Elementary Education in India

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Abstract

Universal elementary education has been at the centre of attention in discussions of both democracy and development in the last decade. This paper begins with a consideration of the need for universalizing elementary, and not just primary, education in India. It then takes up the two main challenges in this process, namely, access and efficiency. The main reasons for the persistence of these is then discussed. Thereafter, an attempt has been made to identify areas where work needs prioritization. This choice is examined and defended. The final section sums up the discussion.
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1. Elementary Education and the Need for its Universalization

The gains from universal elementary education can hardly be overstated. It has important advantages for the individual and the nation. It expands the realm of choices available individual in almost every instance. The benefits in terms of key demographic variables such as infant mortality rate and fertility rate are substantial\(^1\). Equally, it is important for the effective functioning of democratic institutions, the malfunctioning of which impinge on virtually every economic and social outcome.

Elementary education covers the primary (6-11 years) and upper primary (11-14 years) age group. In most Indian states, this translates into the successful completion of prescribed educational requirements till Class VIII. The essence of the goal is for every 14-year old to have acquired foundation skills such as the ability to read and write with fluency, numeracy, comprehension, analysis, reasoning and social skills such as teamwork. Equally, elementary education should instill in children courage, confidence, curiosity, independence, resourcefulness, resilience, patience and understanding\(^2\). While this is recognized by Indian policy documents, in practice, the formal elementary school system is often accused of not developing these skills in children.

In a poor country like India, education cannot serve merely as consumption good; investments in it need additional justification. Education should, at the very least, equip every individual with skills that enable him/ her to participate meaningfully in social, political and economic processes, and to avail of opportunities to learn advanced skills throughout life. In the Indian context, what level of education can provide this bare minimum effectively? By what age can one expect a child to have developed the capacity for formal and articulate thought and expression, so that the education obtained can serve as an effective means (and not only an end) in life options?

There is reason to believe that education till the age of 14 years is the basic minimum for the child to have effectively absorbed the abilities discussed above\(^3\). Apart from it being a Constitutional goal in India, child development studies support going beyond the primary age

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\(^1\) The World Bank (1997), *Primary Education in India*, New Delhi, Allied Publishers Limited.


\(^3\) There is, of course, sufficient debate questioning the tacit assumption that schooling and formal education play a positive role in the appearance of these abilities. See Ivan Illich (1973), *Deschooling Society*; Penguin; Neil Postman
of 11 years. Piaget, for instance, argues that two important ingredients for thought to proceed in a cogent and scientific manner — hypothetico-deductive reasoning and propositional thought — appear in the average child only after the age of 11 years. Other important skills such as elaboration, i.e. the memory strategy of creating a relation between two or more items that are not members of the same category, rarely appear before age 11 (Schneider and Pressley, 1989). Kail (1991) has shown that there is an age-related gain in basic information-processing resources. As a result of this, and through several empirical studies, he has also shown that the rate of decrease in time taken to process basic cognitive tasks begins to taper off by age 14 years and no sooner. Essentially, the age-related gain in basic information-processing resources permits the cognitive systems of older children to hold on to more information at once, as a result of which they can scan the information more quickly and generate better responses in a wide range of situations. The facility to do so does not develop until after the age of 11 years.

2. The Two Dimensions of Access and Efficiency

Significant progress has been achieved in elementary education in India in the last fifty years. Formal primary schools have grown from 210,000 in 1951 to 611,000 in 1997-8. In addition, there are 300,000 Non Formal Education (NFE) centres to cater to non-enrolled children and...
children who have dropped out of school. The increase in the number of upper primary schools has been nearly three-fold, to 186,000 in 1997. Many challenges remain. While the main success has been in access, there are still many children to be reached. There are even more who are enrolled, but learning little. The problem is, therefore, two-fold: it involves (a) ensuring complete access and (b) ensuring a certain minimum quality of education for everyone — in other words, maximizing the efficiency of investments made in elementary education. Expanding access without a simultaneous commitment to improving quality would be of little worth. Children would not gain the knowledge or skills we have been talking about, and the resources invested in teaching and learning would be wasted.

2.1 Access

In India, nearly 94 per cent of rural habitations have access to primary schooling facilities within 1 kilometre (km), and 84 per cent have access to upper primary schooling facilities within a distance of 3 km. Urban areas are much better served by schools. Access to schooling is not uniform across states, within states, by gender or social class.

In this paper, access will henceforth refer to the existence of a functional structure (as defined by Operation Blackboard) suited to the context of the child, thereby offering him/her the opportunity to learn. There are certain categories of children who do not have access to functional schooling in any meaningful sense. In the case of working children for instance, a school might exist within a kilometre, but if it does not take into account calls made on the child’s time, the child might find it very difficult to attend. Children living in remote and inaccessible regions, children of migrant families, children to whom access is restrained due to religious beliefs and practices and adolescent girls are other categories that are difficult to reach and therefore require attention.

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8 The quality of education, as mentioned before, should emphasize the ability to read and write with fluency, numeracy, comprehension, analysis, reasoning, social skills such as teamwork, courage, confidence, curiosity, independence, resourcefulness, resilience, patience and understanding.


10 The Department of Education established Operation Blackboard in 1986 to counter conditions seen as constraints on retention and learning: the large number of single-teacher schools, the lack of female teachers, and the inadequacy of teaching materials and aids. The scheme provides grants to states to construct an additional classroom and post an additional teacher in single teacher schools, with a requirement that half the teachers posted be women. It also provides grants to finance the purchase and distribution by the state of a predetermined, standardized package of teaching materials and aids.

11 Discussions on child labour do not fall within the scope of this paper.
2.2 Efficiency

Efficiency, in this context, refers to the relationship between any input in the elementary education system and the final output. The final output under discussion is the number of children, from a given cohort, who have graduated from upper primary schooling with the requisite learning levels\textsuperscript{12}. Inputs are varied, ranging from teaching inputs to toilets\textsuperscript{13}. The entire size of the financial commitment made by the Government of India to elementary education is Rs 163695.9 million as per the Ninth Five Year Plan (covering the period from 1997 to 2002).

According to official statistics, nearly 33 per cent of those enrolled in primary schooling drop out before completing the cycle\textsuperscript{14}. These rates vary across states with the figure being nearly 60 per cent in Bihar and less than 5 per cent in Kerala. The drop-out rate also varies across social and economic class and by gender. The rural drop-out rate is higher than the national average. Of those who finish the primary cycle, only 77 per cent boys and 69 per cent girls complete upper primary schooling, equivalent to about 46 and 28 per cent of their age cohorts respectively. Thus only 35 per cent of the children enrolled in Class I complete Class VIII\textsuperscript{15}.

The problem of high drop-out rates is compounded by the fact that a large number of children who officially complete primary schooling have levels of learning far below expectation. In 1991, a study conducted by the National Council of Education Research and Training (NCERT) in twenty-three states found that the average achievement on curriculum based basic skills for a sample of 65,000 urban and rural children in Class IV was 46 per cent\textsuperscript{16}. The record of most of those who officially complete upper primary schooling does not appear to be much better.

\textsuperscript{12} Inappropriately complex and difficult primary curricula and textbooks were recognized as a barrier to learning and a factor in decisions to drop out. To address this problem, the Department of Education initiated a national research and development programme to identify, for each state, basic competencies in language, mathematics, and social and environmental studies to be taught in the primary grades. Known as minimum levels of learning (MLLs), these competency statements have been tested and in use in curricula since 1989.

\textsuperscript{13} A large number of schools in India, particularly in poor rural areas, do not have access to basic facilities such as safe drinking water, electricity and toilets. Nearly 92 per cent of the schools in low literacy districts in Orissa did not have toilet facilities as late as 1993. This is a serious problem, especially for adolescent girls and female teachers.

\textsuperscript{14} The World Bank (1997), \textit{Primary Education in India}, New Delhi, Allied Publishers Limited.

\textsuperscript{15} Ibid.

\textsuperscript{16} Ibid.
Why do so many children drop out of school at such an early stage and so many learn so little? According to the National Sample Survey (NSS) 52nd round, 47 per cent of the children who dropped out in the primary stage cited inability to cope with academic failure and lack of interest in studies as predominant reasons. There are many reasons why a large number of children are unable to make a success of their schooling experience. What are the important factors affecting elementary education in India and the child’s learning outcome?

3.1 The child’s natural environment/ environment at home

To a large extent what a child brings with him/her to school is a function of the academic, economic and moral support received at home. How cooperative parents are, the availability of time, space and resources for the child to learn, guidance and motivation are important factors. First generation learners are almost automatically at a disadvantage in many respects here.

3.2 The teacher and the environment at school

In most Indian schools, teachers are the principal instructional source. Their role in motivating children to learn, building basic skills in them and expanding their knowledge horizon needs little elaboration. Teachers salaries claim nearly 97 per cent of state education budgets. But, with such large drop-out rates and low learning levels, their performance falls short of what is desired. In addition, how a child is received socially in class by his/her peers and the teacher has a lasting impact on the child’s performance in school.

3.3 The curriculum

The curriculum is the medium through which the teacher transacts with students, and clearly, the nature and quality of the transaction hinges on the relevance of the curriculum. It is important to learn lessons of practice and history from local communities, so that education is not just imposed from afar but also benefits from local, community experience.

3.4 Infrastructure

Classrooms without proper sunlight and ventilation, blackboards, teaching-learning material and so forth impinge on the child’s attendance and performance and cannot be neglected. Inputs such as toilets are believed to greatly increase the attendance of girls in schools.

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17 Ibid.
18 Ibid.
These factors often go together, and the problems that arise from them, invariably acquire different flavours in different places and situations. Given the complexity of the problem at hand, it is hardly surprising that there is no simple prescription for what the country can do to reach the goal of universal elementary education. One is also often reminded that real progress can occur only when one moves beyond trying to improve things in a piecemeal manner and recognizes the need for system-wide reforms.19

4. Universalizing Elementary Education in India

Renewed progress in education in India calls for strong and productive partnerships. The task is too large for any one institution or agency alone, and too important for a single perspective to hold sway. The government, the corporate sector, non-governmental organisations (NGOs), international agencies and local stakeholders need to forge strong partnerships within and across each other in a committed effort to ensure universalization of elementary education. In so doing, they will need to strengthen political will as well as build public understanding of the need for educational change, and create a mood that does not accept compromises in this pursuit.

In this context, one must rigorously analyze the short-term and long-term implications of various forms of action prior to acting. One must also endeavour to measure impact systematically and draw lessons from there.

It is now time to revisit the two dimensions of access and efficiency, and identify elements in each which are likely to contribute significantly to universalizing quality elementary education.

Access

- One formal elementary school within reasonable walking distance by 2010, and in the interim, one elementary school (formal or otherwise). Effort should be directed towards having quality schools, even if fewer, rather than skimpy structures within every kilometre. These schools should be equipped with basic facilities such as electricity, toilets, safe drinking water, and educational aids such as science kits, maps, globes, charts, play materials and toys.

• Bridging never-enrolled and dropped-out children into the age appropriate grade (interim measure).

Efficiency

• Pre-school education
• Teacher performance improvement

The following sections explain why these are believed to be important.

5. Access

To make a school of reasonable quality available to every child in India does not need much justification in the light of the above discussion. It is important to emphasize the need for investing in schools with sufficient educational material and basic facilities, even if these are not within 1-3 kms of every habitation. Creating structures that are convenient for the child to reach with little consideration for what happens thereafter is of little worth. In addition to having a good, functional school suited to the timing needs and so forth of the child, one needs to work towards making the child technically competent to access that school if the child has not been to school before or has dropped out. Bridge courses — crash courses that work intensively with the child to bring the child to the level of his/ her age appropriate grade — will prove indispensable in the short-term, that is, until every child is enrolled and the drop-out rate reaches a negligible level.

Discussions on pre-school education and teacher performance improvement will account for the remaining portion of the paper. Sections VI and VII are devoted to understanding the basis for the belief that these areas require immediate attention and should be prioritized.
6. Pre-school Education

As discussed earlier, there are many reasons why such a large number of children are unable to make a success of their schooling experience. While some are extrinsic to the child, such as teaching-learning approaches and school facilities, factors intrinsic to the child are often neglected. This section will concentrate on the latter.

6.1 Factors intrinsic to the child

Two important child-specific social and personal variables believed to impact school performance are (a) the psycho-social readiness and (b) the physical readiness of the child to negotiate the demands of school and elementary education. In the Indian elementary education context, this refers to:

(i) the formation of habits (particularly related to punctuality, regularity, concentration and coming tidily to school), and
(ii) the child’s active learning capacity which may be defined as ‘a child’s propensity and ability to interact with and take optimal advantage of the full complement of resources offered by any formal or informal learning environment’ (Levinger, 1994).

6.2 Why should the child acquire these prior to joining primary school?

The process of human development is characteristically cumulative, continuous and holistic in nature. As mentioned above, the formation of certain habits and an active learning capacity contribute substantially to the participation and retention of a child in school. It, therefore, becomes important to note that a child’s status with regard to these variables in school is influenced greatly by what he/she actually brings to the school in terms of pre-literacy skills, health status, socio-economic status, extent of parental stimulation and overall home and pre-school environment.

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The following table lays out the basic needs of a child from age 0 to 6 years and respective inputs as identified in Donohue-Colletta (1992).

### Table 1: Basic needs of a child from age 0-6 years and respective inputs

<table>
<thead>
<tr>
<th>Age</th>
<th>Basic Needs</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Birth to 1 year</td>
<td>• Protection from physical danger&lt;br&gt;• Adequate nutrition&lt;br&gt;• Adequate health care&lt;br&gt;• Attachment with an adult&lt;br&gt;• Motor and sensory stimulation&lt;br&gt;• Appropriate language stimulation</td>
<td>• Safe shelter&lt;br&gt;• Food and micronutrients&lt;br&gt;• Basic health care (immunization, oral rehydration therapy, hygiene)&lt;br&gt;• Age-appropriate developmental curriculum</td>
</tr>
<tr>
<td>1 to 3 years</td>
<td>In addition to the above&lt;br&gt;• Support in acquiring motor, language and thinking skills&lt;br&gt;• Develop independence&lt;br&gt;• Learn self control&lt;br&gt;• Play</td>
<td>In addition to the above, health care will include deworming now.</td>
</tr>
<tr>
<td>3 to 6 years</td>
<td>In addition to the above&lt;br&gt;• Opportunity to develop fine motor skills&lt;br&gt;• Expand language skills through talking, reading, singing&lt;br&gt;• Learn cooperation, helping and sharing&lt;br&gt;• Experiment with pre-writing and pre-reading skills</td>
<td>Same as for 1 to 3 years</td>
</tr>
</tbody>
</table>

Source: Based on Donohue-Colletta (1992).

### 6.3 What is the evidence that suggests that the average child in India who enters Grade 1 without going to pre-school lacks these basic skills?

A study conducted by the National Council for Educational Research and Training (NCERT) in four regions of the country on a sample of 1495 children admitted in Class I focussed on assessing their levels of reading and writing readiness and readiness to learn mathematics\(^\text{22}\). The study found the average reading score to be 47 per cent with marked deficiency in sound discrimination and audio-visual matching tasks. In mathematics readiness tasks, 60.8 per cent children performed below 75 per cent indicating the need for some intervention. The study concluded that children who come directly to school from their homes do not exhibit the desired levels of readiness. The approach should therefore be to involve these children in good early childhood education programmes as well as to equip schools to receive these

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children by adding a school readiness component to the curriculum for Class I. Alternatively, it may be desirable to redefine what a child is expected to know in Class I and thereon.

In terms of measurable cognitive ability and school-readiness capabilities, most children from the Mumbai-based NGO, Pratham’s pre-school “graduating class” of 2001 appear to have the skills to cope with the demands of Class I. The children will be tracked in this and coming academic years to determine if indeed the Pratham preparation in pre-school stood them in good stead in formal schools or not. (Table 2 describes some of these competencies.)

Table 2: Achievement levels of “graduating” children from Pratham’s pre-school programme, March 2001; data for 6410 five- and six-year old children

<table>
<thead>
<tr>
<th>Skill or competency for pre-school children</th>
<th>Percentage of children who can</th>
</tr>
</thead>
<tbody>
<tr>
<td>Say their own address</td>
<td>84.0 %</td>
</tr>
<tr>
<td>Hold pencil properly</td>
<td>98.5 %</td>
</tr>
<tr>
<td>Colour pictures within the outlines</td>
<td>94.5 %</td>
</tr>
<tr>
<td>Recognize and identify shapes correctly</td>
<td>88.0 %</td>
</tr>
<tr>
<td>Recognize differences and similarities</td>
<td>97.0 %</td>
</tr>
<tr>
<td>Able to read simple words</td>
<td>64.0 %</td>
</tr>
<tr>
<td>Addition with objects</td>
<td>81.0 %</td>
</tr>
</tbody>
</table>

Source: Pratham Mumbai, Research Unit.

6.4 What is the impact of acquiring these skills through a pre-school programme?

A properly designed and implemented pre-school programme can have multidimensional benefits including:

- Increasing the efficiency of investments in elementary education
- Lowering welfare, health and education costs
- Increasing social equity
- Helping mothers become income earners

The present paper will mainly discuss findings on the role of pre-school education in increasing the efficiency of investments in elementary education. Before proceeding to do so, it will briefly summarize evidence on how pre-school education can impact the other areas mentioned.
6.4.1 Lowering welfare, health and education costs

- In the Perry Pre-school Program initiated in 1962 (also see 6.5.2), a US$ 1 investment yielded US$ 7.16 in savings because of lower educational and welfare expenditures and higher productivity among participants (Schweinhart, 1993).
- A study carried out by the World Bank and the Brazil Country Management Unit on the impact of pre-schooling in Brazil demonstrated a rate of return on pre-school education of between 12.5 per cent and 15 per cent.

6.4.2 Increasing social equity

- Early childhood interventions can help reduce societal inequalities rooted in poverty by helping to provide young children from disadvantaged backgrounds with a more equitable start in life and a foundation for further schooling (Young, 1995).

Empirical evidence regarding this is, however, open to question on many counts.

6.4.3 Helping mothers become income earners

- Access to free childcare in the slums of Rio de Janeiro allowed mothers to work. Poor women who used external childcare services increased their income by as much as 20 per cent.
- The Mobile Creches programme in India is tailored to meet the needs of working women. The service is located at construction sites to provide day care for female construction workers with small children (Young, 1995).
- The Colombia and Bolivia home day care programmes provide credit to women allowing them to make structural improvements in their homes so that they can be used as home day care locations.

6.5 Pre-school education: increasing the efficiency of investments in elementary education

Given the cumulative, continuous and holistic nature of growth of the mind, paying attention to the years of a child’s life preceding entry into school influences the extent and quality of the child’s response to school inputs. This in turn will determine the child’s educational outcome in terms of participation, retention and learning in elementary school.
A superior utilization of inputs into the elementary education system should, therefore, translate into:

1. a beneficial and statistically significant impact on enrolment, performance and retention rates;
2. decreased expenditure resulting from (a) fewer children repeating a grade and (b) reduced need for remedial education; and
3. increased income earning potential.

An attempt has been made to draw on literature from around the world assessing the impact of pre-school education on the above. While such literature is instructive, it is important to bear in mind that social and economic structures vary across countries, and what might hold true for some might not for others.

### 6.5.1 Enrolment

- A four-country study by Filp in the early 1980s of Argentina, Bolivia, Chile and Colombia (Myers, 1992) showed lower age at enrolment of children with pre-school education for each country except Bolivia. The study population comprised 2545 children.
- A study by Nimnicht of Colombia’s Promesa (Myers, 1992) showed a large positive impact on enrolment.
- A study of the Integrated Child Development Scheme (ICDS) in Haryana by Chaturvedi in 1987 showed an increase in enrolment at the right age (Myers, 1992). Another evaluation of the ICDS by the National Institute of Public Cooperation and Child Development (NIPCCD) in 1992 indicated a positive impact on enrolment.

### 6.5.2 Performance

- Perry Pre-school Study, U.S.: The Perry Pre-school Programme is based on a programme of early intervention in the lives of low-income children in the U.S. who were at risk of school failure. Between 1962 and 1967, fifty-six children, aged 34 years from Ypsilanti, Michigan, received two years of pre-school education (2.5 hours per day) coupled with weekly home visits. Information on participants and a control group were collected annually while the children were between ages 3 to 11 years and again at ages 14, 15, 19 and 27. One third as
many programme group members as non-programme members graduated from regular or adult high school (71 per cent versus 54 per cent).  

- **Head Start Programme, U.S.**: This large scale programme began in the U.S. in the 1960s to prepare children from poor families to enter school by compensating for poor home conditions. A review of seventy-one research reports on this programme found evidence of its positive effects on developed abilities at point of entry into school (school readiness), and on achievement at the end of early grades.

- **A comprehensive pre-school research project in Istanbul, Turkey (Kagitcibasi, Sunar and Bekman, 1987)** studied the overall child development of educational pre-school combined with a programme of parental education and support. Children who had participated in a pre-school programme performed significantly better than children cared for at home on a range of measures of mental ability and cognitive skills.

- **A study conducted by the World Bank (2000)** on the outcomes of pre-school education in Brazil shows that the number of years of attendance at pre-school has a positive and statistically significant impact on the average schooling people ultimately attain. An additional year of pre-school increases schooling ultimately attained by 0.4 to 0.6 years, with some indication that the gain is greater for children of illiterate parents. The study also shows a positive and statistically significant effect on the probability of a child who has attended pre-school completing a certain level of education by a specific age compared to a child with no pre-school experience. The coefficient for reduced repetition rates is positive and significant, and represents a 3-5 per cent reduction in repetition due to an additional year in pre-school. A total of 4940 households were surveyed for the study.

- **A study conducted by NCERT involving the follow-up of cohorts in eight states of India covering 31,483 children** showed a significant impact of early childhood care on retention in primary grades with the children who had been through the programme demonstrating up to 20.5 per cent better rates of retention (Kaul et al, 1993).

- **A microlevel longitudinal study by NCERT in India which followed a cohort of children from the pre-primary stage through five grades of primary school has**

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23 J.R. Berruta-Clement et al. (1984), ‘Changed lives: The Effects of Perry Preschool Program on Youths through 19’. 
shown a significantly favourable and long-term impact of a quality early childhood care programme on children’s learning, specifically in mathematics (Kaul et al, 1994).

- Studies by Khosla (1985) and Sood (1987) showed that in comparison with children who had not been to ICDS anganwadis (AWs), children attending AWs scored higher in language and cognitive development and also performed better in first and second grades of primary school.
- A four country study of Argentina, Bolivia, Chile and Colombia (Myers, 1992) showed negligible improvement in reading/writing ability for Bolivia, Chile and Colombia. Argentina, however, demonstrated a significantly higher reading-writing ability for pre-schoolers (except for urban marginal children).

6.5.3 Drop-out rate

- A study of the ICDS programme in India carried out by NIPCCD in 1992 indicated higher retention of children with pre-school in primary school.
- An evaluation of Colombia’s Promesa (Myers, 1992) showed a 100 per cent increase in entry into Class III for children with pre-school, indicating a lower drop-out rate.

6.5.4 Decreased expenditure resulting from fewer children repeating a grade and lesser need for remedial education

- An evaluation of Brazil’s Programa de Alimentacao de Pre-escolar (PROAPE) showed that by reducing repetition rates and thereby the extra primary schooling cost associated with repetition, a programme of integrated attention to pre-school more than paid for itself24.
- A study of the High/Scope Perry Pre-school Programme showed that pre-school participants had a lower rate of enrolment in remedial high school classes than non-participants25.

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6.5.5 Increased income earning potential

- In the Perry Pre-school programme mentioned above, it was found that at age 27 years, four times as many programme group members as non-programme group members earned US$ 2000 or more per month\textsuperscript{26}.

Literature from around the world, including India, suggests that pre-school education does, to a great extent, give a child the kind of advantages one would expect it to. It should be noted that some researchers have found a ‘fade-out’ effect when successive grades fail to build upon pre-school influences and address age-specific needs\textsuperscript{27}. At the same time it is important to recognize that while pre-school education might equip the child in certain respects, it may not be possible to accurately measure its impact in other areas.

In India approximately 15 per cent of children in the age group 3-6 years benefit from pre-school education\textsuperscript{28}. The main sources of early childhood education in the country and their coverage is provided below:

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Number of centres</th>
<th>Beneficiaries coverage</th>
<th>Percentage of population in age group 3-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Child Development Service (ICDS)</td>
<td>203,383</td>
<td>657,800</td>
<td>11.43</td>
</tr>
<tr>
<td>Early Childhood Education Centre</td>
<td>4365</td>
<td>153000</td>
<td>0.27</td>
</tr>
<tr>
<td>Balwadis</td>
<td>5641</td>
<td>169,000</td>
<td>0.29</td>
</tr>
<tr>
<td>Pre-primary schools</td>
<td>14,765</td>
<td>144,000</td>
<td>2.50</td>
</tr>
<tr>
<td>Creches and Day Care Centres</td>
<td>12,230</td>
<td>306,000</td>
<td>0.53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>240384</strong></td>
<td><strong>864,600</strong></td>
<td><strong>15.02</strong></td>
</tr>
</tbody>
</table>

Source: Rajlakshmi Murlidharan and Venita Kaul, *Early Childhood Care and Education: Status and Problems*.

While the spread of early childhood care and education facilities has been high in the 1990s, covering nearly all the 5320 community development blocks in the country, the actual outreach

\textsuperscript{26} Ibid.

\textsuperscript{27} G. Natriello, E.L. McDill and A.M. Pallas (1990), *Schooling Disadvantaged Children: Racing Against Catastrophe*, New York, Teacher’s College Press.

\textsuperscript{28} Rajlakshmi Murlidharan and Venita Kaul, *Early Childhood Care and Education: Status and Problems*. 
and coverage in terms of the early childhood education component has been poor\textsuperscript{29}. This is evident from the fact that the Gross Enrolment Ratio of 10.33 in 1990 has improved only to 16.9 in 1997-8\textsuperscript{30}.

Although literature from around the world supports the expansion of pre-school education, questions need to be answered in the Indian context. Needless to say, many of these will relate to understanding the effects of pre-school education in urban and rural areas when provided in a cost-effective framework. The Mumbai-based NGO Pratham covers nearly 35,000 children in Mumbai’s slums on a daily basis through its pre-school service. The Pratham model is cost-effective and vibrant, but its dynamics need to be understood carefully as these have important implications for scaling up.

## 7. Teacher Performance

There are 1,871,542 and 1,211,803 teachers in primary and upper primary schools respectively across India as of 1997-8\textsuperscript{31}. Of these, 85 per cent have the required academic qualifications and each one of these is certified to teach\textsuperscript{32}. Approximately 97 per cent of the expenditure on elementary education is used in paying teachers’ salaries and yet student drop-out rates are high. While the government has made strides in improving the quality of the teaching corps by raising pre-service general education requirements, improving pre-service and in-service training and so forth, deficiencies remain\textsuperscript{33}. This, coupled with the absence of performance incentives and other factors to be discussed shortly, has constrained the capacity of the teaching force to deliver high-quality education. While there is no conclusive evidence, it is often said that most teachers are inadequately acquainted with the material they teach, possess few teaching skills and are poorly motivated. Despite efforts to increase the diversity

\textsuperscript{29} The Integrated Child Development Service (ICDS) is the largest programme in India in the sphere of early childhood care and education. The scheme is administered by the Department of Women and Child Development, Ministry of Human Resources Development, which is part of the Union Government.

\textsuperscript{30} Ministry of Human Resource Development, Government of India (2000), \textit{Year 2000 Assessment, Education for All: India}.

\textsuperscript{31} Ministry of Human Resources Development, Government of India, \textit{Selected Educational Statistics 1997-8}.

\textsuperscript{32} Minimum academic requirements to qualify as a full-time formal teacher and the certification to teach vary across states. The norm for teaching in formal primary schools is 10 + 2 and the two-year teacher training course. For upper primary, a graduate degree is required and a one year training course.

\textsuperscript{33} The responsibility of providing in-service education and support to school teachers is shared by a number of institutions under the Central and State Governments. At the Central level, programmes are mainly implemented and administered by the National Council for Educational Research and Training (NCERT) and National Institute for Educational Planning and Administration (NIEPA). At the State level, the State Council for Educational Research and Training (SCERT) and state institute of educational management, administration and training (SIEMAT) perform
of the teaching corps, many states still have few female, Scheduled Caste and Scheduled Tribe teachers to serve as role models for children. Approximately 30 per cent of the teaching force is female in the low literacy districts of the fifteen major states in India, and 11 per cent and 8 per cent Scheduled Caste and Tribe respectively\(^{34}\).

Strategies for preparing teachers vary from state to state. While the main ingredients — pre-training general education, pre-service teacher training and in-service teacher training — are similar, the weight assigned to them differs across states. As mentioned above, the norm for teaching in formal primary school is 10 + 2 and the two-year teacher-training course. The same for upper primary is a graduate degree and a one-year training course. To compensate for the limited subject knowledge and teaching skills of teachers, governments have supported the development of in-service teacher training. However, in its current form and frequency, there is little hope of it contributing much. A study conducted by NCERT showed that, on average, teachers from low-literacy districts had received fewer than twenty days of in-service training since their appointment as teachers. In states like Assam and Madhya Pradesh, 38 percent and 26 per cent of the teachers had received no in-service training respectively\(^{35}\).

An analysis of where problems lie and support mechanisms can be put in place follows.

### 7.1 Academic support to improve knowledge

How important is a teacher’s educational base in determining student performance? A study by Saxena, Singh and Gupta (1995) found that the average number of years of pre-service general education of teachers was positively related to achievement in Assam and Tamil Nadu\(^{36}\). Govinda and Varghese (1993) found that the educational attainment of teachers was a significant predictor of student achievement in both advantaged and disadvantaged regions\(^{37}\). As opposed to pre-service general education, teachers’ qualifications, particularly pre-service training, have not been found to be significantly related to learner achievement. Shukla and others (1994) found that the percentage of untrained teachers was positively related to student reading comprehension in three states and negatively related in four states, while for

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\(^{34}\) The World Bank (1997), *Primary Education in India*, New Delhi, Allied Publishers Limited.

\(^{35}\) National Council of Educational Resource and Training (1992), *Fifth All India Education Survey*.


\(^{37}\) R. Govinda, and N.V. Varghese (1993), *Quality of Primary Schooling in India — A Case Study of Madhya Pradesh*, New Delhi, National Institute of Educational Planning and Administration.
arithmetic achievement, it was positively related in four states and negatively in three. Studies on in-service teacher training in most government schools have not found much relation to student learning achievement. This is only to be expected given the form and frequency of most in-service training programmes.

It is often asserted that many teachers in elementary school, particularly in primary school, have little understanding of the material they teach. One study of primary teachers in Tamil Nadu found that only 39 per cent of rural and 53 per cent of urban teachers could correctly answer four out of five problems on a short mathematics test, the most difficult of which required finding the sum of two fractions with a common denominator and finding the perimeter of a polygon with given dimensions. While this is unfortunate, it is hardly surprising. Many primary teachers have not studied core subjects such as Mathematics and language of instruction beyond Class VIII or X. Moving onto pre-service training programmes, most devote less than 10 per cent of the instructional programme to the study of either content or teaching methodology for any primary-level subject. The training programme also provides little practical instruction in child development, which is crucial to help first-generation learners overcome home environments that do not prepare them for schooling.

### 7.2 Support for improving teaching skills

In addition to the mastery of the subject matter they teach, teachers also need to possess teaching skills that help them communicate the subject matter to their students. Most pre-service teaching programmes do not equip prospective teachers adequately with these skills, leave alone with the skills required to teach in situations encountered by over 65 per cent of them: multiage, multilingual, multigrade classrooms, with many first generation learners who do not attend regularly. As a result, teaching usually comprises lecturing, oral reading and copying and rarely involves an active dialogue or activity with the students.

### 7.3 Enhancing teacher motivation

Research suggests that most government school teachers in India are poorly motivated, as reflected in absenteeism and self-reporting. In a study conducted in 1995 by the World Bank, it

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41 Ibid.

42 Ibid.
was found that less than two-third of teachers come to school every day in Assam, Haryana and Madhya Pradesh. There are several reasons for low motivation levels.

Teachers' salaries, in terms of their amount, are not believed to be a strong motivator of performance. It has been shown that increments in teachers' salaries, net of education and experience, are positively related to student achievement, but the effects are quite modest: the average effect size for increasing the average teacher salary by Rs 100 a month per school is less than 1 per cent of a standard deviation\(^{43}\). Teachers' salaries are, in fact, comparable to those of other public employees with similar qualifications. Yet, they perceive their status as low and feel their salaries insufficient to meet their family needs. At the same time, the infrequent administering of salaries in some states might act as a deterrent to teacher interest and needs to be studied systematically.

An important factor that is often construed as a disincentive to teach is the great divergence between the teacher’s choice of posting and actual location of placement. About 40 per cent of teachers are transferred to schools on administrative grounds. In Maharashtra, the unstated policy has been to post teachers at least 25 kms from their residence, to encourage them to remain in the school’s locale during the week rather than commute daily. However, because many schools lack housing facilities, this clause appears to contribute to higher absenteeism.

Another reason why absenteeism is so striking in government schools is that teachers are required to engage in various other duties such as supervising elections, conducting family planning drives and collecting data at the behest of the district collector.

In addition to the above, working conditions for teachers are often inadequate, particularly in poor, rural districts. Teachers have to contend with crowded classrooms, lack of or non-existent instructional material, electricity, toilet facilities and safe drinking water.

While the problem is not as severe for upper primary teachers, those in primary school have very limited opportunities for career advancement and promotion. Promotion, in any case, is based on seniority and is therefore not a strong motivator of performance. A survey of primary teachers in 1995 found that about four-fifths rated their chance of promotion as bleak\(^{44}\).

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\(^{43}\) The World Bank (1996), 'India: Primary Education Achievement and Challenges', Report 15756-IN, South Asia Country Department II, Washington D.C.

\(^{44}\) The World Bank (1997), \textit{Primary Education in India}, New Delhi, Allied Publishers Limited.
7.4 **Better representation of disadvantaged groups**

Over 70 per cent of teachers in elementary schools in India are male. Most are relatively advantaged compared to their students and also come from higher caste groups. Few teachers come from tribal backgrounds. The sensitivities of dialects, languages without written scripts, widely differing cultural scenarios and social approaches and aptitudes are often too foreign to teachers trained in towns and cities. This mismatch is believed to have important consequences for the quality of classroom dynamics and limit the effectiveness of teachers as positive role models for their students.45

7.5 **Flexibility in curriculum**

The curriculum defines the subjects to be taught and gives general guidance on the frequency and duration of instruction. It is usually embodied in textbooks. Responsibility for curriculum development in elementary education resides with the states, although the NCERT provides model material that can be adapted at state and district levels.

It is widely believed that most school curricula end up being so rigid, that negotiating their demands stifles the creativity and freedom of an otherwise motivated teacher. Standard school curricula are criticised for attempting to cram-up a child with information rather than stimulate the child’s creativity and thought-process. In addition, they are often blamed for being largely out of context for many of their users.

7.6 **Better management and effective feedback mechanisms**

The devolution of responsibility to Panchayati Raj institutions as per the 73rd and 74th constitutional amendments has changed the management of education in India significantly. It is important for these shifts to be accompanied by careful planning to prevent the administrative weaknesses that arise when managers lack sufficient authority or resources to do their jobs effectively, when lines of communication are blocked, when roles and responsibilities are unclear or when managers' time is consumed by routine tasks.46 In particular, at the school level, it is important to increase the head teacher's autonomy and accountability. Equally, individual teachers should be encouraged to go beyond the textbook and teach in a less restricted manner.

45 [http://www.nic.in/vseducation/ncert/priorities.htm](http://www.nic.in/vseducation/ncert/priorities.htm).
Feedback mechanisms, which make teachers and students active participants in the schooling process, are virtually non-existent. As an illustration, Eklavya Foundation — an NGO that provides curriculum and teacher training for some schools (government and private) in Madhya Pradesh — has an active feedback mechanism. Teachers feel they will be heard and their views taken into consideration and this plays no small role in the entire teaching-learning process.

Recent years have witnessed certain disturbing trends in the general approach towards teaching in elementary schools, particularly in the primary segment. Some state governments have simply done away with the requirement of pre-service teacher education as an essential qualification for recruitment as teachers in schools\textsuperscript{47}. Many have now started actively adopting and recruiting cheaper, sub-standard alternatives to provide primary education to the poor—satellite schools, para-teachers etc. Developments of this nature reduce the average level of competency and capability of the system as a whole. Not unexpectedly, they make the identification of a clear role for any agency in the overall process ridden with uncertainty. At the same time, given the variety of interconnections within the system, it is not possible in any strict sense to focus exclusively on certain aspects. However, since an improvement in teachers’ performance holds the key to many problems, it is necessary for government departments, institutions such as DIETs and NCERT/ SCERT, NGOs and other players to work collectively in addressing the issues discussed above. It may also be worth taking a fresh look at the potential offered by existing resources such as the television and radio\textsuperscript{48}.

\textbf{8. Summing up}

When seen from one perspective, the programme for expanding elementary education appears to have taken off, with substantial progress being made in recent years. However, as illustrated in the discussion above, it is not enough to think only in quantitative terms. One needs to pay attention to the qualitative aspects of elementary education in any attempt to universalize it in a meaningful and fruitful way. Especially relevant in this context is the provision of quality pre-school education to all and an investment in improving the performance of teachers. If we compromise on quality and allow the mechanical expansion of

\textsuperscript{47} \url{http://www.nic.in/vseducation/ncert/priorities.htm}.
\textsuperscript{48} In this context, it is important to explore the effects of television programmes like Confederation of Indian Industry's Khullam Khulla.
poor schools for poor children, it should come as no surprise if the gains we had anticipated from universalizing elementary education are not realized.


5. Govinda, R. and N.V. Varghese (1993), Quality of Primary Schooling in India — A Case Study of Madhya Pradesh, New Delhi, National Institute of Educational Planning and Administration.


