to the next/adjacent household.
- **No response household:** If there is nobody at home or if people in a household refuse to participate in the survey, then record this household in the Household Log Sheet. This household will not be counted in the 20 surveyed households. Go to the next/adjacent household.
- **Household with multiple kitchens:** In each household, ask how many kitchens or chulhas are there. If there is more than one kitchen in a household, then select the kitchen from which the respondent's family eats. You will survey only those individuals who regularly eat from the selected kitchen. After completing the survey in this household, proceed to the next 5th household counting from the next household on the street, not from the next kitchen/chulha.
- **Household with no children:** If there are no children in the age group of 4-8 in the selected household then record the basic information about this household in the Household Log Sheet. If a household has children in the age group of 4-8 years but they will not be present in the household on all three days of the survey, then consider it a household with no children and record the basic information in the Household Log Sheet. Both these households will not be counted in the 20 surveyed households. Go to the next/adjacent household.

- **Child refused to get tested:** If a child in the age group of 4-8 years refuses to participate in the testing then fill all the information in the Household Survey Sheet except for the information on testing and make a note in the Household Survey Sheet. This household will be counted in the 20 surveyed households. Skip the next 4 households and go to the 5th household.
- **Unable to complete 20 households where children in the age group of 4-8 years have been tested after finishing the survey in all hamlets/sections:** In such a case, survey another household following the 'every 5th household rule' from the same hamlet/section in which 5 households where children in the age group of 4-8 years have been tested were not completed. Households in which children refused to participate in testing will not be included in this.

Filling the household log sheet

Record the basic information of all households that you have visited during the survey in the Household Log Sheet (see page 137):

- Note the number of the hamlet/section from the map.
- If a household is locked or there is no response, then tick under the appropriate box. No other information will be recorded for this household.
- For every other household visited, ask the respondent and write the name of the head of the household. Then ask the respondent how many children in the age group of 4-8 years live regularly in the household and eat from the respondent's kitchen and fill the details. If a household does not have any children in the age group of 4-8 years, then record '0'.
- Ask the respondent and note the mobile number of any one member of the household. Explain to the respondent that the purpose of taking the mobile number is only so someone can call later to confirm if the volunteers came to the household.
- Write the number of the selected households (with children in the age group of 4-8 years) under the section 'Surveyed Household (HH) No. (for households with 4-8 year olds)'. Write '1' for the first selected household, '2' for the second selected household, and do the same for 20 households.

Sample Village Information Sheet

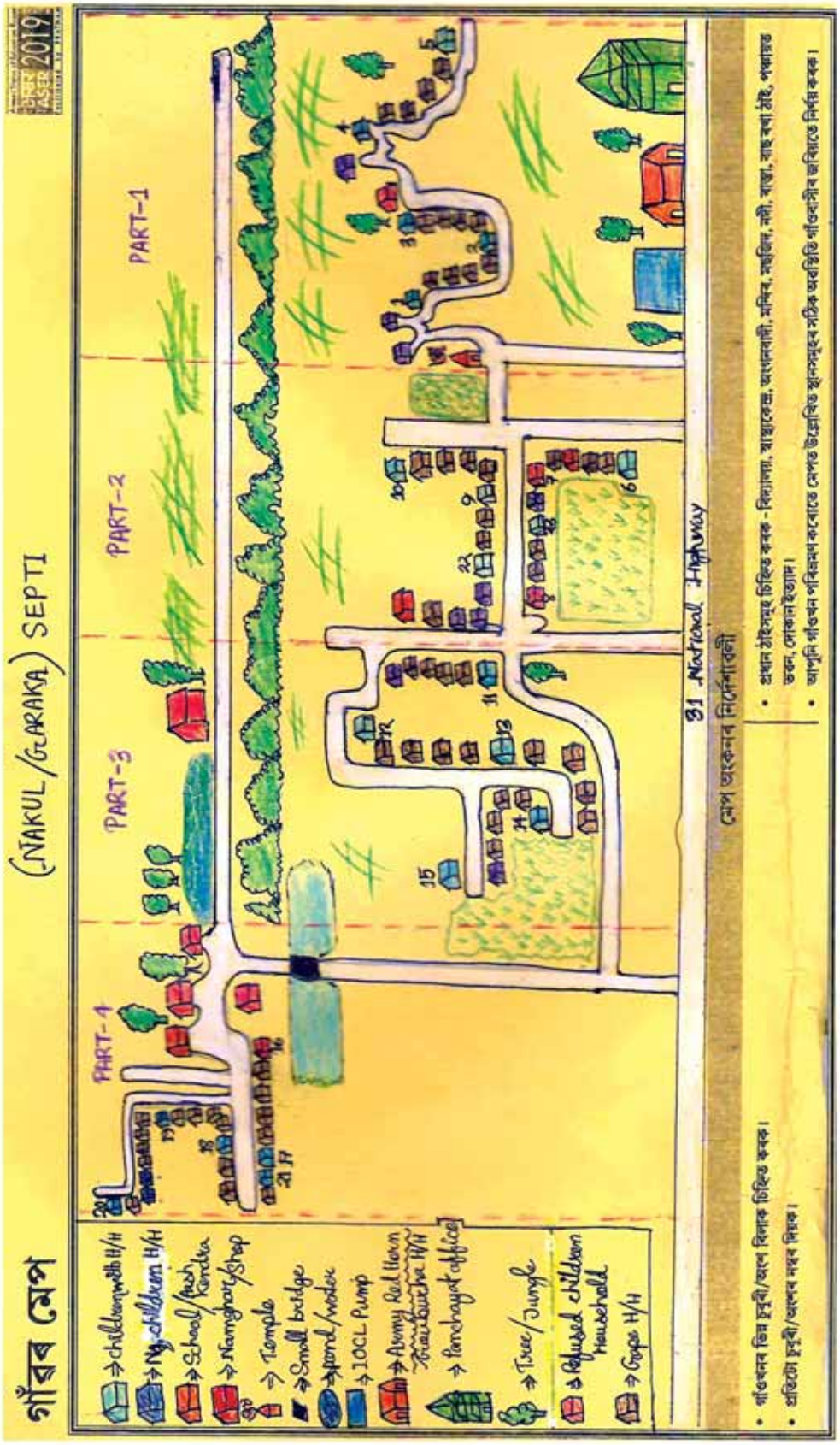
VILLAGE INFORMATION SHEET

ASER 2019

Name of state:	UTTARAKHAND	Name of block:	KALSI
Name of district:	DEHRADUN	Name of village:	MARLOH KHOKTA
Surveyors' names:		1. KIRAN KUMAR 2. RAJESH SHARMA	
Date of survey:	8 NOVEMBER 2019	Day of survey:	FRIDAY

	Please tick (✓) the relevant box	Did you see the following facilities in the village yourself? (Tick Yes/No based on your observation)	
BASIC FACILITIES	Pucca road leading to the village?	✓YES	NO
	Electricity connection in the village?	✓YES	NO
	Post office in the village?	YES	✓NO
	Bank (any type) in the village?	YES	✓NO
	Govt. Primary/Sub Health Centre in the village?	✓YES	NO
	Private health clinic in the village?	YES	✓NO
	Computer centre/internet café in the village?	YES	✓NO
SCHOOLS	Govt. Primary School (Std. 1 to 4/5) in the village?	✓YES	NO
	Govt. Upper-primary School (Std. 1 to 7/8) in the village?	YES	✓NO
	Govt. School (Std. 1 to 10/12) in the village?	YES	✓NO
	Anganwadi in the village?	✓YES	NO
	Pre-primary section in any govt. school in the village? (Do not include anganwadi)	YES	✓NO
	Private school in the village?	✓YES	NO

Sample village map



Sample Household Log Sheet

HOUSEHOLD LOG SHEET

This sheet is a record of all households you have visited including locked and no response households.

Block name: KALSI **Village name:** MARLOH KHOKTA

S.No.	Hamlet/ section no.	For Locked or No response households, (✓) tick		Full name of the head of the household	How many children in the age group of 4-8 years live regularly in this household?	Mobile no. of any member of the household	Surveyed Household (HH) No. (for households with 4-8 year olds)
		Locked	No response				
1	1			AJAY PATEL	1	98716XXXXX	1
2	1	✓					
3	1		✓				
4	1			SHEBHA SHARMA	2	99881XXXXX	2
5	1			SUNIL KUMAR	0	87651XXXXX	
6	1			KAMAL SINGH	1	89111XXXXX	3
7	1			PRADEEP KUMAR	1	79612XXXXX	4
8	1	✓					
9	1	✓					
10	1			AMIT CHAWLA	2	98111XXXXX	5
11	2			RAJ AGARWAL	1	88776XXXXX	6
12	2		✓				
13	2		✓				
14	2	✓					
15	2			MONU CHOUDHARY	1	91125XXXXX	7
16	2			SURAJ KUMAR	1	96741XXXXX	8
17	2	✓					
18	2			SANDEEP BAHL	2	88600XXXXX	9
19	2			USHA KUMAR	0	98777XXXXX	
20	2			RAJESH SINGH	2	87242XXXXX	10
21							
22							
23							
24							
25							
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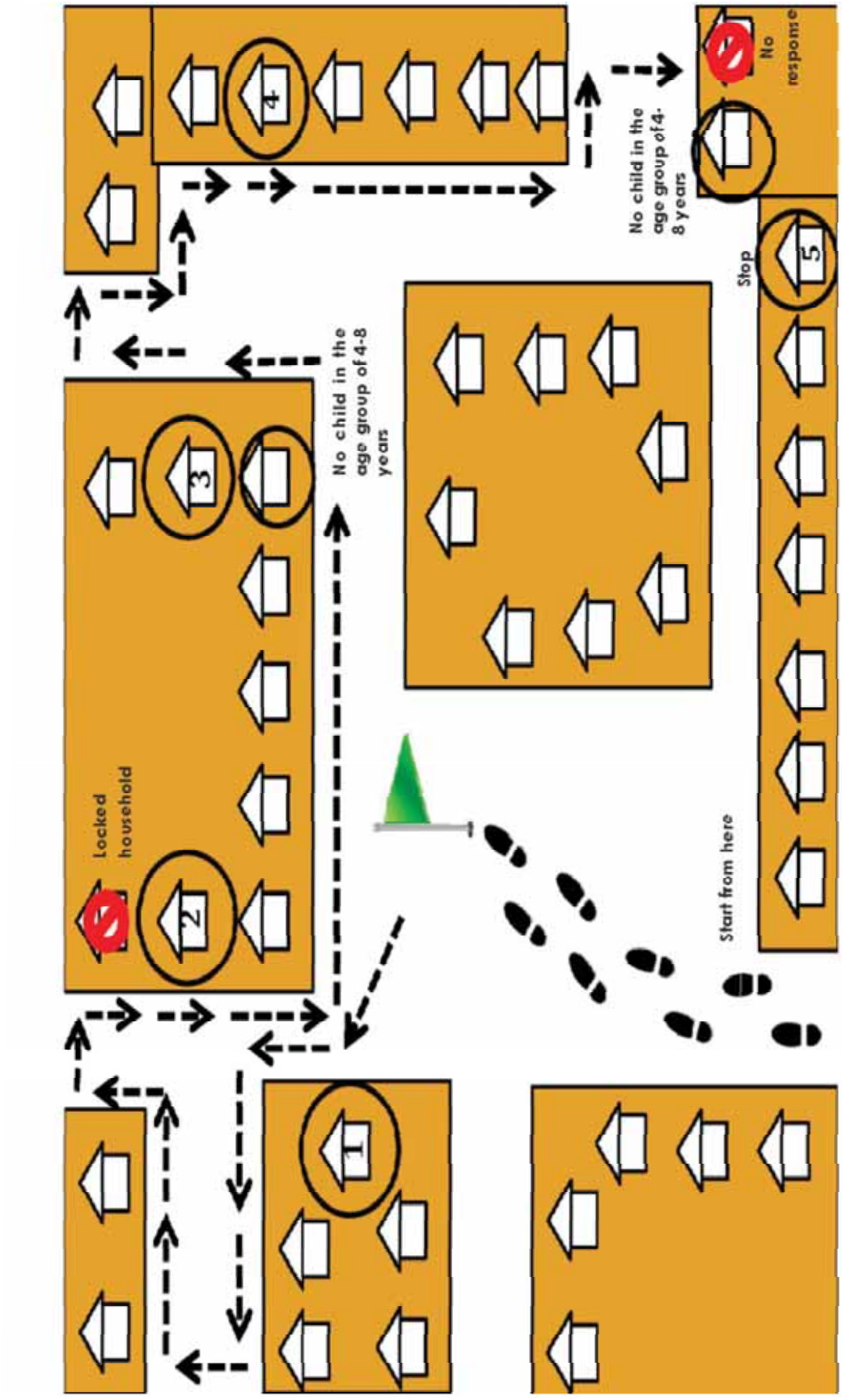
Page 1 Total							

Process to sample households in a hamlet



What to do in each household?

Purpose: To collect all required information about the selected households.

Refer to page 143 for the Household Survey Sheet.

GENERAL INFORMATION

Fill in the general information about the household in the top block of the Household Survey Sheet:

- **HH No.:** Write the household number on every sheet. Write '1' for the first household surveyed, '2' for the second household surveyed and so on for all surveyed households.
- **Full name of the head of the household:** Write the name of the head of the household after asking the respondent.
- **Hamlet/Section no. from the map from which the household is selected.**

All the above information should match the information filled in the Household Log Sheet for each surveyed household.

- **Total number of members in the HH who regularly eat from the same kitchen:** Ask this question to the adults present in the household and write the total number. If there are multiple kitchens/chulhas in the household, remember to include only those members who eat regularly from the respondent's kitchen.
- **Respondent name:** 'Respondent' is an adult who is present in the household during the survey and is providing you with information.

INFORMATION ABOUT CHILDREN AND ADULTS LIVING IN THE HOUSEHOLD

No information will be written in the Household Survey Sheet about any child in the age group of 4-8 years who does not regularly live in the household and does not eat from the respondent's kitchen.

Collect information from the sampled household about all children in the age group of 4-8 years who regularly live in the household and eat from the same kitchen. Ask members of the household to help you identify these children. All such children should be included, even if their parents live in another village or if they are the children of the domestic help in the household.

RULES FOR SELECTING CHILDREN

- **Include all children who are:**
  - **Not at home during the time of the survey:** Children often go out to play. If the child is nearby but not at home, record the information about the child, like the name, age, and schooling status. Ask the family members to call the child so that you can speak to her directly. If she does not come immediately, make a note of the household and revisit it once you are done surveying the other households.
  - **Relatives who live in the sampled household on a regular basis:** Include these children because they live in the same household on a regular basis but do not record their parent's information if the parents' do not live regularly in this household.
- **Do NOT include all children who are:**
  - **Not living in the household on a regular basis:** Do not include children who do not regularly live in the household.
  - **Visiting children:** Do not include children who have come to visit their relatives or friends as they do not regularly live in the sampled household.

Many children may come up to you and want to be included out of curiosity. Do not discourage children who want to be tested. You can interact with them, but data must be recorded ONLY for children living in the 20 households that have been randomly selected.

Children: Now that we have identified which children to survey, let us review what information is to be collected about each child. Remember, one row of the Household Survey Sheet will be used for one child.

- **Collect the following information for ALL children in the age group 4-8 years:**
  - **Child's name, age, sex:** The child's name, completed age and sex should be filled for all children in the sampled household. For female children write 'F' and for male children write 'M' (F= Female, M= Male).
- **For children currently enrolled in school:** Fill the child's class and type of school under 'In school children' in Household Survey Sheet as:

- If the child is attending an anganwadi, then put a tick under 'Anganwadi'. Tick under 'Government' in the 'Type of School' block.
- If the child is attending pre-school like Lower Kindergarten (LKG), or Upper Kindergarten (UKG), or Nursery (NUR), or Balwadi, then tick under 'LKG/UKG/NUR/Balwadi'. Additionally, put a tick under 'Private' in case LKG/UKG/NUR/Balwadi is a private school, OR under 'Government' in case of a pre-primary class of a government school.
- If the child is enrolled in Std I or above then write the Std number in which the child currently goes to under 'Std' and put a tick under the appropriate type of school in the next column.
- If a child is double enrolled (i.e. attending more than one school), then record the information only about the school she attends regularly.
- Medium of instruction: Record the language in which the child's school textbooks are written. If you are unsure about this, ask the respondent which language the child's Math textbook is written in and note the answer.

- **For out of school children (currently not enrolled in school):** Fill the child's information under 'Out of school' as follows:
  - **Never enrolled:** If the child has never been enrolled in school, then put a tick under 'Never enrolled'.
  - **Drop out:** If the child has dropped out of school, then put a tick under 'Drop out'. Note the Std in which the child was studying when she dropped out, irrespective of whether she passed or failed in that Std. Probe carefully to find out these details. Also, note the actual year when the child left school. For example, if the child dropped out in 2016 write '2016'. Similarly, if the child dropped out in the last few months of this year, write '2019'. Children who are out of pre-school but are not yet enrolled in Std I will also be considered as dropped out. In such a situation, write the name of the class (Anganwadi/LKG/UKG/NUR/Balwadi) under 'Which Std were you in when you left school?'. For example, if a child is out of anganwadi, then write 'Anganwadi'.
- **Tuitions:** Ask the respondent if the child takes any tuition (meaning paid classes outside school).
  - If they take classes, then ask how much the parents pay for the child's tuition per month.
  - If the respondent cannot tell you the payment made per month, then leave the box blank.
  - If the child takes more than one paid tuition class, then add the payment for all the classes (in a month) and write the total amount paid per month.

Father's information: After filling the child's information, we ask for the age and schooling information of the child's father. We will only write this information if the father is alive and regularly living in the household. If the father is dead or not living in the household, do not ask for this information. If the father has died or is divorced and the child's stepfather (mother's present husband) is living in the household, we will include the stepfather as the child's father. While recording the father's education, record the last class he has completed. For graduates, write B.A., B.Com., etc.

Mother's information: While beginning to record the information for each child, we ask for the name of the child's mother. We note her name only if she is alive and regularly living in the household. If the mother is dead or not living in the household, do not write her name. If the mother has died or is divorced and the child's stepmother (father's present wife) is living in the household, we will include the stepmother as the child's mother. Note the mother's age and schooling information in the box 'Mother's Information'. While recording the mother's education, record the last class she has completed. For graduates, write B.A., B.Com., etc.

Activity for mother: After completing the testing of the child, request the mother to read a small text. Then give the mother the paragraph to read from the section 'Activity for mother' given in the Test Administration Sheet. Tell her that she can read the paragraph silently and then she will have to answer the question given at the end of the paragraph. If the mother reads the paragraph on her own, then tick under 'Mother read the paragraph' in the section 'Activity for mother' in the Household Survey Sheet. If she answers the question then note her answer under 'Write name of the activity'. If she cannot read the paragraph, then read out the paragraph and question to her and tick under 'Surveyor read the paragraph' and note her answer under 'Write name of the activity'. If she does not want to participate in the activity/refuses to read/does not give any answer, then tick under 'Mother refused to participate'. If she is not present at the time of the survey, then tick under 'Mother was not present'.

HOUSEHOLD INDICATORS

All information on household indicators is to be recorded, based as much as possible on observation. If for some reason you cannot observe them, note what is reported by the respondent/ household members only and not by others. In case of assets like television and mobile phone, ask whether it is there in the household and whether it is owned by the household or not. Some households might be hesitant to give this information. Explain to them that this information is being collected in order to link the education status of the child with the household's economic conditions.

- **Type of house (the child lives in) are categorized as follows:**
  - **Pucca House:** A pucca house is one which has walls and roof made of the following material:
    - **Wall material:** Burnt bricks, stones (packed with lime or cement), cement concrete, timber, ekra, etc.
    - **Roof material:** Tiles, GCI (Galvanised Corrugated Iron) sheets, asbestos cement sheet, RBC (Reinforced Brick Concrete), RCC (Reinforced Cement Concrete), timber, etc.
  - **Semi-kutcha house:** A house that has fixed walls made up of pucca material but roof is made up of material other than those used for pucca houses.
  - **Kutcha House:** The walls and roof are made of material other than those mentioned above like unburnt bricks, bamboos, mud, grass, reeds, thatch, loosely packed stones, etc.
- **Motorized 2-wheeler:** Ask the respondent and mark 'Yes' if the household owns a motorized 2-wheeler like a motorcycle/scooter, otherwise mark 'No'.
- **Motorized 4-wheeler:** Ask the respondent and mark 'Yes' if the household owns a motorized 4-wheeler like a car, jeep etc., otherwise mark 'No'.
- **Electricity in the household:**
  - Mark 'Yes' or 'No' by observing if the household has wires/electric meters and fittings, bulbs or not.
  - If there is an electricity connection, ask whether the household has had electricity at any time on the day of your visit, and not necessarily when you are doing the survey.
- **Toilets:** Mark 'Yes' or 'No' by observing if there is a constructed toilet in the house. If you are not able to observe, then ask whether there is a constructed toilet or not.
- **Television:** Mark 'Yes' or 'No' by observing if the household has a television or not. If you are not able to observe, then ask. It does not matter if the television is in working condition or not.
- **Mobile phone:** Mark 'Yes' if the household has a mobile phone, otherwise mark 'No'. In the next question, mark 'Yes' even if one mobile phone in the household is a smartphone. If there is no smartphone in the household, then mark 'No'. A smartphone is a phone with internet access.
- **Reading material:** Do not include calendars, religious books and school textbooks.
  - **Newspaper:** Mark 'Yes' if the household gets a newspaper every day. If not, mark 'No'.
  - **For children:** This includes poems/story books, comics for children, activity books, etc. If any of the above reading material for children is available, mark 'Yes', otherwise mark 'No'.
  - **Other reading material:** This includes other books, magazines, etc. If this reading material is available, mark 'Yes', otherwise mark 'No'.
- **Other questions for the household:**
  - Mark 'Yes' if anyone (apart from the mother(s) and father(s) whose background information has already been recorded earlier) in the household has completed Std XII.
  - Mark 'Yes' if anyone in the household knows how to use a computer.
  - **Mobile number of the household:** Please note the mobile number in the box at the bottom of the sheet. Explain to the household members that the mobile number will only be used for the recheck process and not for any other purpose, and will not be shared with anyone else.

If you do not get an answer for a question in the Household Survey Sheet, leave the appropriate box blank.

People often gather around and want to know what is going on. Be polite. Explain what you are doing and why. Tell them about ASER. Remember to thank people after you have finished surveying the household. They have given you their time and the information you need. Appreciate their efforts, do not just get up and walk away.

What to do with chidren?

After filling the household information in the Household Survey Sheet, you must test all children in the age group of 4-8 years living in the household. Use the Testing Tool, Test Administration Sheet and the testing material to test each child, and based on the responses of the children, tick under the appropriate code in the Household Survey Sheet.

- **Testing pack:** The testing pack contains the following materials which you will use to test children in the village:
  - **Test Administration Sheet for the volunteers:** The Test Administration Sheet has instructions for the volunteers for what they will say to the child while administering each question and the material to be used for the same.
  - **Testing Tool for children:** The Testing Tool has questions to be shown to the children.
  - **Testing material:** Different shape pieces, small picture cards, pieces of puzzles.
  - **Household Survey Sheet:** This format will be used to record answers given by the child and information about the household.

It is important to follow the guidelines given below while testing children:

- **Sufficient space for testing:** Show the child's parents/ relatives the Testing Tool and testing material. Request them to allow you to test the child in a place with ample space to spread out the testing material in front of the child. Do not keep the testing material in your lap while testing the child. Make sure that you and the child are sitting at the same level during testing, i.e., if the child is sitting on the floor, you should also be seated on the floor. Do not administer the testing while standing.
- **No pressure from others:** Often family members and neighbors gather around to watch how the child is performing. This can make the child nervous. The volunteers should ensure that this does not happen. In such a situation, the volunteer can request the people to stay far from or behind the child and stay quiet. Invite the mother to sit near the child during the testing process.
- **Familiarity with the child:** Often children feel shy and hesitate to talk to new people. Establish a relaxed environment for the child by having a friendly conversation before you start assessing her. Ask the child about her favorite game/sport, food, story, song, friend, teacher; whether she has been to a fair and what she enjoyed most in it, etc. If you feel that the child is still not opening up, you can do some warm-up activities/games with her. When you feel the child is comfortable, show her the Testing Tool and material and tell her that you are going to do some easy and fun activities with her today.
- **No prompting:** Often family members, neighbors or children who have gathered around will try to help the child by prompting or giving the answer. In such a situation stop the testing for a moment and request everyone to not speak during the testing. You can tell the mother/any elder that you want to see how much the child can do on her own. Request them to help you in not letting anyone interfere during the child's testing. It is possible that younger children might not understand your spoken language. In such a situation, if the child's mother or an elder relative is willing to repeat the question to the child in her local language then you can take their help. Ensure that they do not prompt or help the child with the answer.
- **Encouragement and patience with the child:** Before starting any activity, ensure that the child is listening to you carefully. If not, then attract the child's attention by asking her to listen carefully. Be patient when the child is doing any task. Give the child ample time to read, think and solve every question. Do not hurry her. Keep encouraging the child by praising her effort regardless of whether the answer is right or wrong.

It is very important to be in the right frame of mind while assessing children. We are not going to the village as evaluators. We just want to find out the status of children's early language, cognitive development, early numeracy and social and emotional development. Therefore, it is important that you follow the guidelines given above while testing children.

For a step by step explanation of the testing process, please refer to the 'ASER 2019 'Early Years'- Early learning tasks' section of this report on pages 36-42.

Sample Household Survey Sheet

HOUSEHOLD SURVEY SHEET

State: UTTARAKHAND District: DEHRADUN Block: KALSI Village: MARLOH KHOKTA

ASER 2019 — Facilitated by PRATHAM

HH No.	Full name of family head	Total number of members in the household who eat from the same kitchen
1	AJAY PATEL	6

Respondent name	Hamlet/section no. (from the map)
ANJU PATEL	1

Surveyors' names
1. KIRAN KUMAR
2. RAJESH SHARMA

Date of survey: 8-11-2019
Day of survey: FRIDAY
Start time of survey: 1:25pm

Serial no.	Mother's Name	Child's General Information (For age 4-8): Name of child (Children aged 4-8 regularly living in the household)	Age	Sex (M/F)	Schooling Status: For age 4-8: In school children (Currently enrolled in school): (Fill only one column): Anganwadi	LKG/UKG/NUR/ Balwadi	Std.	Type of school (Tick only one column): Government	Private	Madrasa	EGS/AIE, Other	Language in which the child is taught in school? (Medium of instruction)	Out of school children (Currently not enrolled in school): Never enrolled	Drop out	Drop out: Which Std. were you in when you left school?	Drop out: Which year did you drop out (eg. 2016)?	Tuition: Does the child take any paid tuition class currently? Yes	No	If Yes: How much do you pay for the child's tuition per month? (Write only number)	Father's Information: Age	Has the father ever attended school? Yes	No	If attended school, then which Std. completed?	Mother's Information: Age	Has the mother ever attended school? Yes	No	If attended school, then which Std. completed?	Activity for mother (Tick only one column): Mother read the paragraph	Surveyor read the paragraph	Mother refused to participate	Mother was not present	Write name of the activity
1	ANJU PATEL	SANJAY PATEL	6	M			1	✓				HINDI					✓		200	30	✓		5	28	✓		10		✓			SORTING
2																																
3																																
4																																
		Total Count																														

Household Indicators (Tick the appropriate column)

Type of house: Pucca (with walls and roof of brick and cement)	Semi Kutcha	Kutcha	Motorised 2-wheeler (Motorcycle / scooter): Yes	No	Motorised 4-wheeler (Car, jeep, etc.): Yes	No	Electricity connection (Look for wires and fittings): Yes	No	If electricity in household, was there electricity today? Yes	No	Toilet in the household: Yes	No	TV in the household: Yes	No	Mobile phone: Mobile in the household: Yes	No	If yes, is any mobile a smart-phone? Yes	No	Reading material (Other than school textbooks and religious books): Gets newspaper everyday (Ask): Yes	No	For children (Story, poem, activity books, etc.): Yes	No	Other (Books, magazines, etc.): Yes	No
✓			✓			✓	✓		✓		✓		✓		✓		✓			✓		✓		✓

Has anyone in the household completed 12th Std.?*	Yes	No	Don't know
		✓	

*Do not include the above mentioned mother(s) and father(s).

Does anyone in the household know how to use a computer?	Yes	No
		✓

Mobile number of the household: 98716XXXXX

ASER 2019 'Early Years' – Quality control

Quality control processes form an integral part of the ASER architecture, and quality control processes are reviewed and improved each year in order to ensure the credibility of ASER data. For ASER 2019 as well, these processes were laid out for every stage of the survey and were executed by the ASER state and central team members in every surveyed district.

The quality control processes can be broadly divided into internal field-based processes and data entry processes.

Field processes

These comprise 'monitoring' and 'recheck' activities. Each year these processes are reviewed and strengthened in order to improve the quality of the data collected.

Monitoring: During the survey, quality was controlled via oversight of field activities in selected villages while the survey was in progress. As in previous years, the ASER 2019 monitoring process comprised two kinds of activities:

- **Field monitoring:** The ASER state teams personally monitored survey teams who were evaluated during the district level training as they could have possibly required additional support during the actual field survey. In each district, state team members monitored approximately 3 villages per person out of the 60 villages surveyed in each district. Pratham team members also supported the monitoring effort this year.
- **Phone monitoring:** ASER state teams made phone calls to all the volunteers as the survey rolled out in a district. Information regarding the progress of survey activities was collected during the calls and volunteers' doubts were clarified. This helped to provide immediate corrective actions and to avoid repetition of mistakes in case of a two-weekend survey.

Recheck: Information collected during the survey was verified at various levels. The following recheck activities were conducted in ASER 2019:

- **Desk and phone recheck:** On the completion of the survey in a district, ASER state teams conducted desk rechecks of the survey booklets received for all the surveyed villages, as far as possible in presence of the volunteers. In addition, ASER state teams telephoned at least 8 out of 20 surveyed households in each village. These procedures enabled quick identification of villages which were not surveyed correctly.
- **Field recheck:** Based on the information collected from the desk and phone rechecks, villages were identified for an in-person field recheck by the ASER state teams. In each such village, 24% of all surveyed households were rechecked. This process involved verification of the key parameters of the survey- sampling, selection of children, and testing.
- **Cross-state field rechecks:** As the last stage to strengthen the quality control process, ASER state team members switched states and conducted a cross-state recheck. Some villages were chosen purposively and others were selected randomly. The recheck process remained the same.

Overall, 77% villages surveyed in ASER 2019 were either field monitored, field rechecked or both by ASER teams.

Data entry

Data for the survey was recorded in hard copy survey booklets. To compile and then process this data for analysis, it was entered into a database (MS Access or MySQL). For each question in the survey, rules and validations were in place to control incorrect entries.

Once the software was ready, data entry centres were selected across the country. Due to the scale and short timeline of the survey, ensuring smooth movement of data to the entry centres is vital. The preference was to choose a centre that was within the surveyed state, so that the data could reach without delay. For ASER 2019, 11 data entry centres were selected across the country and their staff was trained in person on how to enter the ASER data.

After data entry was completed, every 5th entry was cross-checked with hard copies to ensure that correct data had been entered. If more than 2 mistakes were found, data for the entire village was cross-checked. A final cross-check was done centrally between child-wise data and a sheet with compiled data. If there was more than a 2% difference between the two data sets, then the entire district's data was cross-checked.

At the end of all these layers of quality control checks, villages with poor survey quality were either resurveyed or dropped from the data set.

ASER 2019 'Early Years' – Annexure

Measurement of social and emotional learning in ASER 2019 'Early Years'

About Social and Emotional Learning (SEL)

At its core, SEL focuses on how children can identify and regulate their own emotions and use this ability in their social interactions with people around them. The Organization for Economic Cooperation and Development (OECD) refers to social and emotional skills as 'individual capacities'. These capacities can be exhibited in patterns of feelings and behaviors, developed in formal (school and after-school programs) and informal (community, family) learning experiences, and contribute to socio-economic outcomes during the child's life.

Since CASEL (Collaborative for Academic, Social, And Emotional Learning) has been the torchbearer of SEL ever since the domain was in its embryonic stage, its framework is considered to be the most comprehensive. Most research, done by a variety of stakeholders including policymakers in the US, have used CASEL's work as a stepping stone. ASER 2019 'Early Years' has followed the same path to develop the SEL component of its assessment tool.

CASEL emphasizes that SEL is not a developmental outcome but a process of learning that starts early in life and continues into adulthood and beyond. It defines SEL as the "process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions."

CASEL has sub-divided SEL into five competencies:
a) Self-awareness: understanding one's strengths, limitations, and ability to identify one's emotions;
b) Self-management: effectively managing impulses, regulating, and coping with emotions;
c) Social awareness: understanding other peoples' perspectives and empathizing with them;
d) Relationship skills: communicating well, cooperating with others and constructively dealing with conflicts; and
e) Responsible decision making: taking morally, ethically and socially sound decisions.
Social and emotional skills must be meaningful (lead to life and academic outcomes), measurable (capable of being measured and assessed), and malleable (can be moulded by personal experiences and influences).

These skills are transferable, as they can be taught and learnt. Several research studies have corroborated the fact that integration of SEL into the school curriculum is beneficial not just for the individual child but also for society as a whole. The benefits of SEL for children are likely to spill over and lead to positive consequences for the community they belong to. There are numerous positive outcomes of SEL programs. Short and medium term outcomes include impact on academic performance and on personal growth and positive behavior, and longer term outcomes include a positive impact on a variety of domains, including college and career readiness, healthy relationships, reduced criminal behavior, improved mental health and engaged citizenship, and increased earnings.

ASER 'Early Years' and types of SEL assessments

The existing measurement models for SEL can be categorized into three groups:

- **Self/Caregiver/Teacher questionnaires** are used for an in-depth analysis of a child's social and emotional development. However, these questionnaires are prone to several biases (social desirability, self-perception, memory effect etc.).
- **Direct or performance-based assessments** involve presenting certain scenarios to the child and looking for certain traits. Most direct assessments use computer-generated simulations with an interactive user interface.
- **Classroom observations** involve tracking a child or group of children over a time period in their classroom environment to draw meaningful inferences. This approach is time and human resource intensive.

Based on the requirements and objective of ASER 2019 'Early Years', performance based or direct assessments were the best fit. They involve interactions with the child to directly assess their social and emotional skills.

SEL competencies assessed in ASER 'Early Years'

The tasks and competencies have been mapped with policy guidelines and pre-school and early grade learning outcomes by NCERT. The NECCE curriculum framework lists children's ability to manage their feelings and emotions, and encouragement of

development of self-control as an expectation for 3-6 year olds. Preschool 1 learning outcomes include concepts like caring, sharing, self-regulation, ability to resolve minor conflicts (with adult assistance), and broader problem solving skills. Preschool 2 learning outcomes also expand on the child's ability to map emotions to different situations. If these skills and concepts were mapped to the competencies listed under CASEL, they would include self-awareness, self-regulation, and social awareness. As a result, these three competencies were shortlisted to match the expectations from children in the 4-8 age group.

Emotional knowledge and primary emotions

Primary emotions are the first instinctive and unthinking responses to any situation. The scope of ASER 'Early Years' tool was limited to the four emotions that research has identified as primary emotions - happiness, sadness, anger, and fear.

Emotions factor into every competency in the SEL domain, and the ASER 'Early Years' tool assesses different levels of emotional knowledge. A set of emotion cards was devised to facilitate the administration of tasks and ensure that young children's developing expressive emotional vocabulary did not hinder their ability to respond to the tasks. These cards also ensured consistency in responses from varied sociocultural contexts as well as facilitated grading of tasks. A number of pilots were conducted to examine how different iterations of the emotion cards worked in the field. Each new version was an attempt to create visual cues that children could easily relate to. The field pilots showed that real pictures (with real actors) worked better than illustrations. Hence, a mix of research-backed illustrations based on Facial Action Coding System[1] and real-life actors was used to create the final version of emotion cards.

Overview of SEL tasks in ASER 'Early Years'

Table 1: Overview of the SEL tasks

Task	Competency	Importance of competency
Emotion identification	Self-awareness	Self-awareness is being aware of and correctly identifying one's thoughts, emotions and how this influences behavior. This is an important skill in holding successful social interactions. If a child cannot understand and interpret emotions, she will fail to decode how she feels, read non-verbal cues and understand what others feel. Further, she will be unable to regulate her emotions or understand the consequences of her expressing these.
Situation to emotion mapping		
Situation reaction test (conflict)	Self-regulation	Self-regulation is the ability to effectively regulate one's thoughts, behaviors and emotions depending on different situations. This competency facilitates the capability of an individual to work towards goals - personal and academic. It helps in shifting attention, inhibiting or triggering behavior and moderating emotional and behavioral reactivity based on requirement of social situations.
Situation reaction test (empathy)	Social awareness	Social awareness is the skill that allows individuals to understand others' perspective and empathize with them, including people from varied cultures. An individual with social awareness skills is able to understand ethical and social norms for social interactions. This competency stems from the ability to acknowledge oneself as distinct and separate from others. Social awareness facilitates acting with compassion and respecting people from different backgrounds.

[1]The Facial Action Coding System (FACS) was developed by Paul Ekman to describe visual cues associated with a particular emotion. FACS breaks down the visual cues into atomic action units and describes emotions as a combination of different action units.

Appraisal and expression of emotion in self and others is an important part of SEL. This skill requires a developed emotional vocabulary.

(i) Emotion identification: In this task, the child is shown 4 cards each showing a different emotion. She ask to point to the card that corresponds to each emotion.

Table 1: % Children age 4-8 who can correctly identify emotions 2019

Age	Happy	Sad	Angry	Afraid
Age 4	62.2	43.3	47.7	47.4
Age 5	72.3	50.1	57.4	55.8
Age 6	77.6	56.7	67.2	66.1
Age 7	82.0	62.8	73.7	73.3
Age 8	83.8	68.2	78.0	78.6

Table 1 shows the proportion of children who could identify different primary emotions correctly. For example, of all 8-year-olds, 83.8% children can correctly identify happiness, 68.2% can identify sadness, 78% can identify anger, and 78.6% can identify fear. For all age groups, fewer children could identify sadness as compared to the other four emotions. Children's ability to identify emotions correctly improves with age. If children cannot distinguish between visual cues associated with different emotions, they cannot comprehend how the other person is feeling. This can lead to a major gap in processing of social and emotional information resulting in problems in social interactions and decision making.

Table 2: % Children who could distinguish between valences and identify all emotions correctly 2019

Age	All valences	All emotions
Age 4	53.8	24.0
Age 5	63.3	33.6
Age 6	72.2	44.6
Age 7	77.2	54.0
Age 8	80.9	60.5

Table 2 shows the proportion of children who could identify all four emotions correctly as well as those who could distinguish between emotions by their valences correctly. Each emotion has a valence[2] associated with it. Since there is a greater number of emotions in the negative valence and children find it harder to distinguish between emotions of the same valence, negatively valenced emotions (sadness, fear, anger) are harder to identify. Children find it easier to distinguish between valences than to identify emotions accurately. This ability also develops with age and exposure. For example, 80.9% of all 8-year-olds can distinguish between valences correctly while only 57.3% can identify all four emotions correctly.

(ii) Situation to emotion mapping: In this task, leaving the cards in front of the child, the volunteer read out four hypothetical situations one-by-one to the child. The child was asked to point at any on the cards and show how they would feel in each situation. This task assesses the child's verbal and non-verbal appraisal and expression of emotions.

Table 3: % Children age 4-8 who chose different emotions for the situation: Your mother/father bought you a new toy. How would you feel? 2019

Age	No response	Happy	Sad	Angry	Afraid	Total
Age 4	18.0	53.6	9.5	9.8	9.0	100
Age 5	11.6	65.9	7.8	9.0	5.6	100
Age 6	6.9	76.0	6.7	5.9	4.6	100
Age 7	4.2	84.1	4.6	4.3	2.7	100
Age 8	2.3	88.4	3.8	3.3	2.2	100

Table 4: % Children age 4-8 who chose different emotions for the situation: Your friend ate all your candy. How would you feel? 2019

Age	No response	Happy	Sad	Angry	Afraid	Total
Age 4	21.7	12.6	26.1	26.8	12.8	100
Age 5	13.1	11.5	33.2	30.2	12.1	100
Age 6	7.5	6.9	36.9	37.6	11.2	100
Age 7	4.4	4.5	39.4	42.9	8.8	100
Age 8	2.2	3.9	38.2	47.8	7.9	100

[2]Each emotion has an intrinsic characteristic called 'valence' which is a connotation of the events that evoke that particular emotion, that is happy is a positively valenced emotion as it is evoked by positive events. Sadness, anger and fear are negatively valenced emotions.

Table 5: % Children who chose different emotions for the situation: You were sleeping at night. You heard a sound coming from the dark. How would you feel? 2019

Age	No response	Happy	Sad	Angry	Afraid	Total
Age 4	23.0	12.0	20.9	17.0	27.2	100
Age 5	13.4	9.5	23.6	17.6	36.0	100
Age 6	8.0	6.1	26.3	16.9	42.8	100
Age 7	4.1	3.9	27.4	15.0	49.6	100
Age 8	2.3	2.9	27.4	13.0	54.4	100

Table 6: % Children who chose different emotions for the situation: You were about to play with your toy but your father stopped you from playing. How would you feel? 2019

Age	No response	Happy	Sad	Angry	Afraid	Total
Age 4	24.1	14.7	22.7	21.0	17.5	100
Age 5	13.8	12.8	24.9	26.9	21.7	100
Age 6	8.3	9.1	28.0	30.5	24.2	100
Age 7	4.2	6.5	31.0	34.7	23.6	100
Age 8	2.6	5.0	33.5	35.9	23.0	100

Table 3 shows the proportion of children who chose different emotions for the first situation. Of all 4-year-olds, 53.6% children pointed to the 'happy' emotion card when asked how they would feel if their mother/father bought them a new toy, while 18% did not give a response, 9.5% chose the 'sad' emotion card, 9.8% chose 'angry' and 9% chose 'afraid'. The ability to pick a stereotypical response in these situations also improves with age. Stereotypical responses are responses that fit the social norms for a particular scenario. A child's ability to give stereotypical responses indicates an ability to process social information better (e.g. feeling sad, angry or afraid are the stereotypical responses to a situation of distress). A non-stereotypical response like feeling happy when one gets hurt indicates a gap in processing social information. Tables 4, 5, and 6 also show the responses children gave when asked how they would feel in different hypothetical situations. The ability of children to give stereotypical responses improves with age as is clear in all the situations. For example, 53.6% of all 4-year-olds who picked the 'happy' emotion card when asked how they would feel if their parent bought a new toy for them compared to 88.4% of all 8-year-olds.

iii) Situation reaction test: One by one, the volunteers read out two hypothetical situations to the child. One situation was based on conflict and one on empathy. A comprehensive repository of answer options collated from extensive piloting was provided to the volunteers for grading. The first part of the Situation reaction test assesses the ability of children to self-regulate. It tests if children can manage their emotions, process social information and control their impulses. Controlled impulses are an important outcome of self-regulation.

Older children are better exposed to peer and adult socialization and tend to access more complex outcomes of social encounters. A child's home and school environment and their exposure to different ways of conflict resolution are contributing factors to how they react to situations that require impulse control.

Table 7: % Children who gave the following responses to Situation reaction test (conflict): You had only one toy. You were playing with your friend. While playing, your friend snatched your toy. What will you do now? 2019

Age	No response	Will beat/ fight with friend	Will snatch the toy back	Will tell an elder	Will talk to friend and ask to return the toy	Will get angry	Will not do anything	Will stop talking to friend	Will buy a new toy	Will cry/ feel sad	Others
Age 4	30.4	12.8	4.3	3.9	1.2	3.9	4.0	0.4	1.4	8.2	8.6
Age 5	24.7	17.3	4.8	4.6	1.1	5.4	4.0	0.6	1.6	14.8	7.6
Age 6	17.1	19.7	5.2	5.9	1.8	9.3	3.3	0.5	1.5	20.1	6.8
Age 7	11.6	21.4	6.5	6.9	2.2	13.9	3.1	0.3	1.7	22.6	5.6
Age 8	7.0	22.7	7.3	8.0	2.5	16.9	2.5	0.7	1.5	21.9	5.8

Table 7 shows the proportion of children who gave different responses when asked what they would do if their friend snatched their only toy while playing. Of all 8 year olds, 22.7% said that they would beat or fight with the friend, 16.9% children said they would get angry, 21.9% said that they will cry or feel sad, and so on.

Controlling impulses requires regulating one's emotions and making responsible decisions. Each emotion can be appropriately managed in different ways based on the situation. In a situation of conflict, the underlying emotion of anger can be managed through de-escalation. However, 22.7% of children gave responses like 'will beat or fight with friend' choosing to escalate their anger. This might indicate that children are not familiar with conflict resolution strategies like talking to people and resolving conflicts - only 2.5% of all 8-year-olds said they will talk to their friend and ask for the toy back. With age, more children gave responses leading to conflict escalation as compared to resolution - 22.7% children of all 8-year-olds said they would beat/fight with their friend as compared to 12.8% children of all 4-year-olds.

Table 8: % Children who gave different responses in the conflict situation by their ability to distinguish between valences and identify emotions correctly 2019

	No response	Will beat/ fight with friend	Will snatch the toy back	Will tell an elder	Will talk to friend and ask to return the toy	Will get angry	Will not do anything	Will stop talking to friend	Will buy a new toy	Will cry/ feel sad	Others
Did not distinguish between valences correctly	31.7	17.6	6.0	5.9	2.3	6.9	4.9	0.9	1.6	13.2	9.6
Distinguished between all valences correctly	14.7	22.7	6.5	6.9	1.9	13.1	3.3	0.5	1.8	22.7	6.8
Identified all emotions correctly	11.0	23.5	6.7	7.7	1.9	15.3	2.7	0.5	1.8	24.1	5.8

Management of expression and understanding of emotions are vital to process information about social interactions for a child. Table 8 shows children's responses to the conflict situation by their ability to identify emotions. By giving responses like 'will get angry', 'will cry/feel sad', more children who could identify emotions used emotional vocabulary in comparison to children who could not. For example, of all children, who could identify all the valences correctly, 13.1% said they will get angry, and 22.7% said that they will feel sad or cry. Of all children who could identify all emotions correctly, 15.3% children said that they will get angry and 24.1% said they will they will feel sad or cry.

The second part of the Situation reaction test uses the same method to assess a child's ability to show empathy. Showing empathy involves understanding other people's feelings and acting with compassion. This skill can lead to children developing better relationships with people in general and specially with people from backgrounds different from their own.

Table 9: % Children who gave the following responses to Situation reaction test (empathy): You bought a toffee. You saw that a child was crying because his toffee fell in the mud. What will you do now? 2019

Age	No response	Will give my toffee to the child	Will eat my toffee	Will share my toffee with the child	Will buy a new toffee for the child	Will do nothing	Will pick up the toffee and give it to the child	Other
Age 4	32.7	10.6	3.9	2.9	4.8	5.5	4.9	12.9
Age 5	26.8	18.7	4.3	3.6	5.9	5.3	5.9	15.0
Age 6	19.2	27.4	4.2	4.5	7.7	5.0	6.9	15.0
Age 7	13.5	37.9	4.0	5.7	10.5	3.8	6.8	12.0
Age 8	7.7	45.2	3.6	6.7	10.5	3.2	6.8	11.4

Table 9 shows the proportion of children who gave different responses to the empathy situation. For example, of all 8-year-olds, 45.2% children said that they will give their toffee to the child, 10.5% said they will buy a new toffee, and 6.7% said they will share their toffee with the child. An age-wise progression is clear in proportion of children who gave empathetic responses that involved making the other child feel better.

Table 10: % Children who gave different responses for empathy situation by their ability to distinguish between valences and identify emotions correctly 2019

	No response	Will give my toffee to the child	Will eat my toffee	Will share my toffee with the child	Will buy a new toffee for the child	Will do nothing	Will pick up the toffee and give it to the child	Other
Did not distinguish between valences correctly	34.3	19.4	5.7	5.2	6.7	6.1	6.2	15.6
Distinguished between all valences correctly	16.5	37.3	3.9	5.4	9.9	4.6	7.4	14.4
Identified all emotions correctly	12.9	42.1	3.8	5.9	10.5	4.2	7.2	12.8

Table 10 shows the proportion of children who gave different responses to the empathy situation by their ability to distinguish between valences and identify all emotions correctly. These is a clear progression in the proportion of children who gave empathetic responses (will share/buy new/give their own toffee to the child) with an increasing ability to identify emotions correctly. With better emotional knowledge, more children gave empathetic responses indicating their ability to empathize with others. This implies that children apply their emotional knowledge to comprehend how others feel, understand their perspective, and show compassion.

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ASER 2019 and curricular expectations

Three documents lay out the official curricular expectations for young children in India:

- The Ministry of Women and Child Development has developed the National Early Childhood Care and Education (NECCE) Curriculum Framework that details the goals for different domains of development such as physical, language, cognitive, socio-emotional and creative and aesthetic appreciation for all children under 6 years of age.[1] It also includes suggested developmentally appropriate practices for children in the age group 3 to 5 and 5 to 6.
- The National Council of Educational Research and Training (NCERT) prescribes learning outcomes for pre-school (age 3 to 6) and school (Std I to VIII). In its recent Pre-school Curriculum (2019), NCERT recommends three years of pre-school education before children enroll in school.[2] This is divided by age as Pre-school 1 (3-4 years), Pre-school 2 (4-5 years) and Pre-school 3 (5-6 years). For each stage, it defines concepts and skills, pedagogical processes and learning outcomes under three broad goals: a) Children maintain good health and well-being; b) Children become effective communicators; and c) Children become involved learners and connect with their immediate environment. The first goal focuses on social and emotional, physical and motor, and creative and aesthetic development of children. The second goal centres around language development which includes listening, talking, emergent reading, emergent writing, and comprehension skills. The third goal concentrates on cognitive and arithmetic development.
- In Learning Outcomes at the Elementary Stage (2017), NCERT suggests class-wise pedagogical practices and learning outcomes for grades 1 to 8.[3] These learning outcomes aim to provide 'measurable checkpoints' for children's progress.

This document maps the tasks included in the ASER 2019 'Early Years' assessment to the NECCE Curriculum Framework's suggested developmentally appropriate practices for the two age groups (3 to 5 and 5 to 6), as well as to NCERT's specification of learning outcomes expected of young children at different ages and grades in pre-school and school. This mapping is done separately for the four domains covered by the ASER 'Early Years' assessment: cognitive development, early language, early numeracy, and social and emotional development. The specification of learning outcome that most closely matches the corresponding ASER 'Early Years' task is highlighted for easy reference.

I. Cognitive development

An analysis of the cognitive skills that children are expected to acquire in the early years reveals a discontinuity in the expectations between pre-school and school. The skills of seriation and problem solving are entirely missing from the expected learning outcomes in school – the assumption possibly being that children have acquired these skills to the appropriate level prior to entering Std I.

Sensory development was not assessed in ASER 2019 as it involves assessing children's vocabulary, which is difficult to standardize across states. The skills of matching, one-to-one correspondence and sequencing events were also not assessed as it was difficult to design tasks based on common objects that were familiar to children across the country.

[1] See https://wcd.nic.in/sites/default/files/national_ecce_curr_framework_final_03022014%20%282%29.pdf
[2] See http://www.ncert.nic.in/pdf_files/preschool_curriculum.pdf
[3] See http://www.ncert.nic.in/publication/Miscellaneous/pdf_files/tilops101.pdf

Cognitive development								
Tasks in ASER 2019 'Early Years'		NECCE Curriculum Framework		NCERT learning outcomes[4]				
		Age 3-5 years	Age 5-6 years	Pre-school 1 (3-4 years)	Pre-school 2 (4-5 years)	Pre-school 3 (5-6 years)	Std I	Std II
Sorting	Sort pieces based on three different colors	Provide children with objects that encourage sorting	Develop skills in sorting and classification according to one or two attributes	Compares and classifies on the basis of one category	Compares and classifies on the basis of two categories simultaneously	Compares and classifies on the basis of three categories simultaneously	Classifies objects into groups based on a few physical attributes and observable properties	
Spatial awareness	Identify the person in a picture who is on top of and farthest from an object respectively		Observe and describe shape and space concepts using appropriate vocabulary		Correctly uses position words			
Seriation	Arrange 4 picture cards with objects by size		Develop skills in seriation	Arranges 2-3 picture cards/objects in a sequence	Arranges 3-4 picture cards/objects in a sequence Seriates up to 5 objects on the basis of a particular property	Arranges 4-5 picture cards/objects in a sequence Seriates up to 5 objects on the basis of a particular property		
Pattern recognition	Extend a 3 shape pattern		Develop skills in pattern identification/ pattern making	Follows/ reproduces a simple pattern	Identifies the unit of repeat in a simple pattern and extends it	Creates new patterns	Observes, extends and creates patterns of shapes and numbers	
Puzzle	Solve a 4-piece puzzle (for children aged 4-5) or 6-piece puzzle (for children aged 6-8)	Do simple problem solving	Develop skills in reasoning and problem solving	Provides solutions to simple problem situations Pedagogical process - use 2-3 piece puzzles	Provides solutions to simple problem situations with reasons Pedagogical process - use 3-4 piece puzzles	Solves simple day-to-day problems independently with reason Pedagogical process - use 6-7 piece puzzles		

[4]'NCERT learning outcomes' are taken from Pre-school Curriculum (2019) and Learning Outcomes at the Elementary Stage (2017).

II. Early language

In the skills of listening comprehension and picture description, further discontinuity can be observed as children are expected to do much more complex tasks at the end of pre-school than in the early grades of primary school. On the other hand, as children transition from pre-school to school, there is a big jump in the expectations in reading. For instance, children are expected to read most letters by the end of pre-school and read complete stories with comprehension less than a year later, by end of Std I.

ASER 2019 did not assess the phonological awareness skills of children due to the limitation of designing a standardized task across 14 regional languages. Tasks related to speaking and writing were not assessed due to issues of subjectivity in grading and logistical constraints of carrying material in the field.

Early language								
Tasks in ASER 2019 'Early Years'		NECCE Curriculum Framework		NCERT learning outcomes				
		Age 3-5 years	Age 5-6 years	Pre-school 1 (3-4 years)	Pre-school 2 (4-5 years)	Pre-school 3 (5-6 years)	Std I	Std II
Picture description	Answer 2 simple questions after observing a picture			Uses appropriate vocabulary for some common and familiar objects and pictures Tells a familiar story using the pictures of a story book		Uses pictures and text to make predictions about a story	Observe in detail subtle and direct elements of a picture Understand and appreciate the different incidents, activities, and characters in pictures or pictures arranged in a sequence as part of a story or context	Observe in detail subtle and direct elements of a picture Understand and appreciate the different incidents, activities, and characters in pictures or pictures arranged in a sequence as part of a story or context
Listening comprehension	Answer 2 simple questions after listening to a story			Begins to use active listening skills Listens to age appropriate short stories and responds by answering simple questions	Listens to others for a short period of time and responds	Retells a story in sequence and answers complex questions	Talks, gives opinion, and asks about heard material such as story, poem, etc.	Talks about and responds to any conversation, story, poem that she sees or that is being read out
Letter recognition	Read 5 out of 8 letters correctly	Exposure to environ-mental print		Explores a range of texts such as alphabet books	Recognizes few letters and their corresponding sounds Taps out syllables in words with support	Recognizes many letters and their corresponding sounds Taps out syllables in words	Identifies the shape and sound of the letters in Hindi vocabulary Identifies the units of letters, words, and sentences in a written text	Identifies the shape and sound of the letters in Hindi vocabulary Identifies the units of letters, words, and sentences in a written text

Early language								
Tasks in ASER 2019 'Early Years'		NECCE Curriculum Framework		NCERT learning outcomes				
		Age 3-5 years	Age 5-6 years	Pre-school 1 (3-4 years)	Pre-school 2 (4-5 years)	Pre-school 3 (5-6 years)	Std I	Std II
Word recognition	Read 5 out of 8 words correctly	Sight vocabulary				Tries to decode words Recognizes some sight words Creates own words combining vowels and consonants	Identifies words in known and unknown written text Identifies the units of letters, words, and sentences in a written text	Identifies words in known and unknown written text Identifies the units of letters, words, and sentences in a written text
Std I level text reading	Correctly and fluently read a Std I level text						Adopts various tactics to estimate what is written in a text such as using pictures, print, letter-sound correspondence, word identification, and information from previous experiences	Reads a story, poem, poster, etc. depending on her liking and reading level Adopts various tactics to estimate what is written in a text such as using pictures, print, letter-sound correspondence, word identification, and information from previous experiences
Reading comprehension	Answer 2 simple questions based on a Std I level text							Reads a story, poem, poster, etc. depending on her liking and reading level, and responds to questions/asks questions on it

III. Early numeracy

In arithmetic, an enormous jump is visible in expected learning outcomes as children are expected to identify numbers up to 10 when they finish preschool but in Std I children should identify numbers up to 99 and be able to work with numbers up to 20. Then up to 99 in Std II.

The ability to count money was not assessed in ASER 2019 due to the recent change in the design of the notes and other logistical constraints. Reciting the days of the week and months of the year and sequencing events accordingly were also not tested as the task is vocabulary oriented and language dependent. Measurement was also not assessed due to the possibility of subjectivity in grading.

Early numeracy								
Tasks in ASER 2019 'Early Years'		NECCE Curriculum Framework		NCERT learning outcomes				
		Age 3-5 years	Age 5-6 years	Pre-school 1 (3-4 years)	Pre-school 2 (4-5 years)	Pre-school 3 (5-6 years)	Std I	Std II
Counting objects	Count up to 9 objects in a picture		Counting objects	Counts and gives up to 3 objects when asked to	Counts and gives up to 5 objects when asked to	Counts and gives up to 10 objects when asked to Count forward from a particular number up to 10	Counts objects up to 20 - concretely, pictorially, and symbolically Counts objects using numbers 1-9	
Relative comparison (objects)	Tell which object occurs the most frequently in a picture		Counting groups and comparing them using the terms more, fewer, or same	Compares objects on the basis of observable properties such as more/less			Compares numbers up to 20 Collects, records (using pictures/numerals) and interprets simple information by looking at visuals	
1-digit oral word problem addition	Solve a simple 1-digit addition problem told orally						Applies addition of numbers 1 to 20 in daily life Solves day-to-day problems related to addition of numbers up to 9	Solves simple daily life problems/situations based on addition of two-digit numbers
1-digit oral word problem subtraction	Solve a simple 1-digit subtraction problem told orally						Applies subtraction of numbers 1 to 20 in daily life Solves day-to-day problems related to subtraction of numbers up to 9	Solves daily life problems/situations based on subtraction of two-digit numbers

Early numeracy								
Tasks in ASER 2019 'Early Years'		NECCE Curriculum Framework		NCERT learning outcomes				
		Age 3-5 years	Age 5-6 years	Pre-school 1 (3-4 years)	Pre-school 2 (4-5 years)	Pre-school 3 (5-6 years)	Std I	Std II
Number recognition (1-9)	Recognize 5 out of 8 numbers correctly				Identifies numerals with corresponding numbers up to 5	Recognizes numbers up to 10		
1-digit relative comparison (1-9)	Compare a number with 4 others and say which number is smaller than the given number						Compares numbers up to 20	
1-digit numeric addition	Solve a 1-digit addition problem						Constructs addition facts up to 9 using concrete objects	
1-digit numeric subtraction	Solve a 1-digit subtraction problem						Subtracts numbers using 1 to 9	
Number recognition (11-99)	Recognize 5 out of 8 numbers correctly						Recognizes numbers up to 99	Reads and writes numerals for numbers up to 99
2-digit relative comparison (11-99)	Compare a number with 4 others and say which number is bigger than the given number							Uses place value in writing and comparing two-digit numbers Forms the greatest and smallest two-digit numbers
2-digit numeric addition	Solve a 2-digit addition problem with carry over							[5]
2-digit numeric subtraction	Solve a 1-digit subtraction problem with borrowing							[5]

[5]Although the learning outcomes for Std II do not explicitly specify 2-digit numeric addition and subtraction as an expectation, the NCERT math textbook for Std II has problems on 2-digit numeric addition with carry over and subtraction with borrowing (see chapter 12 on page 90).

IV. Social and emotional development

The domain of social and emotional development forms part of the learning outcomes expected in pre-school but is entirely missing from the learning outcomes expected in school.

The domains of gross and fine motor development and creative and aesthetic development were not assessed in ASER 2019 due to difficulty in the standardization of recording responses for such tasks and the logistical constraints of carrying material in the field.

Social and emotional development								
Tasks in ASER 2019 'Early Years'		NECCE Curriculum Framework		NCERT learning outcomes				
		Age 3-5 years	Age 5-6 years	Pre-school 1 (3-4 years)	Pre-school 2 (4-5 years)	Pre-school 3 (5-6 years)	Std I	Std II
Emotion identification	Identify 4 primary emotions - happy, sad, angry, and afraid			Expresses emotions through verbal and non-verbal modes (gestures, drawings, etc.)				
Situation to emotion mapping	Map 4 different situations to an emotion				Expresses emotions appropriate to the situation			
Situation reaction test (self-regulation)	Assess the ability of the child to control impulse	Encouragement to develop self-control	Manage own feelings and needs	Resolves minor conflicts with the help of adults	Suggests solutions to conflicts with guidance	Manages emotions appropriately in challenging situations Suggests solutions to conflicts and makes adjustments when working or playing in group		
Situation reaction test (social awareness)	Assesses the ability of the child to empathize with someone	Opportunities to learn cooperation, helping, and sharing		Helps other children, cares and shares belongings with them	Shows caring behaviour and shares belongings with other children	Helps peers who are in need and help in an activity in large and small groups		

ASER 2019 'Early Years' and other early learning assessment tools

Overview

As part of the Sustainable Development Goals (SDGs) agreed upon by the United Nations in 2015, early childhood development and learning is highlighted in SDG 4, Target 4.2, which states: "By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education" (UN, 2015). More recently the World Bank reiterated the importance of this goal, stating that "investing in the early years is one of the smartest things a country can do to eliminate extreme poverty, boost shared prosperity, and create the human capital needed for economies to diversify and grow" (World Bank, 2017). To translate this commitment into action, it has become increasingly important for countries to develop and implement reliable measurements of early learning environments and outcomes.

Out of the pool of existing measurement models, two are designed to be internationally applicable and have been widely used:

- International Development and Early Learning Assessment **(IDELA)**, developed by Save the Children in 2011; and
- Measuring Early Learning Quality and Outcomes **(MELQO)**, conceptualized in 2014. This initiative was led by UNESCO, Brookings Institution, the World Bank and UNICEF.

Two measurement tools are relevant specifically in the Indian context:

- Early Learning and Development Assessment **(ELDA)** designed by Centre for Early Childhood Education and Development (CECED) at Ambedkar University in 2017; and
- **ASER 'Early Years'**, developed and implemented by ASER Centre in 2019.

ASER 2019 'Early Years' is an effort to generate evidence about young children's abilities across India. It is different from the aforementioned instruments in a number of respects, all stemming from the fact that the ASER 'Early Years' architecture retains key elements of every ASER survey. First, it is a household survey, enabling coverage of all children in the 4-8 age group regardless of schooling status, and also acting as a mechanism to engage families and communities in discussions about children's learning. Second, the assessment items and processes are simple to understand and quick to administer, enabling assessment to be conducted by trained volunteers who are non-specialists. ASER 2019 'Early Years' is the first assessment of early learning outcomes on a national scale in India.

Although the four assessments listed above have a common overarching goal of measuring early learning outcomes, they differ in many important respects. This document summarizes key features of each assessment model.

Organizations

ASER 'Early Years' was facilitated by the non-governmental organization Pratham Education Foundation and conceptualised by ASER Centre, the organization's research and assessment unit. It was implemented in 2019 by partner institutions in one or two rural districts in almost every state of the country, covering 26 districts in all. Partner institutions included colleges, universities, District Institutes of Education and Training (DIETs), and NGOs.

IDELA was conceptualized in 2011 by Save the Children. The development of IDELA began with adaptations from existing early childhood development (ECD) tools such as the Early Development Instrument (EDI), the Bayley Scales of Child Development, and the Ages and Stages Questionnaire. IDELA has been used in 70 countries across project sites, and populations by partners of Save the Children. It has been implemented in middle and high income countries like Australia, USA, Jordan, and Italy as well as low and lower middle income countries like India, Myanmar, and Pakistan.

The creation of **MELQO** modules was spearheaded by the World Bank, UNICEF, UNESCO, and the Center for Universal Education at the Brookings Institution. MELQO was an attempt to take action on the recommendations from two consortiums. First, a conglomerate of WHO, UNICEF, and UNESCO to develop an early childhood measurement framework from birth to 8 years of age. Second, the Learning Metrics Task Force (LMTF) which was a platform to bring together governments and organizations from 118 countries to build consensus on fundamental elements of learning from early years through secondary schooling. MELQO has been used to generate evidence on ECD in more than 20 countries. These include Ethiopia, Nicaragua, Sudan, and Tanzania among others.

CECED set out to develop Early Learning Development Standards (ELDS) for children in the 3-6 age group. As a part of this initiative, it developed **ELDA**, a child assessment, in collaboration with Ambedkar University Delhi and UNICEF India. It invited experts, consultants, professionals, and organizations working in the area of ECD across India to agree on a set of standards for the country. These included representatives from Azim Premji University, NCERT, University of Delhi, UNICEF India, Mobile Crèches Delhi, the World Bank, etc. Data collection was conducted in two districts of five Indian states. Volunteers reached 7,500 children with equal distribution from each selected state, namely: Kerala, Gujarat, Nagaland, Jharkhand, and Uttar Pradesh.

Objectives, target population, core domains, and instruments

Table 1: Overview of ASER 2019 'Early Years', IDELA, MELQO, and ELDA

	ASER 2019 'Early Years'	IDELA	MELQO	ELDA
Objective	To generate large scale actionable evidence on young children's abilities and bring the discourse on ECE to the forefront	To promote ECD program evaluation and evidence globally, especially in underprivileged communities	To facilitate ECD goals at the regional and international levels with principal objectives of reduced poverty, well-being in academic and non-academic spheres, and women's empowerment	To generate normative data for developing Early Learning Development Standards with the objective of devising reliable and accurate measures of ECD
Target age group	**4-8**	**3.5-6**	**4-6**	**3-6**
Domains covered	i) Early language ii) Early numeracy iii) Cognitive development iv) Social and emotional development	i) Emergent literacy and language ii) Emergent numeracy iii) Gross and fine motor development iv) Socio-emotional development	i) Language/ literacy ii) Mathematics/ numeracy iii) Executive function iv) Social and emotional development	i) Sensory, perceptual and cognitive development ii) Language, communication and literacy iii) Personal and socio-emotional development iv) Physical and motor development
Tools and instruments	i) ASER 2019 'Early Years' assessment ii) Household questionnaire	i) IDELA assessment ii) Caregiver survey	i) Measure of Child Development and Early Learning (MODEL) ii) Measure of Early Learning Environments (MELE)	i) ELDA tool ii) Caregiver interview protocol

ASER 2019 'Early Years' aimed to generate reliable, current, and actionable evidence on scale to highlight the nature of young children's enrollment trajectories and early learning on a range of competencies that research has identified as important predictors of future success. The selected competencies fall under the four broad domains of early language acquisition, early numeracy skills, cognitive abilities, and social and emotional development. The survey retains the core elements of the ASER architecture: it is a sample-based household survey, conducted by local volunteers, using simple and easy to administer tools and formats, and intended to generate discussion around the topic of schooling and learning in early years India.

Both the international assessment frameworks, **IDELA** and **MELQO**, were developed to aid the international community in developing evidence-based quality ECD policies and programs. Additionally, IDELA was also developed with a goal to promote ECD evidence

and program evaluation in disadvantaged communities where Save the Children works. It shortlisted the most feasible and reliable items to assess the development of children in the age group of 3.5 to 6 years across contexts, countries and languages. The final tool consisted of 22 items that passed the tests of feasibility, psychometric rigour, and international applicability. These items were categorised into four domains: socio-emotional development, emergent literacy and language, emergent numeracy, and gross and fine motor development.

MELQO aims to provide open source modules to ECD researchers to improve access to technically sound measurement scales. In this process, it is intended to promote evaluation of proposed ECD goals at not only regional and country level but also globally, in order to achieve the goals of reduced poverty, well-being in academic and non-academic spheres, and women's financial and social empowerment. MELQO consists of two modules – one on Measuring Child Development and Learning (MODEL) and the other on Measurement of Early Learning Environments (MELE) including pre-school and early grades. MODEL assesses age-appropriate competencies for children in the 4-6 age group in the same domains as IDELA. The materials developed under MELQO can be integrated into national assessments at scale by adapting them to the relevant sociocultural contexts.

ELDA was conceptualized with an overarching goal of developing Early Learning and Development Standards (ELDS) for children age 3-6. Using two instruments, a child assessment tool and a caregivers' interview protocol, ELDA aims to measure the early development and learning of children in a holistic manner. The normative data collected using ELDA was used to convert norms into standards fulfilling the overall objective of devising reliable and accurate measures of ECD. The tool covers four domains – cognitive skills, physical and motor development, early language and literacy, and personal and socio-emotional development.

Tools and testing

Table 2: Assessment tasks covered in ASER 2019 'Early Years', IDELA, MELQO, and ELDA

	Assessment tasks	ASER 2019 'Early Years' Age group 4-8	IDELA Age group 3.5-6	MELQO Age group 4-6	ELDA Age group 3-6
Physical development	Copying/drawing shapes		■	■	■
	Drawing a person		■		■
	Folding paper		■		
	Working memory - Forward/backward digit span		■	■	
	Hopping		■		
	Pencil tap			■	
	Inhibitory control (HTKS)		■	■	
	Ball catching and body balance				■
Early language development	Picture description	■			
	Listening comprehension	■	■	■	■
	Reading letters	■	■	■	■
	Reading words	■			
	Reading paragraph (Std I level text)	■			
	Reading comprehension	■			
	Print awareness		■		■
	Expressive vocabulary		■	■	
	Emergent writing (name, letters, etc.)		■	■	■
	Phonemic awareness		■	■	■
	Interest in literacy			■	

	Assessment tasks	ASER 2019 'Early Years' Age group 4-8	IDELA Age group 3.5-6	MELQO Age group 4-6	ELDA Age group 3-6
Early numeracy development	Counting objects	■	■	■	■
	Oral word problems	■			■
	Number recognition	■	■	■	■
	Relative comparison (number)	■		■	■
	Addition/subtraction with objects		■	■	
	Numerical operations - Addition/subtraction	■			
	Writing numbers				■
Sensory and cognitive development	Sorting and classification (on the basis of shape, size, color, etc.)	■	■		■
	Seriation	■			■
	Sequencing				■
	Spatial awareness	■		■	■
	Problem solving (puzzle, maze, etc.)	■	■		■
	Shape identification		■		■
	Comparison by size and length		■		
	Mental transformation			■	
	Color identification				■
	Identification of different tastes and odour				■
Social and emotional development	Emotion identification (self-awareness)	■	■	■	■
	Situation to emotion mapping (self-awareness)	■	■	■	
	Situation reaction test (empathy)	■	■	■	
	Situation reaction test (conflict)	■	■		
	Peer relationships		■		
	Self-awareness (questions about the child's background)		■		
Approaches to learning	Persistence		■		
	Motivation		■		
	Engagement		■		

The **ASER 2019 'Early Years'** assessment tool consists of 24 items that assess foundational and early grade learning outcomes for children in the 4-8 age group. The items were categorized into four domains - early language, cognitive development, early numeracy, and social and emotional development. All children in the 4-8 age group were administered the same tool irrespective of grade, age or schooling status. The items were developed based on a review of international research and policy guidelines, as well as curriculum and learning outcomes defined for pre-school and Std I and Std II. A separate household questionnaire had questions on socio-economic indicators such as type of house, electricity, motor vehicles owned, smart phone, toilet, reading material for children among others. Data about the parents' age and educational qualifications was also collected.

The assessment process was adaptive to the child's ability, so that she did not have to attempt all levels. Questions were not timed, and the child was given ample time to perform to her best potential. In some tasks such as pattern recognition, puzzle, and sorting, the volunteer was required to give an example and then proceed to the question. Children in rural areas have often not been exposed to such tasks and the example activity ensured that children understood the question.

IDELA comprises a child assessment tool and a caregiver survey. The caregiver survey assesses the child's home and family environment and is intended to be used along with the child assessment. The assessment tool consists of 24 items. Core IDELA domains include gross and fine motor development, emergent literacy and language, emergent numeracy, socio-emotional development. **MELQO** has a more comprehensive framework, with greater number of measurement tools to assess many aspects of a child's early development using the two modules - MODEL and MELE. MODEL uses a direct child assessment with 22 items and a parent and teacher survey to assess child's abilities and their environment. MELE uses a classroom observation tool, as well as teacher, head teacher/supervisor and parent surveys to assess the quality of learning environments on indicators like personnel, play, pedagogy, interactions, etc. While IDELA selected items based on their international applicability, significance in later achievement and educational outcomes, and relevance as per curricular goals, MELQO also used actionability (skills that can be taught in classrooms) as a guiding principle in selecting tasks.

While IDELA and MELQO differ in their frameworks, their child assessments are similar in terms of the domains, tasks assessed, and general administration rules although each assessment also includes some items that are omitted in the other. IDELA also has questions that ask the assessor to record their observations based on the child's approaches to learning in terms of persistence, motivation and engagement. IDELA and MELQO have some practice questions to build an understanding of what the child is expected to do. While MELQO does not put a time limit in any question, IDELA has a time limit of 2 minutes in a few questions like puzzle and name writing.

The **ELDA** tool assesses children's abilities in four domains - sensory, perceptual and cognitive development, language, communication and literacy, personal and socio-emotional development, and physical and motor development through children's performance on 33 tasks. Additionally, it has a number of writing tasks like drawing shapes, writing numbers and letters, and drawing a person. The assessment framework allows the surveyor to repeat the question once and lists the conditions in which this must be done. ELDA's caregiver questionnaire collects data on caregivers' basic information like age, educational qualification, family income, etc. Caregivers are asked questions about their observations of the child's domain-wise abilities at home. It relies on the caregiver to assess the child's social and emotional development and approaches to learning.

Test administration

ASER 2019 'Early Years' is a household survey. Children are tested at home. The ASER 2019 'Early Years' tool is administered orally, one-on-one. All children in the 4-8 age group who reside regularly in the sampled household are given the same test, regardless of schooling status, age, or grade. Within each household, different children are administered different samples of the testing tool. On average, it takes 15-20 minutes to administer the tool with a child. Two volunteers undertake the assessment: one reads out the script with instructions for each activity, while the other grades the child's responses.

The direct assessment components of **IDELA, MELQO**, and **ELDA** are also oral assessments with a number of items administered by trained assessors. All three assessments are conducted one-on-one. The assessor follows a script to explain each question and grades the child's responses. The IDELA and MELQO assessments can be conducted anywhere (home or school) depending on the sample population and objective of the program. Assessments under the ELDA study were conducted in households. On average IDELA takes close to 30 minutes and MELQO takes 25-35 minutes to administer.

Process implementation and quality monitoring

The **ASER 2019 'Early Years'** implementation process began with a national workshop attended by the ASER central team and state teams. The state team in turn conducted district level trainings for volunteers from local partner organizations such as colleges, universities, DIETs, and NGOs.

All ASER volunteers had completed Std XII. Most of them were graduates and/or enrolled in postgraduate programs. Volunteers received intensive training over 3-4 days in preparation for the survey, including a day of practice in the field. A quiz is conducted and doubts are clarified to ensure that all volunteers have developed a clear understanding of the survey process. They are then paired into teams and tasked with surveying the sampled villages.

ASER devotes considerable time and resources to ensure data quality through carefully designed training, monitoring, and recheck procedures, details of which are provided in each year's report and on the ASER Centre website. A multi-layered system of field monitoring, desk recheck, and field recheck has been established wherein ASER state and central teams travel to surveyed villages in order to check for adherence to survey process and protocols. Computer rechecks are also incorporated at the data entry and data consolidation stages. More than 65% of all surveyed villages were monitored/rechecked in ASER 2019.

IDELA does not specify rules for conducting and monitoring data collection, giving the executing agency the flexibility to design their own implementation process. However, it does provide a pool of resources to support the use of the tool including a sample training schedule, guidelines for enumerators and other training material like PowerPoint presentations. Save the Children provides data analysis support and services on request. IDELA enumerators mostly include community members like university students, teachers, and government officials. Although no prior formal training in ECD is required, it is preferred to have enumerators who have had some experience working with children.

MELQO has developed a step-by-step implementation plan. It starts with planning (defining the research question and aligning MELQO with national standards), adaptation and pre-field testing (modifying items), field testing and data collection (training enumerators), and analysis and application to policy. MELQO also provides resources like a quiz for enumerators, training schedules etc. that aid organisations in training the enumerators. It suggests a 5-day training for enumerators and suggests field practice along with activities like video scoring. Preferably, the MELQO enumerators must have some experience in pre-primary institutions of the home country and must not be associated with the program they are assessing to avoid bias.

Data collected using **ELDA** was done with the assistance of state partners. Field teams for every state had 5-7 field investigators and an appointed field coordinator. The field coordinator was someone who was at least a graduate and had previously worked with children. All field investigators were trained intensively for four days. Trainings included sessions on tool administration with the help of role plays and field practice, as well as feedback/debrief sessions. CECED team regularly monitored the data collection process. To check that the content was not changed in the process of translation, the tool was back translated as well.

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Children's performance on early learning tasks by age

I. Children's performance on cognitive tasks by age

% Children

Sorting[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	10.8	20.7	68.5	100
Age 5	5.7	12.0	82.3	100
All	8.1	15.9	76.0	100

This table shows the proportion of children's responses on a sorting task by age. For example, of all 4-year-olds, 10.8% did not give a response to the sorting task, 20.7% cannot do this task, and 68.5% can correctly do this task.

Spatial awareness (task 1)[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	10.8	20.7	68.5	100
Age 5	5.7	12.0	82.3	100
All	8.1	15.9	76.0	100

Spatial awareness (task 2)[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	10.5	30.5	59.0	100
Age 5	5.3	21.8	73.0	100
All	7.6	25.6	66.8	100

Seriation				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	8.2	49.6	42.2	100
Age 5	4.2	45.2	50.6	100
Age 6	3.9	31.7	64.3	100
Age 7	1.5	22.5	76.0	100
Age 8	1.4	14.3	84.3	100
All	3.5	31.2	65.3	100

Pattern recognition				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	14.1	45.2	40.7	100
Age 5	7.8	44.9	47.3	100
Age 6	6.0	37.1	56.9	100
Age 7	2.9	29.3	67.8	100
Age 8	2.2	24.1	73.7	100
All	6.0	35.2	58.8	100

Puzzle[2]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	8.1	55.2	36.8	100
Age 5	4.8	42.9	52.4	100
Age 6	4.1	46.5	49.4	100
Age 7	2.2	37.0	60.7	100
Age 8	1.4	27.4	71.2	100
All	3.8	40.6	55.6	100

[1] These tasks were administered to children age 4-5 only.

[2] A 4-piece puzzle was adminitered to children age 4-5. A 6-piece puzzle was administered to children age 6-8.

II. Children's performance on early language tasks by age

% Children

Picture description (task 1)				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	14.8	9.6	75.6	100
Age 5	9.7	6.1	84.2	100
Age 6	8.7	3.8	87.4	100
Age 7	4.7	2.5	92.8	100
Age 8	2.8	2.0	95.2	100
All	7.7	4.5	87.8	100

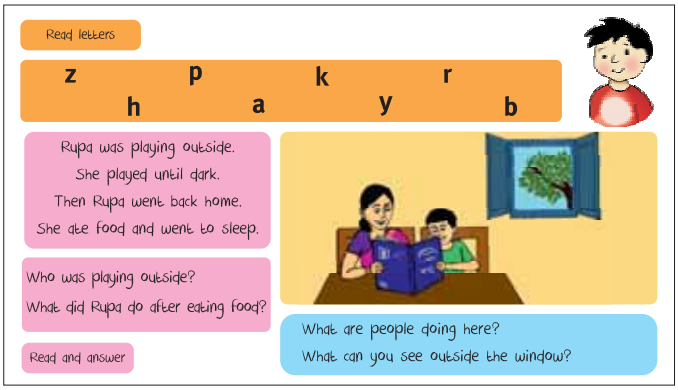
This table shows the proportion of children's responses on the first picture description task by age. For example, of all 4-year-olds, 14.8% did not give a response to this picture description task, 9.6% cannot do this task, and 75.6% can correctly do this task.

Picture description (task 2)				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	16.0	19.4	64.6	100
Age 5	9.2	14.0	76.8	100
Age 6	7.3	9.7	82.9	100
Age 7	3.3	6.1	90.6	100
Age 8	1.8	4.5	93.7	100
All	6.9	10.1	83.0	100

Listening comprehension (task 1)				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	43.8	30.6	25.5	100
Age 5	29.7	26.6	43.8	100
Age 6	19.5	17.6	63.0	100
Age 7	11.3	12.5	76.3	100
Age 8	6.3	8.2	85.5	100
All	20.5	18.2	61.4	100

Listening comprehension (task 2)				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	41.0	27.2	31.8	100
Age 5	25.5	23.3	51.1	100
Age 6	16.1	17.1	66.8	100
Age 7	9.2	14.2	76.7	100
Age 8	5.6	11.1	83.4	100
All	17.9	17.9	64.2	100

Letters				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	30.7	48.7	20.6	100
Age 5	18.8	40.1	41.1	100
Age 6	12.4	26.1	61.5	100
Age 7	5.9	17.2	76.9	100
Age 8	3.2	11.0	85.7	100
All	13.0	27.0	60.0	100



III. Children's performance on early numeracy tasks by age

% Children

Counting objects (task 1)[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	16.4	32.7	50.9	100
Age 5	8.2	18.7	73.2	100
All	11.9	25.0	63.2	100

This table shows the proportion of children's responses on the first counting of objects task by age. For example, of all 4-year-olds, 16.4% did not give a response to this counting objects task, 32.7% cannot do this task, and 50.9% can correctly do this task.

Counting objects (task 2)[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	17.7	40.6	41.8	100
Age 5	8.2	28.5	63.4	100
All	12.4	33.9	53.7	100

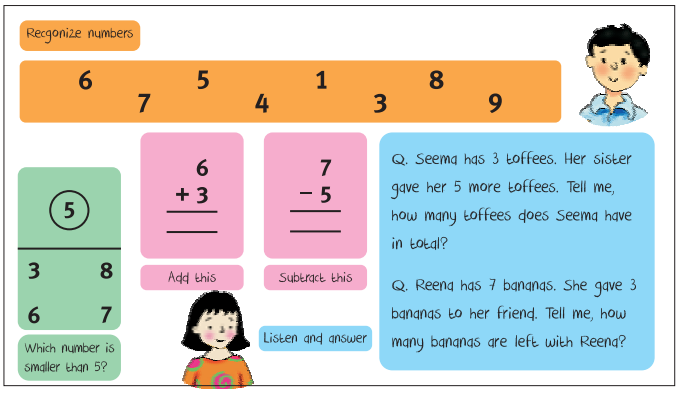
Counting objects (task 3)[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	17.5	40.8	41.7	100
Age 5	8.3	26.8	64.9	100
All	12.4	33.1	54.5	100

Relative comparison (objects)[1]				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	19.4	38.3	42.3	100
Age 5	9.9	27.1	63.0	100
All	14.1	32.1	53.8	100

1-digit oral word problem addition				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	42.5	49.9	7.6	100
Age 5	28.8	54.5	16.7	100
Age 6	18.7	47.2	34.1	100
Age 7	9.6	33.1	57.3	100
Age 8	5.2	22.6	72.2	100
All	19.2	40.3	40.4	100

1-digit oral word problem subtraction				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	44.6	46.3	9.1	100
Age 5	31.8	50.5	17.6	100
Age 6	21.6	48.1	30.3	100
Age 7	11.3	40.3	48.4	100
Age 8	7.3	28.5	64.2	100
All	21.6	42.2	36.3	100

Number recognition (1-9)				
Age	**No response**	**Incorrect**	**Correct**	**Total**
Age 4	24.2	48.4	27.5	100
Age 5	13.2	34.5	52.3	100
Age 6	7.0	19.3	73.7	100
Age 7	3.1	9.0	88.0	100
Age 8	1.3	4.8	93.9	100
All	8.7	21.1	70.2	100



[1] These tasks were administered to children age 4-5 only.

Early learning tasks	% Children who did not give a response to each question by age and sex									
	Age 4		Age 5		Age 6		Age 7		Age 8	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Sorting	9.4	12.3	5.2	6.3						
Counting objects (task 1)	15.5	17.3	7.3	9.1						
Counting objects (task 2)	16.7	18.7	7.4	9.0						
Counting objects (task 3)	16.0	18.9	7.3	9.4	Not administered[1]					
Relative comparison (objects)	18.6	20.1	8.6	11.3						
Spatial awareness (task 1)	8.7	9.6	3.9	4.7						
Spatial awareness (task 2)	10.2	10.8	5.0	5.6						
Picture description (task 1)	14.2	15.4	8.8	10.6	8.2	9.3	4.2	5.2	2.2	3.4
Picture description (task 2)	14.9	17.0	8.4	9.9	6.4	8.3	2.9	3.8	1.3	2.4
Listening comprehension (task 1)	40.8	46.9	27.6	31.9	18.6	20.4	11.1	11.4	6.8	5.6
Listening comprehension (task 2)	38.1	43.8	23.3	28.0	14.5	17.8	8.4	10.0	5.3	5.9
Letter	30.2	31.4	18.2	19.4	11.8	13.0	6.3	5.5	3.2	3.3
Seriation	6.9	9.5	3.7	4.7	3.3	4.6	1.3	1.7	1.1	1.8
Pattern recognition	11.9	16.3	6.9	8.8	5.3	6.8	2.5	3.4	2.3	2.1
1-digit oral word problem addition	40.1	44.9	27.3	30.5	17.4	20.0	8.7	10.5	4.4	6.1
1-digit oral word problem subtraction	42.9	46.3	30.3	33.5	20.2	23.1	9.6	13.0	6.3	8.2
Number recognition (1-9)	22.8	25.5	12.6	13.9	6.1	7.9	2.6	3.6	1.0	1.7
Puzzle[2]	7.0	9.2	4.1	5.5	3.6	4.7	2.0	2.4	1.4	1.4

This table shows the proportion of children who did not give a response to each task by age and sex. For example, of all 4-year-olds, 9.4% boys did not give a response to the sorting task compared to 12.3% girls; of all 5-year-olds 5.2% boys did not give a response to the sorting task, and so on.

[1] Sorting, counting objects (tasks 1 to 3), relative comparison (objects), and spatial awareness (tasks 1 and 2) tasks were administered to children age 4 and 5 only.

[2] A 4-piece puzzle was administered to children age 4 to 5. A 6-piece puzzle was administered to children age 6 to 8.

State: District	% Households which have								
	Pucca house	Electricity connection	Of households with electricity connection, % households with electricity available on day of visit	Toilet	Television	Mobile phone	Smart phone	Reading material[1]	Reading material for children[2]
Andhra Pradesh: Srikakulam	85.0	98.9	99.1	70.3	83.7	91.5	37.4	3.1	6.4
Assam: Kamrup (Rural)	39.5	95.2	92.9	85.2	61.5	90.2	43.3	9.6	15.1
Bihar: Nalanda	74.3	96.8	90.7	63.7	41.9	93.7	35.5	6.1	17.4
Chhattisgarh: Mahasamund	44.2	98.5	94.7	91.0	73.7	90.2	62.5	3.0	4.4
Gujarat: Mehsana	56.3	97.6	98.2	84.4	78.8	93.7	55.7	4.8	6.2
Haryana: Hisar	69.8	97.5	91.4	97.9	91.3	95.3	59.5	3.1	4.5
Himachal Pradesh: Kangra	70.2	99.7	99.5	93.6	93.7	99.5	79.5	5.7	8.6
Jharkhand: Ramgarh	65.7	97.9	93.9	78.3	59.2	93.9	42.2	4.7	12.2
Karnataka: Chamarajanagar	57.3	97.0	95.7	77.7	90.0	97.1	43.8	1.8	3.5
Kerala: Thrissur	99.0	99.6	98.0	99.3	95.1	99.4	91.2	11.6	33.7
Madhya Pradesh: Bhopal	41.1	96.0	89.8	75.5	69.7	93.6	50.3	2.9	5.8
Madhya Pradesh: Satna	26.0	97.0	96.1	55.0	44.7	87.2	28.6	5.0	11.5
Maharashtra: Nagpur	70.5	97.5	97.1	90.2	88.5	94.1	44.3	1.6	11.7
Manipur: Bishnupur	13.9	99.4	95.9	99.4	83.8	97.9	66.0	4.8	7.7
Meghalaya: East Khasi Hills	25.8	92.6	97.1	91.4	54.8	78.5	43.1	4.0	9.0
Nagaland: Dimapur	27.3	99.2	96.2	98.9	90.5	96.9	79.4	12.9	19.7
Odisha: Khordha	58.9	98.2	98.7	70.9	80.5	93.1	48.4	9.0	11.2
Punjab: Bathinda	83.3	99.7	96.7	98.1	92.0	97.7	75.3	5.6	12.1
Rajasthan: Ajmer	89.1	95.9	94.8	60.9	76.1	95.4	57.1	2.3	3.4
Tamil Nadu: Vellore	95.5	98.8	97.1	83.7	95.9	97.6	50.1	1.4	2.8
Telangana: Karimnagar	82.3	99.4	99.3	93.0	90.7	97.3	64.7	0.9	2.9
Tripura: South District	7.0	96.6	94.0	91.1	69.6	87.6	41.9	2.4	10.9
Uttar Pradesh: Lucknow	80.2	90.7	93.0	80.8	61.5	94.7	48.2	4.5	8.8
Uttar Pradesh: Varanasi	83.2	95.9	93.1	88.8	70.9	97.3	55.9	6.9	10.1
Uttarakhand: Dehradun	88.9	97.4	95.2	91.5	79.0	95.7	68.5	8.9	15.8
West Bengal: Bankura	43.5	87.2	93.9	54.2	48.8	91.3	51.0	5.1	12.7
All districts	**65.6**	**96.4**	**95.7**	**79.0**	**73.7**	**94.1**	**52.5**	**4.5**	**9.4**

[1]'Reading material' includes magazines, books other than children's school textbooks and religious books.

[2]'Reading material for children' includes poems/story books, comics for children, etc.

State: District	Mother's education					Father's education				
	% Mothers by education level					% Fathers by education level				
	No schooling	Std I-V	Std VI-X	Std XI or more	Total	No schooling	Std I-V	Std VI-X	Std XI or more	Total
Andhra Pradesh: Srikakulam	30.4	11.0	41.6	17.0	100	34.6	10.0	37.4	18.0	100
Assam: Kamrup (Rural)	17.9	12.3	49.2	20.7	100	16.8	12.6	45.2	25.4	100
Bihar: Nalanda	52.9	10.0	27.3	9.9	100	30.7	8.3	40.4	20.7	100
Chhattisgarh: Mahasamund	22.5	25.8	41.7	10.0	100	10.5	23.8	51.9	13.7	100
Gujarat: Mehsana	23.5	18.7	47.6	10.3	100	7.1	11.2	54.3	27.4	100
Haryana: Hisar	24.1	15.6	33.3	27.0	100	15.3	8.2	36.3	40.2	100
Himachal Pradesh: Kangra	1.7	3.6	40.6	54.1	100	4.1	2.7	40.5	52.7	100
Jharkhand: Ramgarh	25.2	9.2	38.7	26.9	100	16.5	8.4	50.0	25.2	100
Karnataka: Chamarajanagar	13.4	6.8	59.5	20.3	100	28.5	11.7	41.0	18.9	100
Kerala: Thrissur	0.0	0.4	27.8	71.8	100	0.0	3.4	55.0	41.6	100
Madhya Pradesh: Bhopal	33.9	21.0	37.8	7.3	100	22.9	13.2	47.0	16.9	100
Madhya Pradesh: Satna	27.8	15.8	44.8	11.6	100	16.5	12.3	52.0	19.1	100
Maharashtra: Nagpur	2.2	3.7	49.4	44.6	100	3.8	10.1	50.1	36.0	100
Manipur: Bishnupur	15.6	3.7	62.1	18.7	100	7.6	1.5	51.0	40.0	100
Meghalaya: East Khasi Hills	22.1	33.0	30.3	14.6	100	32.9	28.8	27.3	11.0	100
Nagaland: Dimapur	19.8	11.6	49.5	19.0	100	15.1	12.3	47.2	25.4	100
Odisha: Khordha	7.9	11.2	67.4	13.5	100	7.8	12.2	60.1	20.0	100
Punjab: Bathinda	16.5	14.4	41.3	27.9	100	16.1	9.7	44.2	30.1	100
Rajasthan: Ajmer	55.2	17.9	21.5	5.4	100	20.4	14.2	47.3	18.0	100
Tamil Nadu: Vellore	6.4	6.7	56.6	30.3	100	7.3	9.6	58.6	24.6	100
Telangana: Karimnagar	16.6	7.0	45.8	30.6	100	17.5	5.3	46.4	30.8	100
Tripura: South District	9.5	20.5	60.9	9.1	100	7.6	22.5	56.8	13.1	100
Uttar Pradesh: Lucknow	34.4	14.8	33.0	17.8	100	22.4	12.2	44.8	20.6	100
Uttar Pradesh: Varanasi	25.2	8.9	31.1	34.8	100	14.0	7.7	41.8	36.5	100
Uttarakhand: Dehradun	25.1	16.3	29.5	29.1	100	19.4	12.0	36.5	32.0	100
West Bengal: Bankura	24.3	17.1	46.9	11.7	100	16.8	20.1	49.0	14.1	100
All districts	**22.7**	**12.2**	**42.4**	**22.7**	**100**	**16.0**	**11.4**	**47.2**	**25.5**	**100**

State-wise norms for age of enrollment in Std I

The most recent document available for all states on age of entry to Std I is, MHRD, Department of School Education and Literacy, Statistics Division, Selected Information on School Education (Reference Year 2015-16), November 2017

This table shows the state-wise norms for age of enrollment in Std I as collated during field work in 2019.

State	Age	Reference - Official documents
Andhra Pradesh	6	Notification by School Education Department (July 30, 2010)
Arunachal Pradesh	6	The Arunachal Pradesh Gazette, Department of Education (dated June 3, 2010)
Assam	6	The Assam Right of Children to Free and Compulsory Education Rules, 2011 (dated July 11, 2011)
Bihar	6	The Bihar Right of Children to Free and Compulsory Education Rules, 2011 (dated May 12, 2011)
Chhattisgarh	6	Notification by Department of School Education, Chhattisgarh (dated April 12, 2010)
Delhi	5+ but less than 6	Notification by Directorate of Education, Government of National Capital Territory of Delhi (dated Sep 19, 2016)
Gujarat	5	The Gujarat Elementary Education Rules, 2010
Haryana	5 to 6	Notification by School Education Department, Government of Haryana (dated June 3, 2011)
Himachal Pradesh	5+	Letter by Directorate of Elementary Education (dated July 2009)
Jammu and Kashmir	6	The Jammu and Kashmir School Education Amendment Act 2013
Jharkhand	5 years and 6 months+ but less than 7	Notification by School Education and Literacy Division, Government of Jharkhand (dated Feb 16, 2016)
Karnataka	5 years and 10 months	Notification by Sarvajanik Shiksha Elaka, Government of Karnataka (dated February 11, 2013)
Madhya Pradesh	5+ to 7	Notification by Department of School Education (dated April 11, 2019)
Maharashtra	6+	Notification by School Education and Sports Department, Government of Maharashtra (dated January 21, 2015)
Odisha	6+	The Orissa Right of Children to Free and Compulsory Education Rules, 2010 (dated Sep 27, 2010)
Tamil Nadu	6	Letter from Director of Matriculation Schools, Chennai (dated July 12, 2010)
Telangana	6	Notification by School Education Department (July 30, 2010)
Uttar Pradesh	5	Notification by Basic Education Division, Government of Uttar Pradesh (dated September 30, 2019)
West Bengal	6 years and above but less than 7	Memorandum by School Education Department, Government of West Bengal (dated November 22, 2019)

State	Age	Reference - Official communication
Manipur	5+	Department of Education
Meghalaya	6	Department of School Education and Literacy
Nagaland	6 (or 5 years and 9 months)	Nagaland Board of School Education
Punjab	6	Department of Education
Rajasthan	5 years and above but less than 7	Rajasthan Education Initiative, SMSA Rajasthan
Tripura	6	Department of School Education, South Tripura
Uttarakhand	5	District Education Office, Deharadun

Note: This information could not be collected for Goa, Mizoram, Sikkim, and Union Territories.

Jammu and Kashmir has been added under 'State' since it was a state during the reference year 2013.

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Overview

1. What is ASER?

ASER stands for Annual Status of Education Report. It is a household-based survey of children's schooling and learning status. In the 'basic' ASER, schooling status is recorded for children in the age group 3 to 16, and children in the age group 5 to 16 are tested for their ability to read simple text and do basic arithmetic. Except for 2015, ASER has been conducted every year since 2005.

2. ASER completed 10 years in 2014. Since then, the same report has not been coming out every year. There was no ASER in 2015 and a different one in 2017 and again a different one in 2019. Why these changes?

When we started ASER in 2005, we made a commitment to do it every year for five years because we believe that for data to feed into policy, it needs to be reliable, comparable, and available on a regular basis. At the end of five years the consensus was that it was too soon to discontinue ASER. In 2014, we completed 10 years and so we decided to take a year off to reflect and consolidate our learnings. So in 2015, ASER was done only in two states - Punjab and Maharashtra - at the specific request of the respective state governments. There was no national ASER 2015 report.

Then in 2016, ASER began its second decade. Much had changed since 2005: there was far more awareness of the learning crisis, and learning assessments were being conducted regularly by the central and state governments. But despite all this attention, the problem of poor foundational reading and arithmetic abilities is still widespread. Even in 2016, less than half of all children in Std VIII could solve a simple division problem. Taking all these factors into account, we decided that for the next ten years (2016-25), ASER would switch to an alternate-year cycle. The 'basic' ASER will be conducted every other year - it was conducted in 2016 and again in 2018. The next 'basic' ASER will be in 2020. And in alternate years, ASER will focus on a different aspect of the education system. So, in 2017, we conducted 'Beyond Basics', focusing on the abilities, experiences, and aspirations of youth in the 14-18 age group. In 2019, ASER 'Early Years' focuses on young children in the age group 4 to 8 years and collects information on their enrollment and abilities.

3. What is ASER 'Early Years'?

ASER 'Early Years' is a sample-based household survey conducted by local volunteers in one rural district in almost every state in India. It collects information on pre-school and school status of children in the age group 4-8 years and their performance on some important developmental indicators. These indicators are divided into four domains: cognitive development, early language, early numeracy, and social and emotional development.

4. Why ASER 'Early Years'?

The early years, defined globally as age 0-8, is the most important stage of development in the human life cycle. There is little evidence in India on scale with respect to whether young children are acquiring the foundational skills and abilities that are key to subsequent success in school and beyond. Further, parents, families, community members, and others are not always clear about the different kinds of abilities that can help young children cope with the demands both of academic learning and of everyday life. Given the rising aspirations for educational success, parents often put their children into school well before they are developmentally 'ready'. Most of the available instruments for assessing young children's abilities are designed to be administered in institutional settings, by trained professionals, in order to inform experts. The overall objective of the ASER 'Early Years' survey is to highlight the kinds of abilities that young children need to build, to generate evidence on scale that is easy to understand, and to develop ways of discussing these issues with all kinds of people - policy makers, researchers, parents, and others - across the country.

5. What is the geographical coverage of ASER 'Early Years'? How is it different from the 'basic' ASER?

Like the 'basic' ASER, ASER 'Early Years' is also a rural survey. Urban areas are not covered. But since it is the first time we are focusing on this age group, we decided to limit the survey to one district per state instead of all rural districts of the country. ASER 'Early Years' was conducted in 26 districts across 24 states. Certain states have been excluded for logistical reasons such as natural disasters, situations of unrest, or conflict, etc.

6. What is the survey calendar? Why was this timeline selected?

ASER is carried out in the middle of the school year - roughly between September and November. By this time children's enrollment patterns have settled down for the year. Data entry and analysis happens in November and December, and survey results are released in mid-January of the following year. The calendar is designed to enable ASER data for the current school year to be available in time to feed into the district level annual

planning process for the following year. Planning for elementary education takes place at the district level and before ASER there was no source of district level data on children's learning outcomes that could provide inputs into this process.

7. Who collects the data?

ASER is conducted by volunteers from local partner organizations in each district. A wide range of institutions partner with ASER each year. These include universities and colleges, self-help groups, non-governmental organizations, and government institutions, among others. ASER is facilitated by Pratham. The process of finding, training, and monitoring ASER partners and volunteers is led by ASER Centre, the research and assessment unit of Pratham.

8. What is the per child cost of ASER 'Early Years'?

ASER 'Early Years' survey costs a little over INR 211 per child (approximately USD 3). Compared to other large scale learning assessments, this is an extremely low cost.

9. How can ASER 'Early Years' results help plan action to improve children's learning?

While we have some information on where young children are enrolled, there is not much evidence on scale on what they are learning. To ensure that the needs and abilities of young children move to the center of current debates on educational policy and practice in India, the evidence needs to speak and be understood by a wider set of audiences - policy makers, practioners and people at large.

ASER 'Early Years' generates this evidence on young children's abilities on important developmental indicators. A look at this year's results show that a large proportion of children are entering school without acquiring the expected pre-school level skills. Even within the first grade, children's performance varies enormously.

Improving children's learning levels requires an understanding of what children are currently able to do, so that teaching methods and materials can be designed to enable them to start from their current level and build towards the learning levels appropriate for their age and grade. ASER results can provide this understanding. If data is required on a specific geography or group, the ASER tools and testing process can be used to generate this understanding for any class, school, or group of children.

About sampling

10. What is the purpose of sampling, and why does ASER do it?

Assessing foundational learning abilities of every child in India would be an enormous task, requiring a huge amount of resources. Fortunately, it is not necessary to do so. The careful selection of a sample of villages and households enables us to generate data that is just as accurate and reliable as testing every child in the country - provided that the process of sampling is done carefully by experts and strictly followed on the ground. This is why no large scale surveys cover every single unit in their target population, other than the Census of India, which is conducted every ten years. In the case of ASER, the sampling methodology has been designed by experts and based on methods that are standard for large scale surveys.

11. What is the sample size of ASER 'Early Years'? How does this compare with the 'basic' ASER and other large scale surveys?

ASER 'Early Years' focuses on a new age group, 4 to 8 years. The survey has been conducted in one rural district per state. The sample size of ASER 'Early Years' has been designed in a manner that it generates district level estimates for young children's schooling and learning status. In each district, 60 villages are selected and in each sampled village, 20 households with children in the age group 4 to 8 years are randomly selected. This gives a total of 60 x 20 = 1,200 households in each rural district. This figure may vary as sometimes, in small villages, 20 households with children in the age group 4 to 8 years cannot be found. The same sample size is used in all districts regardless of population or socio-economic characteristics. Refer to 'Sample design of rural ASER 2019' on page 43.

'Basic' ASER provides district level estimates of children's schooling status, basic reading and arithmetic. Each year, the 'basic' ASER reaches close to 570 rural districts. In each district, 30 villages are selected and in each sampled village, 20 households are randomly selected. This gives a total of 30 x 20 = 600 households in each rural district. Depending on the exact number of districts surveyed, a total of 320,000 to 350,000 households across the country are sampled for each year's ASER. In each surveyed household, all children in the age group 3 to 16 are surveyed and all children in the 5 to 16 age group are tested. The same sample size is used in all districts regardless of population or socio-economic characteristics.

The National Sample Survey (NSS) conducted by the Government of India's National Sample Survey Organization is the main source of official data for estimating poverty, employment, and other socio-economic indicators. In 2011-2012, the NSS Employment Survey was done in 7,469 villages across India with 8 households per village. The National Achievement Survey 2017 conducted by NCERT was implemented in 701 districts across 36 states/union territories. It covered a total of 2,121,173 students from Classes III, V, and VIII. Students were tested in language, math, science, and social studies in schools. A total of 116,534 schools were surveyed. There is no equivalent measurement on scale for young children in India.

12. Why was ASER 'Early Years' done in only one district in each state? How were districts and villages selected? Why were 60 villages per district and 20 households per village selected?

ASER 'Early Years' is a pilot assessment of 4-8 year olds in the ASER architecture; hence it was conducted in one rural district per state. Districts were first shortlisted on the basis of availability of survey partners. Of these, districts that were close to the average state learning levels of children in the age 5-8 (as measured in ASER 2018) were selected. No district was selected for survey in Jammu and Kashmir, Mizoram and Arunachal Pradesh due to logistical issues.

For selection of villages and households, ASER 'Early Years' also uses a two-stage sample design like 'basic' ASER. In the first stage, in each surveyed district, 60 villages are randomly selected from the Census 2011 village directory using Probability Proportional to Size (PPS). In the second stage, 20 households with children in the age group 4 to 8 years are randomly selected following a procedure known as the 'every 5^{th} household rule' in each of the villages selected in the first stage. This two-stage design ensures that every household in the district has an equal probability of being selected. This sampling strategy generates a representative picture of each district. One rural district has been surveyed in each major state, with the exception of Uttar Pradesh and Madhya Pradesh where two rural districts have been surveyed. While this is not a nationally representative sample, the size and geographical spread of the sample enables the estimates to be aggregated to get an overall picture of the rural population in India. For more information, refer to 'Sample design of rural ASER 2019' on page 43.

13. How can I find out which villages have been surveyed?

You can't. This information is not in the public domain; the ASER 'Early Years' village list is confidential. In all large scale surveys and research studies, it is standard practice to maintain the confidentiality of respondents. This means that all information that could enable someone to identify particular individuals, households, or villages is removed. This includes village names, respondent names, and so on.

14. Is ASER 'Early Years' data representative? At what levels? How does this compare with the 'basic' ASER?

ASER 'Early Years' data is representative at the district level. 'Basic' ASER data is representative at the national, state and district level.

15. Why does ASER 'Early Years' generate district level estimates?

Most official statistics in India produce estimates only at the state and national level. Even poverty estimates in India, generated by the National Sample Survey Organization, are available only at the state or regional level, not at the district level. However, planning and allocation of resources is often done at the district level. For example, according to Samagra Shiksha Abhiyan[1], an overarching program for school education from pre-school to Std XII, all annual work plans are to be made at the district level. While information for enrollment, access, and inputs is available annually for each district, annual estimates of children's learning are not available at the district level. All ASER surveys, including ASER 'Early Years', aim to help fill these gaps.

16. Do ASER 'Early Years' or 'basic' ASER estimates for a district also apply to individual villages or blocks in that district?

No, they don't. All ASER estimates for a district are representative only at the district level, and provide a snapshot of children's schooling and learning status for the district as a whole. The sampling is not representative at the village or block level. The situation in individual villages or blocks can be different. To understand the status of a particular village or block, a different sampling strategy would have to be used.

[1] http://samagra.mhrd.gov.in/docs/Framework_IISE%20_F.pdf

17. Who designed this sampling strategy?

The ASER sampling strategy was designed in consultation with experts at the Indian Statistical Institute, New Delhi. Inputs were also received from experts at the Planning Commission of India and the National Sample Survey Organization (NSSO).

18. Is enrollment data for children age 3 and 4 comparable across all ASER years?

Due to a change in the way the data was collected, ASER 2018 data for enrollment of children age 3 and 4 and ASER 2019 data for enrollment of children age 4 is not comparable with previous ASER years or with each other.

19. Is reading and arithmetic data for children age 5 to 8 in ASER 'Early Years' comparable with previous ASERs?

No, due to changes in the design and administration of these items, this data is not comparable with previous ASERs.

About design

20. Why do all ASERs, including ASER 'Early Years', test children at home and not in school?

The ASER survey generates estimates of schooling and basic learning levels for all children in rural India. This includes children enrolled in different types of pre-schools and schools (government, private, and others) as well as children currently not in school. The first problem with school-based testing is that there is no complete list of all schools in the country. In particular, there are many low-cost private schools which are not found on any official list. Without a complete list of all schools, it is not possible to select an unbiased sample of schools. The second problem with school-based testing is that not all children are in school. Some have dropped out, some have never enrolled, and others are absent from school on the day of the survey. Testing in school would mean that all these children would be excluded. ASER tests children at home so as to include all these different kinds of children. Household-based testing is the only way to ensure that all children are included. In the Indian context, it is not possible to do this if testing is done in school.

21. How do you ensure that children are at home on the day of the survey?

The household survey is usually conducted on a Sunday and/or at other times when children are not in school. If a child is not found at home at the time of the survey, volunteers are asked to note down the child's details and return to the household at a time when family members say she will be available.

22. Why is the target age for children's assessment in ASER 'Early Years' 4 to 8 years?

The Right to Education Act proposes that state governments make the necessary arrangements for early childhood care and education for all pre-school age children, that is 3 to 6 years. It mandates formal school age as 6 to 14 for compulsory elementary education. In practice, however, ASER data shows that large proportions of children who are younger than 6 and older than 14 continue to be in elementary grades. Many states allow children to enter Std I at age 5, but children can start school much later as well. They can also drop out and then return to school, repeat grades, and so on. The India Early Childhood Education Impact Study 2017 also presents evidence that young children do not follow the enrollment trajectories outlined by policy. Hence, to better understand this age group from both the policy and practice lens, ASER 'Early Years' is designed to capture the enrollment and learning status of young children in the pre-school and early primary grades age group, that is 4 to 8 years.

23. Why is the survey not done in urban areas?

For several reasons. First, many urban areas have large low income populations that are undocumented and therefore not included in the available sampling frames. These areas would be left out of a sample-based survey. Second, a representative sample of the urban population in any state would include not just metros but also a diverse range of urban habitations. Whereas for rural districts, the estimates generated by ASER can be shared with the district administration, there is usually no equivalent single urban authority in a state with whom educational planning can be discussed for the state as a whole.

24. What is the definition of 'rural' that is used in ASER data?

ASER uses the Census village directory as the sampling frame. When we say ASER (rural), we refer to the definition of rural habitations as used in the Census. It does not refer to rural districts, since the Census itself does not define districts as either rural or urban.

25. Do you also collect information about the household?

Yes. In addition to children's schooling and learning status, some basic information about the household is collected (such as number of members, household assets, and parents' education). Household information collected can vary from

year to year; details of what is asked are provided in each year's ASER report.

26. Do you collect information about pre-schools and schools?

ASER has been doing school visits every year since 2009. Survey teams visit the largest government school with primary sections in each sampled village, and collect basic information on enrollment, staffing, and school infrastructure. In ASER 2018, information on the availability of pre-schools (anganwadis and pre-primary sections in government schools) was also collected. ASER 'Early Years' follows the alternate-year model. As in ASER 2017 'Beyond Basics', it did not collect information about provision of facilities (in this case pre-schools and schools), and was limited to data collection from sampled households.

27. Why don't you collect information on children with disabilities/special needs/working children?

The ASER approach is designed to be rapid and easy to do. Assessing children with special needs requires more time, training and expertise than ASER volunteers have. Also, since ASER is a household survey, the sampling may not be suitable for reaching working children. While it is important to have data on children with disabilities, special needs and on working children, among others, ASER may not be the appropriate medium to collect it.

About tools and testing

28. Usually, ASER assesses only reading and arithmetic. Why this change in 2019?

Every year ASER for children age 5 to 16 tells us that a large number of children in primary grades are struggling to acquire basic reading and arithmetic skills. While it is known that difficulties in these two domains prevent children from acquiring higher level skills, it is also important to understand that a large number of underage children are in school and young children enter school with learning gaps. This merits an enquiry into the quality of pre-school learning.

This year, ASER is focusing on a new target age group, 4 to 8 year olds. An assessment on early childhood education would entail an enquiry into children's abilities on developmental indicators that are predictors of future success in school and in life. While this year's assessment includes select reading and arithmetic tasks of 'basic' ASER suitable for early primary grades, it also assesses children on important developmental domains such as cognitive development, early language, early numeracy, and social and emotional development. ASER 'Early Years' aims to highlight the abilities that our young children need to build and the extent to which they are able to do so.

29. What guidelines were followed in developing the ASER 'Early Years' assessment tools?

Broadly, the assessment has been designed to retain key elements of the ASER architecture, that is, it is rapid, easy to administer and understand, scalable, and low cost. For selection of domains and tasks, a mapping of children's learning trajectories, policy guidelines, curricular frameworks, and learning outcomes defined for pre-school and early primary school (Std I and Std II) was conducted. Additionally, research on early learning and assessments on early childhood education were reviewed. Based on this exercise, an initial set of domains and tasks were developed, then piloted with children extensively, and refined over several months. For the final assessment four key domains were selected: cognitive development, early language, early numeracy, and social and emotional development. For more details, refer to 'Evolution of ASER 2019 'Early Years'' tool on page 126.

30. What languages do you test in? Is the ASER 'Early Years' assessment comparable across different languages?

ASER 'Early Years' reading tool is available in 14 languages including English. The ASER 'Early Years' assessment does not strive to be comparable across different languages. The objective is to develop a tool that assesses the most basic foundational skills for language acquisition (picture description and listening comprehension) and literacy acquisition (letter recognition, the reading of simple words and reading words in connected text that is of Std I level) for each language. Consequently, the inference based on the ASER 'Early Years' early language assessment is not about comparing performance across different languages but to evaluate children's level of language and literacy acquisition in relation to curricular expectations in their state.

31. Why does ASER test children individually and in an oral format?

A typical pen-and-paper test assumes that the child can read. Hence it is not a viable option for a child who is a beginning reader or a struggling reader as it places additional cognitive demands on the child to read and comprehend instructions. The oral format has emerged as the only way to separate 'reading' and 'comprehension'. ASER 'Early Years' is conducted

with young children who cannot fulfill the cognitive demands of reading and comprehending instructions. In view of this and to maintain a standard administration approach, all assessment tasks this year are administered in an oral format, except numerical problems for which children were provided a paper and pencil. Further, the nature of tasks also demands the assessment be administered individually.

32. Why does ASER 'Early Years' include Std I level text in reading and subtraction with borrowing in arithmetic? Are these not too difficult for this age group?

The content of the assessment is aligned to pre-school and Std I and Std II school curricula. Keeping in mind the breadth of the age group and children's developmental trajectory, some elementary tasks have not been administered to 6 to 8 year olds. Similarly, for 'academic' tasks in reading and early numeracy, an adaptive testing approach is used to accommodate younger children. In reading, the administration of the test begins at the most basic level, that is, letter recognition and in early numeracy it begins at number recognition (1-9). A child is given the task of the next level only if she performs to a satisfactory standard at this stage. Hence, the level of the task administered is adapted to the child's ability. In this administration format, the assessment is quicker and does not compromise on the objective of identifying the highest level that any child can do.

33. Why are all children in the age group 4 to 8 assessed with the same tool? Why does ASER 'Early Years' not assess children at their grade level?

All children are assessed with the same tools as the objective of the ASER 'Early Years' survey is to ascertain whether or not children in this age group have attained skills that are key to subsequent success in school and beyond. This is irrespective of age or grade level. It is not designed to be a grade appropriate assessment but rather to provide an understanding of young children's cognitive development, early language, early numeracy, and social and emotional development.

34. How long does the process of testing a child take?

ASER is designed to be easy and quick to administer. Depending on the age and ability of the child, the 'basic' ASER assessment of reading and arithmetic takes an average of about 10 minutes per child and ASER 'Early Years' assessment takes an average of about 20 minutes per child.

About implementation

35. Why does ASER use volunteers?

ASER is a citizens' initiative, implemented by partner organizations in every rural district across the country. One of the major aims of the survey is to generate awareness and mobilize people around the issue of children's learning. The entire design of ASER thus revolves around the fact that it aims to reach and involve 'ordinary people' rather than experts. All tools and procedures are designed to be simple to understand, quick to implement, and easy to communicate.

36. Which organizations partner with ASER? How do you find them?

Participation in ASER is open to any institution, organization, or group that can provide volunteers who are comfortable spending time in rural locations. Many different kinds of institutions participate. In the months leading up to the survey, ASER Centre staff travel extensively around their respective states to find institutions that are interested and willing to participate and that meet the criteria required of all ASER partners. Institutions often partner with ASER for more than one ASER cycle. Partner organizations sign a Memorandum of Agreement that lists their responsibilities and those of Pratham. A complete list of ASER partners is published in each year's ASER report.

37. Are the volunteers capable and well trained to do the survey? How do you ensure data quality?

Yes! Volunteers are trained intensively prior to the survey, including a field pilot where they practice every procedure that they will be required to implement during the actual survey. During training, their performance is carefully monitored and documented. Once the survey is underway, trainers monitor their performance and help sort out any problems that are encountered. For more details, refer to 'ASER 2019 'Early Years'-Training' process on page 130.

Even though ASER tools and procedures are simple and intuitive, enormous effort is dedicated to ensuring that the data produced by the survey meets stringent quality standards. Quality monitoring processes have been put in place at every stage of the process, from training of trainers and volunteers, to monitoring survey implementation in the field, to recheck of the data collected once the survey is complete. Every year these procedures are carefully reviewed, refined, and

improved. Details are available in each year's report. Refer to the 'ASER 2019 'Early Years'- Quality control' process on page 144.

38. What happens when young children do not respond to volunteers or leave the test midway?

Volunteers are taught how to interact with household members and children in villages during the training for the survey. They are given specific instructions on how to create a conducive environment for assessment in the sampled household and become familiar with the child to be assessed, by asking her about things that interest her, playing some local games, etc. They are instructed to deal with the child with encouragement and patience during the testing. They also practice techniques to control parental and community pressure when the child falters. Despite these measures, some children refuse to be tested or only engage with the first few activities. In these cases, the assessment is concluded.

39. What happens when young children cannot understand the volunteers' spoken language?

As we partner with local organizations, the volunteers are mostly familiar with the local language/dialect. In case of ASER 'Early Years' as well, volunteers were encouraged to use the local dialect to explain the tasks. If for some reason, a child still could not understand the volunteers' spoken language, the volunteers were asked to take help from the parents or family members of the child who are around during the assessment process. They were advised to not give any additional instructions in this case.

40. How did volunteers collect the data for ASER 'Early Years'?

To conduct the survey, a pair of volunteers was assigned to each sampled village. They worked together to complete the survey of 20 households, usually over a period of three days. Village information was collected on the first day, and the household survey was conducted for the rest of that day and all of the following two days. In each household, the survey team recorded basic household information and schooling status for all children age 4 to 8 and assessed them on a set of tasks, one at a time. For more details, refer to 'ASER 2019 'Early Years'- Village process' on page 132.

About ASER results

41. Why don't you rank states? How can I compare my state with others?

ASER doesn't rank states because state rankings will vary depending upon the indicator that is selected. For example, children in Std I and II might be doing better in one state relative to others but children in Std III and IV might be doing worse. Or, the proportion of children who can do arithmetic in a state could have improved, but the proportion of children who can read may not have. By providing the data, those wanting to compare states can choose the parameters on which to do so. However, the inference based on the ASER reading assessment is not about comparing performance across different languages but to evaluate children's level of reading in relation to the state mandated curriculum.

42. What if the data I am looking for is not in the published report? Is the raw data available in the public domain?

ASER publishes this national report annually, which includes selected estimates at various levels. ASER reports can be downloaded from the ASER Centre website (www.asercentre.org). Data queries on some key parameters of the 'basic' ASER can also be run through the query function on the website. Beyond these options, ASER Centre makes the 'basic' ASER data sets available for research purposes on request.

43. All ASER surveys collect household information, so why does the ASER report not publish it? What is the relationship between household indicators and children's learning?

ASER 'Early Years' includes information about the mothers of the young children who were surveyed. In addition, information on this and other selected household indicators is included in an annexure in each year's ASER report. The body of the report focuses on children's schooling and learning status because these are the main objectives of the survey. While it is true that household information is collected in order to understand the relationship between household characteristics and children's learning, unpacking these relationships requires more time and deeper analysis. The ASER report simply presents the findings of the survey but these data have been used by researchers in India and abroad to explore many important questions about the nature of the influences on children's learning.

About impact

44. What impact has ASER had on education policy in India?

ASER has had a major influence in bringing the issue of learning to the centre of the stage in discussions and debates on education in India. In 2005, when ASER began, most people, from parents to government functionaries, were concerned with getting children into school. The assumption was that if children were in school, they must be learning. Today, the fact that large proportion of children are not learning even the basics is widely recognized. For example, ASER has been cited in major Government of India documents such as the Eleventh and Twelth Five Year Plan and the Economic Survey of India. Most recently, ASER data has been used in the following reports: Three Year Action Agenda of NITI Aayog, Economic Survey of India 2017-2018, and The World Development Report-Learning to Realize Education's Promise, to make the learning crisis visible and advocate for remedial steps towards improving learning outcomes.

Many state governments are now implementing their own learning assessments, sometimes using tools very similar to the ASER tools; and some are implementing programs aimed at improving learning outcomes. A great deal remains to be done to ensure that every child in India is in school and learning well. But the first step is for the problem to be recognized. The second step is to have reliable evidence on the nature and extent of the problem. Only then can workable solutions be found.

45. What impact does ASER 'Early Years' seek to have on education policy in India?

Recent policy developments in India like the draft National Education Policy 2019 and Chapter 9 on Pre-school education in the draft Framework for Implementation of Samagra Shiksha (Integrated Scheme for School Education)[1] document provide guidelines for implementing numerous changes in infrastructure and teaching and learning for providing quality pre-school education for all young children. In this context, ASER 2019 'Early Years' aims to provide evidence on young children's pre-school and school status and their abilities on important developmental indicators, in order to help policy makers make evidence-based decisions.

46. What response do you get from the parents of children you test or from the community in general?

In the village there is usually a great deal of curiosity, interest and discussion as the ASER testing is being done. People crowd around to observe and talk about what is going on. The simplicity of the tool helps parents and community members to engage with the effort and also to engage with the question of whether their children are learning. Very often parents assume that because their children are going to school, they must be learning. ASER is sometimes the first time that parents become aware that their children may be lagging behind. The ASER 'Early Years' assessment also helps parents see how simple activities can help their children develop key skills.

About resources

47. Who funds ASER?

ASER is a citizens' initiative, designed by Pratham/ASER Centre and implemented each year by partner organizations in every rural district. People who conduct ASER each year donate their time to ASER and are compensated only for their local travel and food costs. The ASER survey receives support from a variety of sources including foundations, development agencies, and corporates. Significant funding also comes from individuals. Each year the names of the partner organizations and sources of support are listed in the ASER report. ASER does not receive funding from any government institution.

48. Can I volunteer for ASER or participate in any way?

Yes, you can; ASER depends on volunteers! You can reach out to us at ASER Centre by sending an email to contact@asercentre.org. Depending on your location, your interests, and your availability, we can figure out how best you can join in this effort.

49. How can I contribute towards ASER surveys?

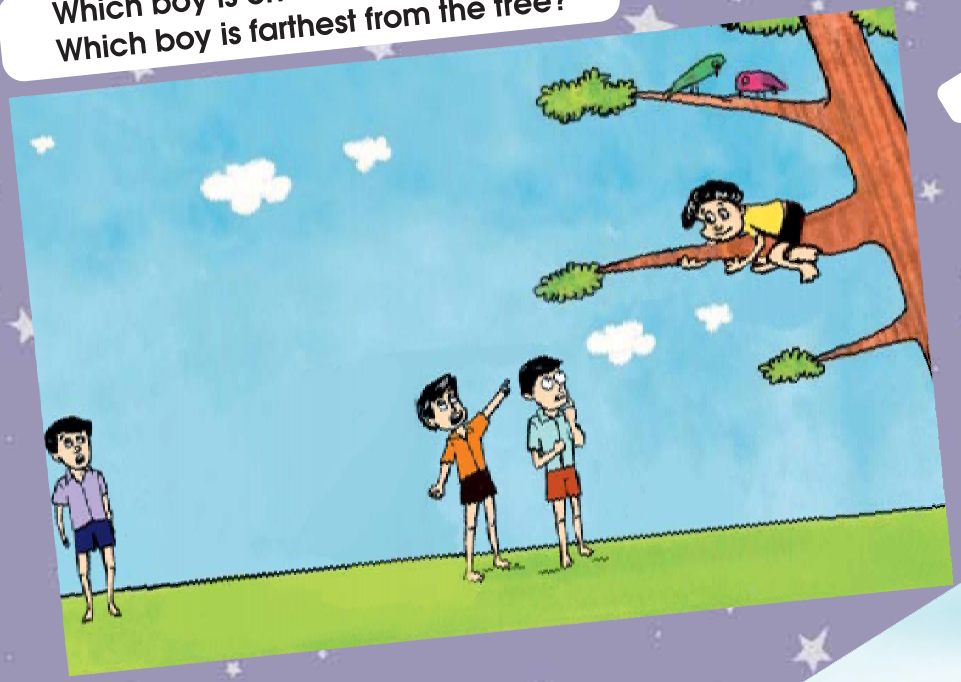
As a user of good quality data, you will appreciate the effort that goes into it. While ASER reports and tools are available free of charge, donations of any amount are welcome and will help us continue to generate evidence on learning outcomes in India.
For online payments, please visit: http://www.pratham.org/get-involved/donate-now

[1] http://samagra.mhrd.gov.in/docs/Framework_IISE%20_F.pdf

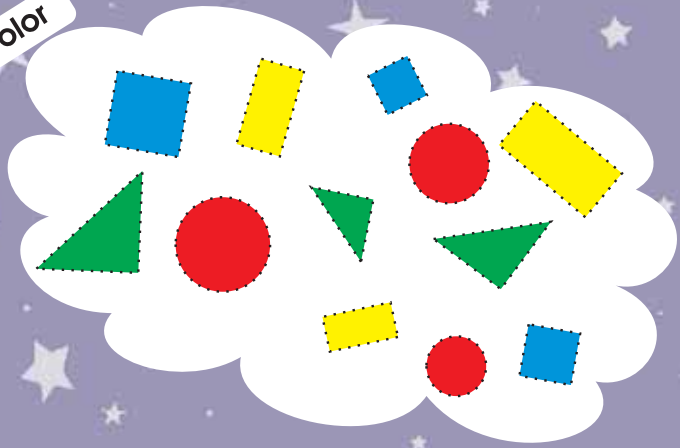
Cognitive Skills

'Early Years'

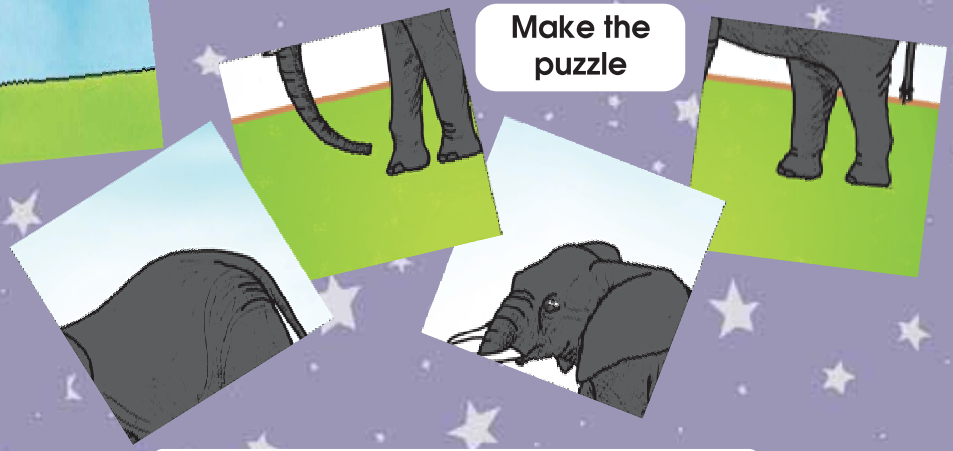
Which boy is on the tree?
Which boy is farthest from the tree?



Sort by color



Make the puzzle



Arrange from smallest to biggest

What will come next in this pattern?

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Early Language

Read letters

z a r
p k
h y b

Read and answer

Rupa was playing outside.
She played until dark.
Then Rupa went back home.
She ate food and went to sleep.

Who was playing outside?
What did Rupa do after eating food?

What are people doing here?
What can you see outside the window?

Read words

baby ball moon
girl cat
rope ant hot

Listen and answer

Geeta wanted to fly a kite. Geeta made a kite with paper. Then she tied a thread to the kite. Geeta was happy to fly the kite.

Who wanted to fly a kite?
What did Geeta tie to the kite?

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Early Numeracy

Count how many umbrellas are there?
Count how many balls are there?
Count how many fish are there?
Which of these objects is the most in number?

Recognize numbers

56 33 11 79 45 62 26 89

Add this

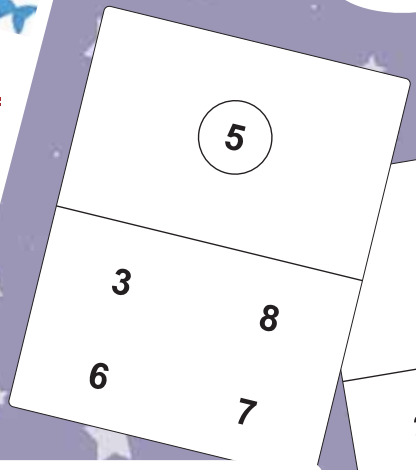
$6 + 3 =$ ____

$26 + 19 =$ ____

Subtract this

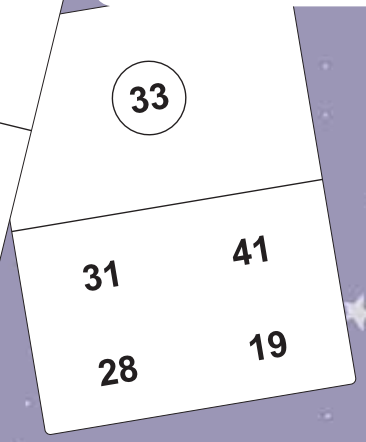
$7 - 5 =$ ____

$42 - 17 =$ ____



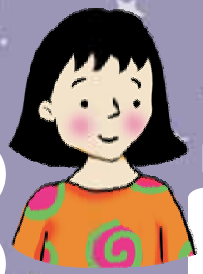
Which number is smaller than 5?

Which number is greater than 33?



6 9 1 4 3 5 8 7

Recognize numbers



Listen and answer

Seema has 3 toffees. Her sister gave her 5 more toffees. How many toffees does Seema have in total?

Reena has 7 bananas. She gave 3 bananas to her friend. How many bananas are left with Reena?

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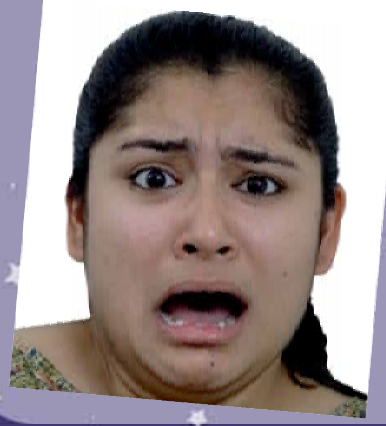
Social and Emotional Development

Which of these girls is sad?
Which of these girls is angry?
Which of these girls is afraid?
Which of these girls is happy?

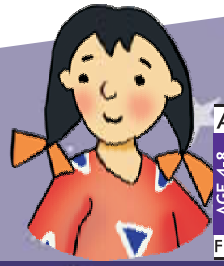


Point to a card and show me how you would feel.

1. Your mother/father bought you a new toy.
2. Your friend ate all your candy.
3. You were sleeping at night.
   You heard a sound coming from the dark.
4. You were about to play with your toy but your father stopped you from playing.

What will you do?

1. You had only one toy. You were playing with your friend. While playing, your friend snatched your toy.
2. You bought a toffee. You saw that a child was crying because his toffee fell in the mud.



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