



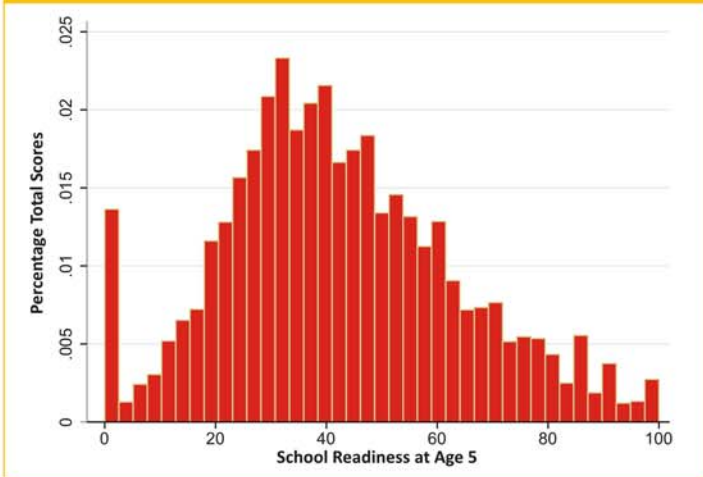
The **Indian Early Childhood Education Impact Study** is a five year longitudinal study that tracks close to 13,000 four year olds in three states of India: Assam, Rajasthan and Telangana. Perhaps the first of its kind in India, this mixed-methods study aims to generate estimates of children's participation in preschool education in rural areas and the impact of this participation on children's school readiness and subsequent early grade learning outcomes. It also makes a comprehensive assessment of the quality of preschool programmes, including anganwadi centres and low budget private schools, in the three states. The study identifies specific programme characteristics that are associated with positive developmental outcomes for children, and examines whether these impacts persist during the early years of primary school.

This policy brief summarizes major findings from the first three years of data collection, September 2011 through December 2014.

Building children's cognitive, preliteracy and prenumeracy skills during the pre-primary years improves children's learning outcomes in early grades.

In the first two assessment rounds for this study, four and five year old children were assessed using a tool that evaluated their ability to do ten tasks in the cognitive, preliteracy and prenumeracy domains. These are key components of what is known as 'school readiness'.

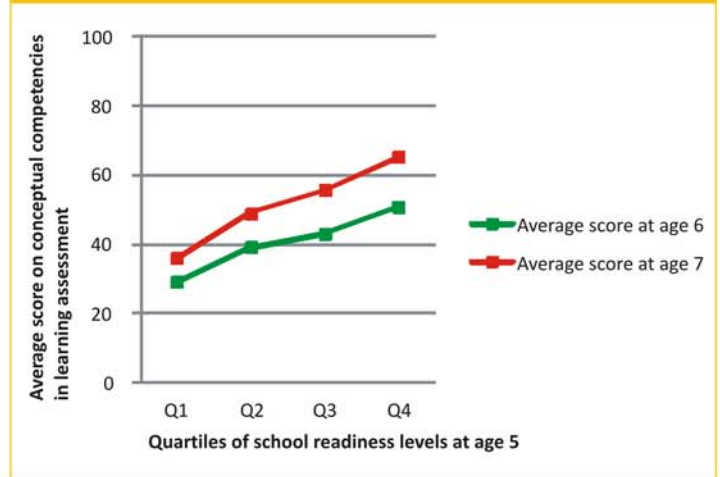
Chart 1: Distribution of school readiness scores at age 5



Overall the school readiness levels overall in the sample were low at age 5 with most children scoring less than 40% despite having attended a preschool in the preceding year.

The study shows that children's school readiness scores at age 5 are strong predictors of their learning outcomes at ages 6 and 7.

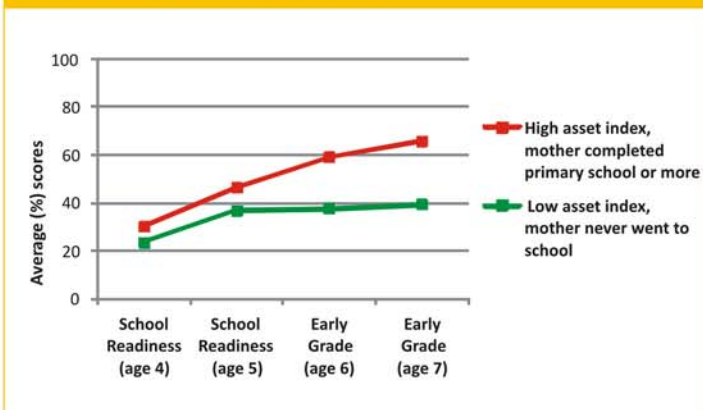
Chart 2: Relationship between school readiness at age 5 and learning levels in early grades



Children with higher school readiness scores at age 5 did better on more conceptual tasks in subsequent years. This early advantage persists even two years later, at age 7.

Although participation in preschool education does improve children's school readiness, quality is important. High quality preschool experience can compensate for home disadvantage.

Chart 3: Children's learning trajectories by household characteristics



Children's school readiness score at age four is a good predictor of their school readiness at age five. The latter in turn impacts children's early grade learning at age six and seven.

For the sample as a whole, household factors such as mother's level of education and economic status are strongly correlated with children's school readiness levels and early grade learning.

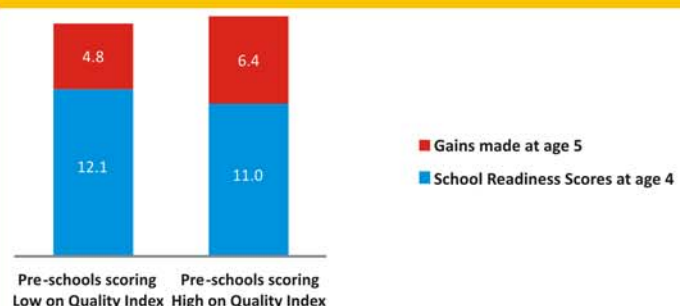
From age four to age seven, the gap in learning trajectories of children from the most and the least disadvantaged homes widens.

In each district, a subset of preschool programmes attended by sampled children was observed closely in order to assess the quality of the curriculum provided to children. A time on task analysis revealed issues of quality across programmes offered by both public and private sectors.

ACTIVITY	ANGANWADI	PRIVATE ECE
Planned activities for all round development	Low	Low
Rhymes and songs	High	Medium
Conversation	Medium	Low
Formal Teaching	High	High
Routine Activity	High	High
Unplanned Play	Low	Low
No Activity	High	Medium

OPPORTUNITIES	ANGANWADI	PRIVATE ECE
Learn to share	Low	Low
Think and answer	Medium	Medium
Express curiosity & ask questions	Low	Low
Learn to wait for turn	Medium	High
Play/work with other children	Low	Low
Rote Memory	High	High

Chart 4: Relationship between quality in preschools and gains in school readiness levels.



These data show that children attending preschool programmes that were ranked high on the quality assessment gained significantly more from one year's preschool participation than children who attended centres with poorer quality indices. This is true despite the fact that children attending the high scoring preschools started out with lower levels of school readiness than their peers.



Specific characteristics of preschools are strongly associated with better school readiness among children.

CLASSROOM PLANNING

- Age/development appropriateness of activities ensured by teacher
- Weekly/Daily schedule followed by teacher
- Individual planning for children

CURRICULAR TRANSACTION

- Opportunity for all children in individual and group creative activities
- Classroom arrangement & time provided by teacher for free play with interaction with children during play
- Activities conducted for number readiness and learning maths concepts

TEACHING PROCESS

- Asking children questions and encouraging children's questions
- Promoting Higher order thinking
- interactive and democratic teacher

PHYSICAL INFRASTRUCTURE

- Toilet availability & use
- Availability of clean water for drinking
- No hazardous and unclean conditions around the school
- Safety level of building that is maintained

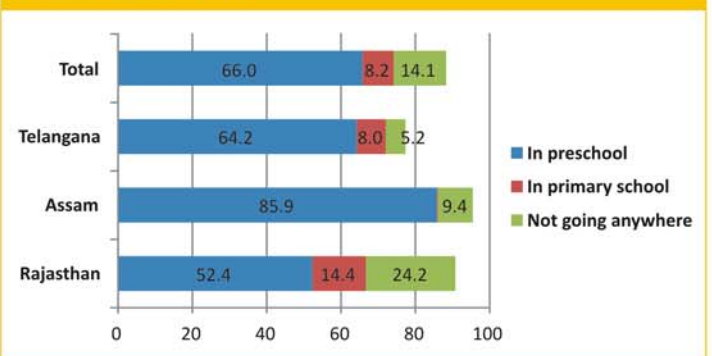
After controlling for children's individual and household characteristics, preschools that produce the best outcomes with respect to children's school readiness have a range of indicators with respect to physical environment, curriculum, and the actual teaching-learning process.

Evidence from this study suggests that one key indicator is that the activities conducted should be age and developmentally appropriate for young children. This is a key factor at the primary school level as well.

At age four, most children are already attending preschools. India is therefore well positioned to focus on ensuring that quality standards are developed and implemented.



Chart 5: Percentage of sampled children age four who were:



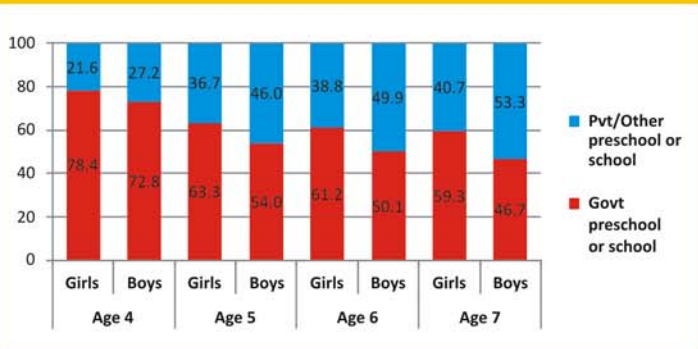
Facilities for preschool exist in every village sampled for this study. All villages had at least one Anganwadi centre and many had private facilities as well. Close to two-thirds of all sampled children were participating in preschools at age four, although substantial variation is visible across states.¹

With provisioning of facilities and children's participation largely in place, policy should focus on issues of quality.

¹During the initial rounds of data collection for this study, large numbers of sampled four year olds were going outside their village to study, especially in Telangana. Because no confirmed data are available on whether these children were attending schools or preschools, they have been excluded from this estimate. Thus the actual proportion of four year olds attending both preschool and primary school is likely to be higher.

Private school participation is increasing steadily even among preschool age children. And clear gender differences are visible in participation trends.

Chart 6: Participation trends by management type, age and gender



Even at age four, about one third of children attend private institutions. This proportion increases year on year.

At each age from four to seven, a higher proportion of boys than girls attend private institutions (preschools or primary schools). Conversely, higher proportions of girls attend government institutions.

While girls' participation in private institutions stays at about the same level from the age of five onwards, the proportion of boys attending private institutions grows with each successive age cohort.

Preschool and primary school education need to be viewed along a continuum, both in terms of access and quality.

Access: Currently, what children do between ages four and seven varies depending on where they live.

The Right of Children to Free and Compulsory Education Act (2009) and the National Policy on Early Childhood Care and Education (2013) prescribe preschool for four and five years olds, followed by primary school starting at age six. However, many states allow admission to Std I of primary school at age 5.

Among children sampled for this study, at least 8% of four year olds were already in primary school.² Among five year olds this proportion reached almost one third. In both cases, the majority of children entering primary school early were located in Rajasthan and Telangana. At the other extreme, large proportions of six and seven year olds continued in preschools, mostly in Assam. These trends vary enormously by state.

Chart 7: Rajasthan

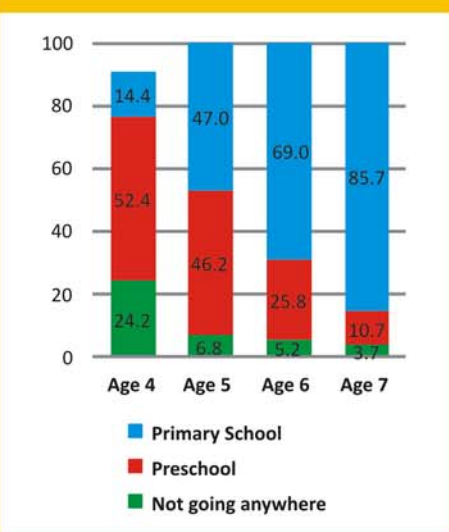


Chart 8: Assam

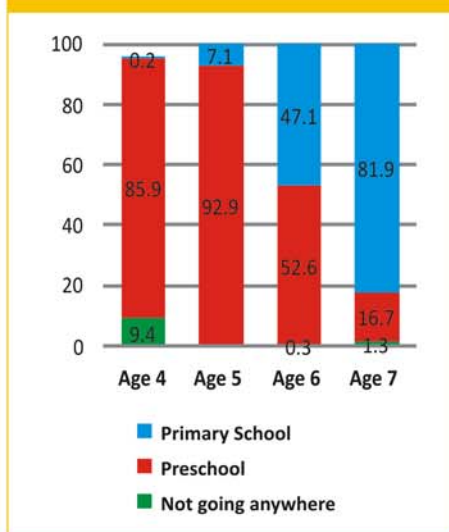
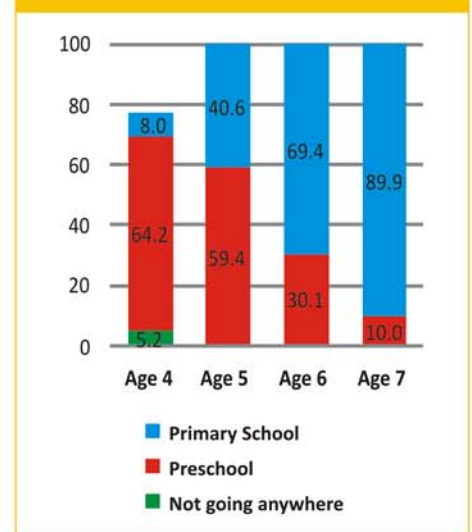


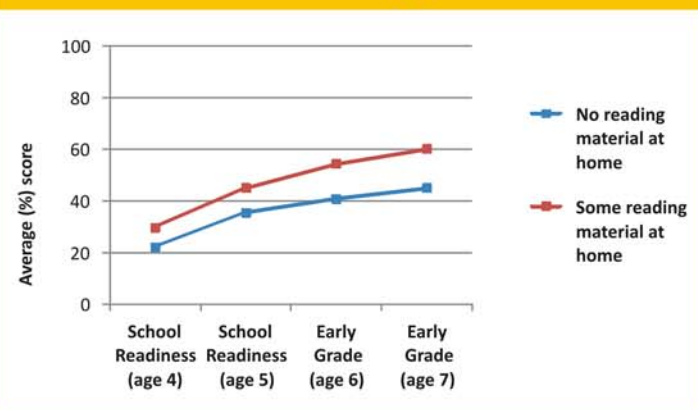
Chart 9: Telangana



²The actual proportion of four year olds attending primary school may be higher. See Footnote 1.

Bridging home and school: Children's transition from home to school should reflect a continuum of experiences. Families can help build children's school readiness.

Chart 10: Relationship between reading materials at home and early grade scores



Preschool programmes should involve parents and communities. Children who have learning support at home have better school readiness and early grade outcomes.

Many parents do not know that doing simple activities with children helps in their cognitive development. Strategies that promote family engagement in preschools can help improve children's school readiness and learning outcomes.



Quality: Children's learning takes place along a continuum as they grow. The curriculum for preschool and early primary grades should reflect this continuity.

The National Policy on Early Childhood Care and Education (2013) refers to the importance of age and developmentally appropriate content for young children. The gap between what is viewed as appropriate for preschool children and what children in Std I are expected to do is enormous.

Figure 1 shows the words used to assess sampled children's foundational reading abilities in 2013. As the table shows, even in Std II, barely two thirds of children could read even the three short, simple words without matras shown here. Of those sampled children who were in Std II, barely one in every five could read a very simple four line text fluently.

A look at any Std I textbook shows that children are expected to transact fairly complex text. For example, Figure 2 contains a sample chapter from the Std I Rajasthan Hindi textbook in 2013. The text is long and there are numerous three syllable words with matras.

This study, like others before it, shows clearly that children entering primary school do not have the foundational skills and concepts needed to handle these curriculum expectations. Unless primary school curricula build on what children need and are able to do, the gap between those who can access other sources of support and those who cannot will only continue to widen.

Figure 1: Sampled children's ability to read in Std I, II and III

Std	% Children who could read 3 simple words
I	49.6
II	66.1
III	74.5

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Figure 2: Extract from Std I textbook in Rajasthan



Study supported by



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