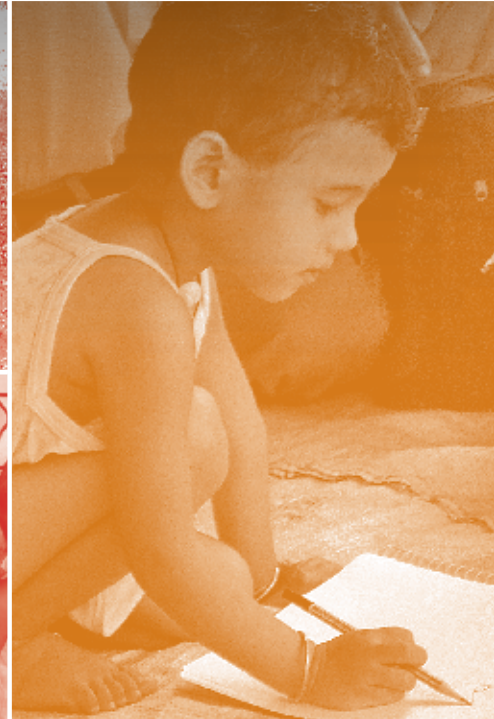


Quality and Diversity in Early Childhood Education

A view from Andhra Pradesh, Assam and Rajasthan

Executive Summary



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Centre for Early Childhood
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Ambedkar University, Delhi



Indian Early Childhood Education Impact Study – 1

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A view from Andhra Pradesh, Assam and Rajasthan

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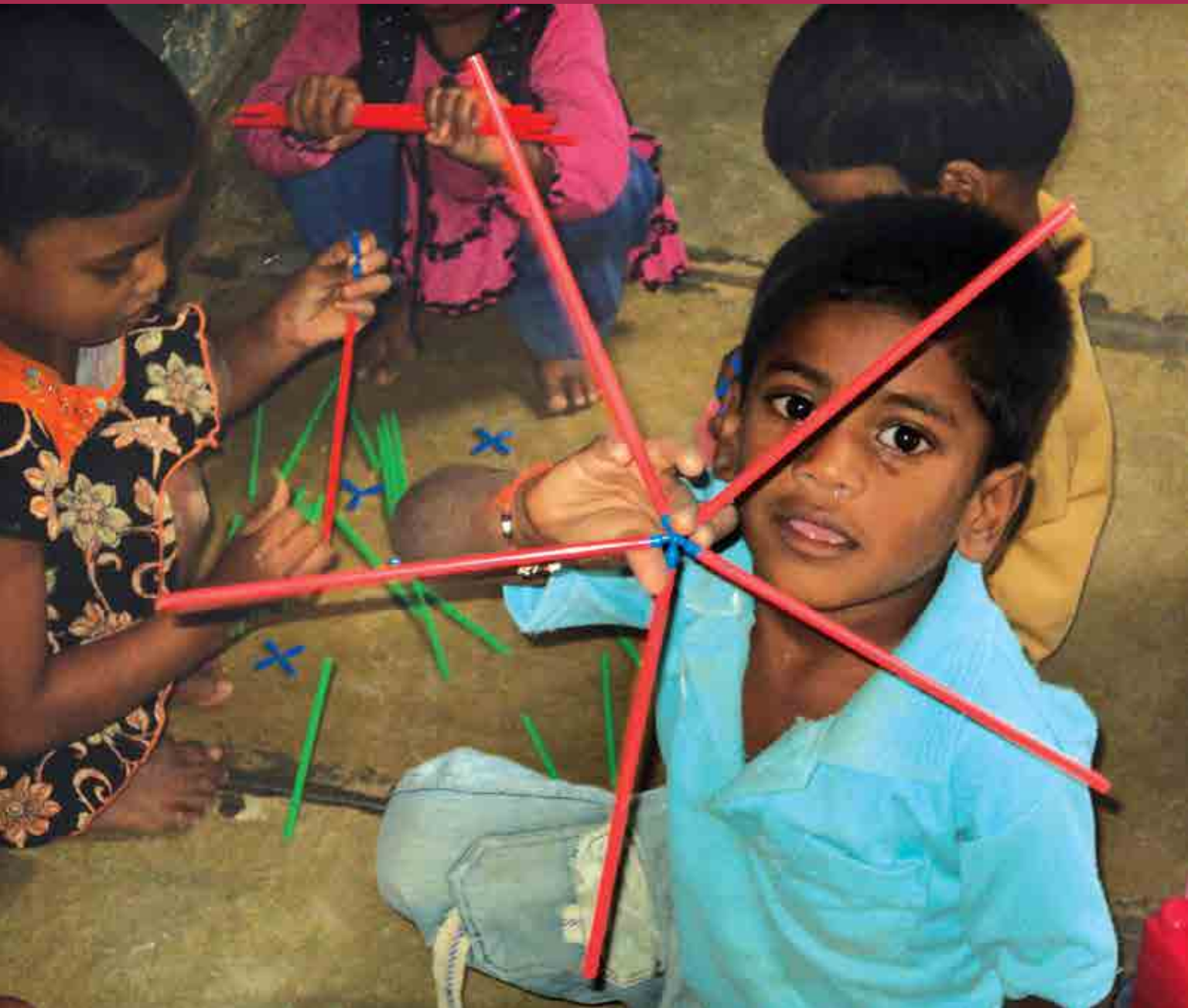
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The report draws on a comprehensive survey of the quality of 298 Early Childhood Education centres across public, private and voluntary sectors, in three states of India...



1 Introduction

India has perhaps the world's largest public-funded and integrated programme for children below 6 years, namely the Integrated Child Development Services (ICDS) which has Early Childhood Education (ECE) as one of its six components, in addition to health and nutrition. Although the ICDS, which was conceived in 1975, is now rapidly expanding towards universalization, there is to date very little evidence available in the country about not only the quality of ECE offered to children through the ICDS and also the extent to which children are actually participating in this programme, or in any other ECE programme accessible to them. There is also no research on the impact of these different kinds of provisions on children's participation, performance and continuance in school. This is the context that provides the rationale for this study.

This survey is part of a larger, multi-strand, longitudinal research that is exploring the differential impact, immediate and medium term, of variations in the quality of early childhood experiences of children on their levels of school readiness at age 5, and subsequently on their cognitive/academic and socio-emotional

levels, through the next three years. (Annexe 1) The present report is limited to and based on data generated on the quality of the ECE programmes during the *pre-test phase* of this larger longitudinal research.

The report draws on a comprehensive survey of the quality of 298 Early Childhood Education centres across public, private and voluntary sectors, in three states of India, namely Andhra Pradesh, Assam and Rajasthan. Within each state, two districts were purposively selected of which at least one that had an innovative or known Early Childhood Care and Education (ECCE) programme, to ensure variation in quality to be able to study impact. Within each district 50 villages were selected. The districts sampled were Medak and Warangal in Andhra Pradesh, Dibrugarh and Kamrup in Assam, and Ajmer and Alwar in Rajasthan. The objective of this survey was to document and analyze the variations in quality of current provisions in ECE across public, private and the voluntary sectors and identify emerging low-budget models of ECE available to most children, particularly in rural areas, and derive lessons from these for the larger system.

Based on the experience of the pilot detailed in the main report, the sampling method adopted

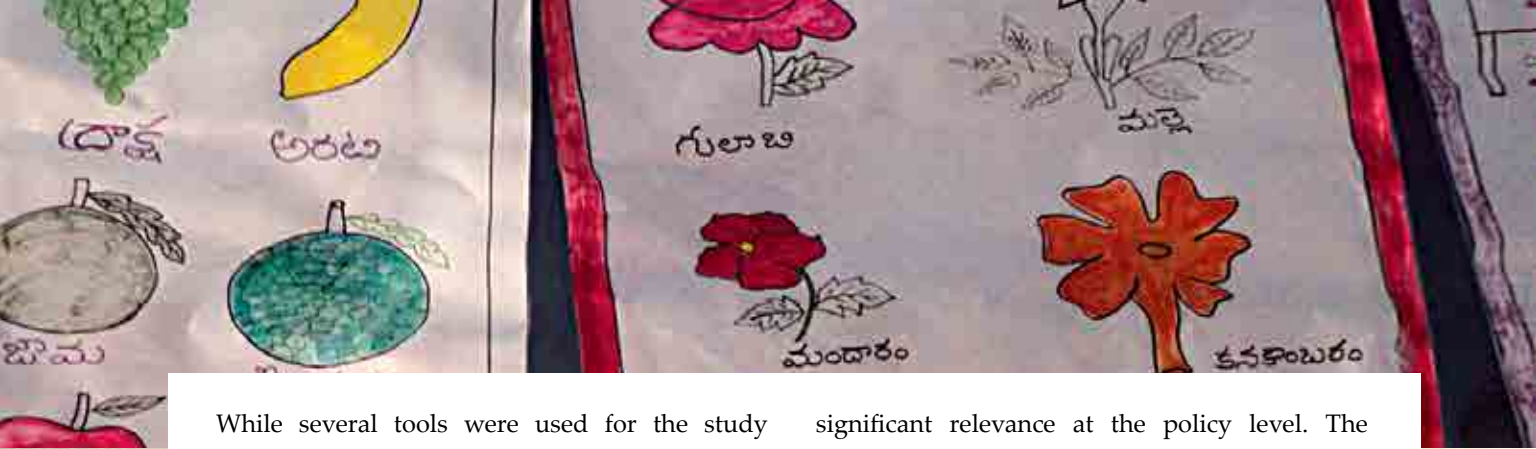
	Anganwadi	Private Pre-school	Known ECE Practice Centre	Government Primary School	Total
Andhra Pradesh	54 (42.5%)	54 (42.5%)	13 (10.2%)	6 (4.8%)	127
Assam	101 (86.33%)	10 (8.54%)	6 (5.13%)	0	117
Rajasthan	10 (18.6%)	33 (61%)	9 (16.7%)	2 (3.7%)	54
Total	171 (57.4%)	97 (32.6%)	22 (7.4%)	14 (4.6%)	298

TABLE 1: Distribution of sampled centres by State and Type

was to identify villages in each of the districts with (a) population between 2,000 to 4,000 so as to maximize the possibility of finding diverse ECE facilities across sectors, within a single village; (b) availability of, as far as possible, some innovative/'known practice' or 'community preferred practice' in ECE to ensure adequate variance in quality; and (c) at the village level, adopt the strategy of 'follow the children' to the centers they are attending, rather than use centers as unit of sampling to ensure there is adequate and regular child participation in those centres. This was necessary to be able to subsequently study the impact of quality variations on child outcomes. Since only those centres were selected that children were regularly attending, the sample also indirectly reflects the emerging trends in parental choices and preferences. The sample, which was purposively selected, is predominantly rural. The sampling method and process followed has been discussed in detail in the main report.

A total of 2,767 children were sampled from 298 centres, using the method of 'following the child'. The types of ECE centres thus selected included *Anganwadis* or ICDS centres, private pre-schools and government primary schools in which under-age children were accompanying their older siblings. In addition, innovative or known practice centres were selected as mentioned above. These included *Bodhshalas* run by an NGO, Bodh Shiksha Samiti in Rajasthan, the IKP *balwadis* sponsored by Society for Elimination of Rural Poverty, Government of AP, in Andhra Pradesh, and *Ka Shreni* centres attached to government primary schools in Assam. The sample distribution of ECE centres by type is given in Table 1.

The pre-test phase was completed in January, 2012. The present report is based on the analysis of data generated from the comprehensive quality assessment of these 298 ECE centres sampled in the study.



While several tools were used for the study that are detailed in the larger report, the tool for quality assessment of the centres was the Early Childhood Education Quality Assessment Scale (ECEQAS), which has been adapted from internationally used Early Childhood Environment Rating Scale (ECERS) and indigenized for our context. It yields quantitative scores for ten different domains of quality of ECCE centres, on the basis of a full day's observation of each centre.

2 Findings of the Study

The findings of the study are discussed below under four broad heads: (a) Are children participating in ECE? Emerging Trends (b) Are ECE centres developmentally appropriate for children? (c) What are the diverse low-budget ECE models available to less-advantaged communities? (d) What do we conclude from this study? (e) Recommendations of the study.

2.1 Are Children Participating in ECE Programmes? Emerging Trends

This study highlights the very important distinction that needs to be made between 'enrollment' and 'participation', which has

significant relevance at the policy level. The sample of 2,767 children identified across the three states included children from both enrolled and non-enrolled categories; however, those considered under the 'enrolled' category for the purpose of this study were often found to be not attending any pre-school. The contrary was also often seen. This distinction has important implications for estimating GER or NER for any stage of education, and at any level of the system.

Some significant trends observed are as follows:

- A very positive finding from the study is that 83 percent of the children of the specified age group, that is between 3½ to 4½ years across the three states were found to be attending an ECE programme regularly. Only 17 percent children were found not attending any ECE centre or primary school, or if enrolled, were not attending it very regularly.
- The trends across the three states indicate an expanding role of the private sector with 43 percent of the participating children across the three states found attending private pre-schools while almost an equal proportion, that is 45 percent were in *Anganwadis* or ICDS centres. There were however state-wise differences, with private provisioning found to be in much lower proportion in Assam as compared to AP and Rajasthan.



- Mother's education level was found to have a significant association with preference for private schooling of children. This indicator may also be reflective of a higher socio-economic status.
- Again the fact that the villages with a population between 2,000-4,000 now not only have *Anganwadis* but can also boast of a mushrooming of private pre-schools, and 85 percent of the 3 year olds are attending ECE programmes regularly reflects greater parental demand and awareness regarding sending children to pre-schools. It also indicates a gradual increase in number of parents even in rural and tribal areas, who can and are, willing to pay for their young child's education.
- However, awareness regarding develop-

mentally appropriate ECE practices is still minimal as evident from parental interviews. It was observed that most of the parents across different types of centres predominantly want their children to learn to read and write at this stage and be prepared for formal schooling. Hygiene and 'learning good behaviour' were some other attributes expected by parents from the ECE centres, but these were in fewer numbers. Interest in children learning English was also a common response. An interesting finding was that parental awareness of what good quality ECE is, as in the case of the known or innovative practices covered in the study, tended to influence the nature of their demand in favour of more developmentally appropriate early education over private

Anganwadi Centres are available across the three states but the infrastructure varies, Anganwadi centres in Rajasthan had better infrastructure as compared to others.

schooling. This presents a strong case for concurrently strengthening parental awareness and education regarding the nature and significance of ECE while also working on improving the quality of the programmes.

2.2 Are ECE Centres Developmentally Appropriate for Children?

Each centre was observed for a full day on the basis of a rating scale developed for the study called *Early Childhood Education Quality Assessment Scale* (ECEQAS), which makes a very comprehensive assessment of quality with regard to all ECE domains. The domain-wise findings are discussed below:

2.2.1 Physical Facilities

A comparative analysis of the infrastructural facilities by type of centres and by state presents a very complex picture. While the aggregated picture indicates better infrastructural facilities in private pre-schools, distinct state differences emerge and make comparisons more complex and varied. Infrastructural facility differences can be attributed largely to the sites where the centres are located. In Rajasthan the *Anganwadis*, which were selectively sampled based on

participation of children, were found in most cases to be relatively better in infrastructure as compared to *Anganwadis* in other states and the private pre-schools. In Andhra Pradesh, many of them were running at rented accommodations: while in Assam, they were operating either in primary schools or in semi-pucca or katcha accommodations. Private pre-schools were mostly part of larger composite schools. In Assam and Andhra Pradesh, in most cases they were found to have their own buildings, which the managements invested in, both for asset creation as well as to attract parents. These structures were actually designed as schools, unlike other improvised settings. In Assam, the numbers of private pre-schools are smaller but the ones surveyed seem to have good well maintained facilities. The Rajasthan private pre-schools, however, demonstrate a major infrastructure deficit, which can be attributed to the fact that they operate from old, abandoned and dilapidated *havelis* in the villages! The 'known practice' or innovative centres, particularly those running in Rajasthan, were found to have relatively better infrastructure facilities, but on several infrastructural aspects like building, availability of toilets, cleanliness of surroundings even the 'known practice' centres were found to



be more or less comparable to the *Anganwadis* and private pre-schools, and far from satisfactory. However, these innovative programmes did seem to give more attention to the more functional aspects such as sitting facilities, classroom space, cleanliness of classroom, etc. Since the 'known practices' have a strong community involvement, this also works as a positive factor.

Non-availability of toilets and clean drinking water stand out as major infrastructural issues, across the board, which need urgent attention, not only from the perspective of basic facilities but also from their importance in promoting sound health habits in these early childhood years. Another gap that gets highlighted from this survey is the significant lack of facilities for children with special needs, making the national mandate of bringing every child into the fold of education almost unachievable. Of all the 298 centres visited, children with special needs were seen participating in only 23 centres across the three states.

2.2.2 Learning Materials

The overall finding is that the larger number of ECE centres available to children, that is

the *Anganwadis* and private pre-schools across the three states, do not as a rule provide for 'activity based teaching learning' possibly due to non-availability of learning materials as well as lack of awareness regarding its need. Most centres were observed to be focusing more on either formal education and teaching of the 3 R's or at the other extreme on a minimalist curriculum of 'songs and rhymes', rather than on providing children with a developmentally appropriate learning environment. Although private pre-schools in Andhra Pradesh and Assam were found to focus on infrastructure, learning and play materials were not seen as a priority with them. The good practices observed were again in the innovative 'known practice' sites across the states, and more particularly in Rajasthan, where children not only had access to learning material but were also observed in most cases to be using it. A positive finding was that in most cases wherever materials were available, they were seen being used.

2.2.3 Classroom Organization and Management

The specific indicators observed to assess class organization and management were teacher-child ratio, presence of teacher in the class,



and age composition of children; in addition, indicators related to classroom organization were studied such as flexible and activity focused seating arrangement, age appropriateness of activities, use of weekly/daily schedule, display of relevant information for the children, and display of children's products in the classroom. The aim of assessing these specific indicators was to explore the extent to which the guiding principles of planning a play-based and developmentally appropriate Early Childhood Education curriculum were being followed at the centres. A comparative analysis of the class composition, management and organization of different types of ECE centres clearly presents the 'known practice' centres as better practices with a relatively greater focus on planning and management.

2.2.4 Teacher-child Ratio

The *Anganwadi* centres, although accessible to most children and found in every village visited, were found to have a favourable ratio of less than 20-25 children to a class in most cases with two adults, an *Anganwadi* worker and a helper. This trend was primarily because these centres were not the preferred option by the community in most cases. On the other hand, the socially

'preferred' private pre-schools were observed to have high teacher child ratio, sometimes peaking at 80 children to a class. The 'known practices' centres as a policy were found to maintain a favourable teacher-child ratio, so as to be able to pay individual attention to each child. However, state-wise differences were seen. A positive and significant observation was that almost all centres across types and states had a teacher or attendant in the class supervising the children at the time of visit.

2.2.5 Seating Arrangement and Wall Display

A formal 'whole class' seating pattern with no meaningful classroom display comes across in the study as the most typical classroom arrangement in most *Anganwadis* and private pre-schools. However, the 'known practice' centres, especially in Rajasthan, tend to provide more activity focused and flexible seating arrangement and an appropriate wall display, which is relevant and at the eye level of children.

2.2.6 Planning the Schedule

Given that ECE centres often cater to multi-age composition of children, planning and organization of the curriculum on a weekly and daily basis become an essential requirement for

Private pre-school programmes cater to a mixed age group of children but the curriculum being followed is primarily downward extension of the primary grades focusing on the 3 R's.

ensuring age appropriateness of activities. This practice was observed in 'known practice' centres only, especially in Rajasthan, where in some cases even individualized plans for each child were developed and followed, thus, allowing them to learn at their own pace. In the *Anganwadis* and private pre-schools, age-appropriate activities were not observed at all. The private pre-schools in most cases do follow a weekly subject-wise timetable, but it is focused on formal education. There was also no evidence of planning in the *Anganwadis*, although in some states, they are officially provided calendars and schedules by the department. Flexible class arrangements with activity corners and child-centred classroom organization, which are accompaniments to activity-based teaching learning, were therefore an exception rather than the rule. Even when a few activities were observed being undertaken, these did not involve all children, thus, raising the issue of each child's average time on task.

2.2.7 Curriculum Content and Method

A major issue in Early Childhood Education in India is the dichotomy visible in the system between the 'prescribed' and the 'practised' curriculum. While the prescribed '*developmentally appropriate curriculum*' for ECE is informed by

Child Development theory, which focuses on all-round development of the child and school readiness through play and activity method, the more visible form of curriculum practised in pre-schools and often desired by parents is the '*academically oriented curriculum*'. This, in most cases, is a downward extension of the primary curriculum and focuses on formal teaching of the 3 R's, that is, reading, writing and arithmetic. While this dichotomy is reported mainly on the basis of anecdotal evidence, there is to date no empirical data on what is the more prevalent practice in ECE across sectors and, if there is a dichotomy, to what extent it is a clear dichotomy or a blend of both approaches. This issue was explored in this study, and is reported under each domain.

- ***Multi-level classrooms but undifferentiated curriculum:*** All centres studied across the states were found to be catering to a mixed age group of children, sitting all together in a classroom, except in private pre-schools. In most private pre-schools, children were found categorized in different grades, depending on their age and learning levels. Rajasthan was an exception, where despite being distributed grade wise, children were often seen sitting together as one class, due to lack of space and teachers. The ideal flexible seating arrangement was



observed only in some of the 'known practice' centres. Also, other than in the 'known practice' centres, the different age groups of children were in most cases offered the same content or curriculum with no differentiation in terms of their age or learning levels.

- **Language development activities:** Language development activities at the pre-school stage are linked primarily to development of the four language skills of listening, speaking and readiness for reading and for writing. Some recommended activities include free and guided conversation, recitation of rhymes and songs, guided language and vocabulary games and storytelling. These activities have several benefits, including helping children expand their vocabulary and expression, enabling them

to understand social roles and relationships, nurturing their creativity and imagination and helping them learn to think sequentially. In addition, specific activities linked to phonetics, print awareness, picture – sound matching and book handling serve as pre-reading experiences, while activities like 'make believe' writing, joining dots, pattern drawing, colouring within enclosed space, etc., which require eye-hand coordination, facilitate writing readiness in children.

To what extent are these kinds of developmentally appropriate activities being conducted with children? The findings indicate that almost no activity of this kind like storytelling, free conversation and language games were seen being conducted with children in almost half of the ECE centres assessed. Even where these

were conducted, in almost 23 percent of the centres, these involved only a few children in the class. In contrast, in the 'known practice' centres, activities for language development were conducted regularly and involved all children of the class. While in 90 percent of the centres assessed across the three states, the children were observed being given the opportunity to speak; this was limited to only answering the teacher's questions when asked; usually these answers were also limited to yes or no. In only about 36 percent of the centres, largely from the 'known practice' category in Rajasthan, were the children given planned opportunities and encouraged to speak on their own and express their own feelings, ideas and experiences. These teachers and some in *Anganwadis* in AP focused on conducting both free and guided 'conversation' as an activity with the children, often at the beginning and end of the day. This was rarely observed in the private pre-schools, where the children were more exposed to formal teaching of the 3 R's, and within a very formal set up not only not encouraged but also often strictly not allowed to talk freely! Storytelling, an activity so closely associated with children, was rarely observed across different types of centres, including the 'known practice' centres.



Cognitive development activities: A developmentally appropriate curriculum in ECE is expected to enable children at the pre-school stage to develop a strong conceptual and cognitive foundation that rests on formation of some basic concepts and strengthening of skills, which enable the child to understand the environment better. These include concepts related to the physical, natural and social environment, concepts of colour, shape, space and pre-number and number concepts associated with different dimensions of measurement such as size, length, weight, distance, temperature, etc. The conceptual development takes place through a constructive learning process that is mediated by use of cognitive skills related to logical thinking such as classification, seriation, sequential thinking, problem solving, memory, reasoning and creativity. Activities for development of

....the more innovative 'Known Practice' centres demonstrate a greater focus on developmentally appropriate curriculum with an emphasis on cognitive development as compared to the other ECE programmes.

these cognitive skills and concepts are particularly recommended for children between 4 to 6 years of age who are more 'ready' in maturational terms for structured play-based learning activities.

An analysis of scores of all 298 ECE centres across the three states on these parameters shows that, as expected, the more innovative 'known practice' centres demonstrate a greater focus on cognitive development in their curriculum as compared to the other more regular types of ECE centres, namely *Anganwadis* and private pre-schools. However, while these centres have relatively better scores, their own performance on the scale is less than 50 percent, except for 'known practice' in Rajasthan, indicating overall an inadequate focus on this domain within their respective programmes as well.

Opportunities for concept formation: A disturbing finding is that in 71 percent of the centres across the three states, no activity was observed being conducted for supporting children in concept formation. The centres demonstrating these were, as expected, the 'known practice' centres, particularly in Rajasthan, and to a much lesser degree in *Anganwadis* in AP and Assam. Interestingly, some

activities for concept formation were observed in 40 percent of the private pre-schools in Assam and 30 percent of the centres had all children involved. This was a very surprising and positive finding.

Opportunities for development of cognitive skills: It was again disconcerting to find that almost 80 percent of the sampled ECE centres did not organize any activity for development of cognitive skills related to thinking, reasoning and problem solving across the three states; the emphasis appears to be very much on rote memorization only. Again, it is the 'known practice' centres in Rajasthan that stand out as the good practice with all centres demonstrating some activities in support of this domain and 65 percent ensuring participation of most children.

Reading, writing and number readiness: Developing school readiness in children, particularly for first-generation learners, is an important objective of early childhood education. These activities, as described earlier, are required to be planned and conducted in the play-way method through a variety of materials including picture cards, puzzles, dominoes, picture story books, blocks, number towers and rods, objects in the environment and also using children themselves as resource. In most cases, these



activities can be individual centred or presented as small group activities.

The study shows that there is little awareness in the ECE programmes regarding the significance and nature of emergent literacy and 'readiness' and there is a general tendency to make the pre-school curriculum a downward extension of the primary curriculum. In almost 75 percent of the sampled centres, all children irrespective of age were found being exposed to formal teaching of the 3 R's, predominantly through rote memorization, with activities like copying from the blackboard, charts or textbooks or choral recitation. About 15 percent centres were observed teaching the 3 R's, but with the help of teaching-learning aids and materials. In only about 9 percent of the centres, the teachers were not found teaching reading, writing and number work, or if they were, these activities were done with the older children who were ready for it. Most centres that focused on formal teaching were *Anganwadis* and private

pre-schools, which most children attend, making this the more typical practice. It was particularly disturbing to observe that in most private pre-schools, children often spent an entire day, often up to 5 to 6 hours, just memorizing alphabets and numbers or tables! While formal teaching was common in *Anganwadis* and 'known practices' too to an extent, these rote practices were interspersed with some activities as well.

An important finding is that even where readiness activities were organized, these in most cases did not last for more than 10 minutes or so and were limited to one activity for a few minutes every day. Therefore, even though these were organized, children did not necessarily get adequate exposure and opportunity to strengthen and scaffold their concepts and skills in preparation for schooling. However, a higher proportion of 'known practice' centres in Rajasthan and Andhra Pradesh were observed not using formal education methods; even when reading and writing was taught to the children,



the method used was child friendly and through activities and teaching aids. Interestingly, in Assam, about 10 percent of the private pre-schools also provided some evidence of this good practice. This trend towards formal teaching is possibly explained as resulting from a lack of ECE training of teachers as well as a response to parental demand for the 3 R's, which is not informed by an appropriate understanding of ECE.

Activities for development of motor skills:

Enabling children to develop their fine and gross motor skills is an important objective of any well-balanced ECE programme. While for gross motor development, activities requiring use of larger muscles, like running, catching, balancing, kicking, hopping etc. are useful, for development of fine motor skills all activities involving use of fine muscles and eye-hand coordination, such as drawing, colouring, painting, clay work, threading beads, cutting, pasting, joining dots, playing with manipulative materials like putting shapes into matching slots, building blocks, sand play, clay work, etc. have a great deal of value. Although development of gross and fine motor skills is a vital part of the foundation for lifelong development, they also directly contribute to a child's preparedness

for school. While gross motor skills prepare the child for participation in sports, dancing, gymnastics and other co-curricular activities, the fine motor skills contribute to a child's writing skills and enhance his/her potential for art and craft as well. An early childhood education programme needs to provide children a good balance of these kinds of activities, to help them develop good body control and coordination.

The findings present a dismal picture with regard to this domain across the three states. Outdoor play was very rarely seen in the centres, with a major constraint being lack of outdoor space. Even in the category of 'known practice' centres or innovative centres, which are expected to implement a more developmentally appropriate programme, the overall low score of 3.7 on a scale of 10 reflects a significant neglect of this domain. However, the 'known practice' centres in Rajasthan do stand out as a 'good practice' at a score of 6.5, while none of the other categories across the three states crossed a score of even 3 out of 10. In terms of the more regular practice in ECE, while the private pre-schools across the board demonstrate a very low score, the *Anganwadis* demonstrate marginally better provision of activities for motor development,



except in Andhra Pradesh where these seem to be more or less at par with the private pre-schools. In terms of nature of activities, children were rarely found involved in colouring and drawing activities for development of their fine motor skills. In only 25 centres out of 298 centres across states were these activities observed. These centres were as expected some 'known practice' centres and in a few cases *Anganwadis*. Clay work, another activity for development of fine motor skills and creativity, was observed in only two *Anganwadis*, one each in Assam and Andhra Pradesh! In a few centres, children were observed playing with manipulative material during guided and free-play time provided by the teacher, where they were observed threading beads, playing with blocks, placing pebbles on the floor along a particular pattern or on alphabets and so on.

It is important to point out that for organizing activities for fine motor skills, availability of manipulative materials are a prerequisite. These were found to be lacking in the regular ECE programmes like the private pre-schools and *Anganwadi* centres. However, it is not only availability but use of materials that really makes a difference. This becomes evident from the fact that when a first-level correlation was computed

between availability of indoor learning material and organization of activities for fine motor skill development, it was found to be very weak at 0.32. However, when organization of activities was looked at in relation to the use of the learning material, a strong association was found at (0.45) which shows that even when the centres were equipped with learning aids and manipulative material, they were not in use and activities were not conducted. Mere availability of learning materials is, thus, an essential but not sufficient condition. A major constraint in the regular centres could be the absence of a recurrent budget in these programmes for replenishment of raw material such as crayons, paper, paint, etc. for these fine motor activities.

The broad picture that emerges from a review of the content of the ECE programmes with reference to the domain of motor development indicates some optimism but more dissatisfaction. The optimism comes from the possibilities demonstrated by the 'known practice' centres in Rajasthan, and to some extent in AP, of being able to offer a developmentally appropriate programme for children within the constraints of a low-cost provision catering to the poorest of families. The dissatisfaction arises from the finding that a large number of children are



attending *Anganwadis* and private pre-school programmes and not getting the benefit of these kinds of activities for their overall development.

Creative activities and free play: Nursery rhymes, songs, rhythmic movements, puppetry and creative drama, art and craft and imaginative free play are some creative activities that are almost synonymous with early childhood education for children below 8 years. Children respond to these activities in a multi-sensorial mode with a natural desire for self-expression and for representation of their imaginative ideas and images, as inspired by the stimulation they experience in their environment. These activities, offered through a blend of planned free and guided play with supervision, are thus expected to be an integral part of any developmentally appropriate curriculum at the ECE stage. The element of choice in free play is important, as it helps develop in children the capacity for decision making, while also understanding that people can differ in terms of likes and dislikes and can make different choices. Free-play activities in activity corners like doll's corner or imaginative play provide a very important mode of socialization as through their play children begin to internalize social roles in the environment

around them and also use this play to channelize their emotions. Both free and guided activities, thus, need to be part of any good ECE programme, as they have a great deal of significance for children's development.

The findings, however, indicate that not much attention was observed being given to this domain in the regular ECE programmes like the *Anganwadis* and private pre-schools. Free-play time was not adequate and even if provided, teachers were not observed supervising the children. Art and craft activities were rarely observed being practised at these centres and whenever observed, only a few children were seen to be involved. The 'known practice' centres, particularly in Rajasthan, emerged as a good practice again where teachers were seen allocating specific time for recitation, creative expression and free play, often with materials of their choice, which was rarely seen in other programmes across states. In Assam, about 80 percent *Anganwadis* were found to be providing opportunities for recitation and about 45 percent were getting children to do it with action and expression. Intriguingly, the maximum number of centres providing opportunity for both group and individual recitation of rhymes was in the category of private pre-schools in Assam. This



may be due to the focus on English rhymes and songs, which are easier for children to learn and 'demonstrate English learning', although often with mispronunciations! The fact that a very large number of centres across states either do not expose children to rhymes and songs or do it without encouraging expression and voice modulation indicates a clear pointer towards need for this activity to be strengthened in the training of teachers.

Socio-emotional development: A very important objective of ECE is to provide children opportunities and experiences for their socialization and for formation of their personal health habits. Within this critical stage, a child is ready to learn the social skills of sharing, cooperating, waiting for one's turn, respecting others' rights and the social and cultural norms and values specific to the context in which the child is growing and developing. A key factor influencing the development of social skills

in children is the extent of opportunity the child gets to interact with other children and with adults in a child-friendly environment, through activities for cooperative learning and play. Activities for socio-emotional development were observed in terms of the following indicators: (a) creating comfort level for children; (b) greeting the teacher and others; (c) opportunities for interaction with others; (d) opportunities for cooperation and sharing; and (e) opportunities to learn to wait for one's turn.

The overall finding on this domain indicates significant state differences. The ECE centres in Andhra Pradesh were observed to be providing children with a relatively more socially conducive classroom environment, with teachers individually greeting children and ensuring a more democratic and interactive classroom environment. Interestingly, unlike in the other two states, in Andhra Pradesh there

Anganwadi centres provided for conducive and informal environment to the children whereas the private pre-schools were found to be more restrictive and formal.

is evidence even in private schools of this kind of a socially conducive environment. In Assam too, the ECE centres were to an extent observed to have interactive classrooms. However, in Rajasthan, with a larger proportion of private pre-schools, the classroom environment was found more restrictive and formal, with a climate of limited interaction. While in *Anganwadis*, the meal time was a good opportunity for children to interact, in the private schools, this opportunity too was lost since meal time was not a part of the pre-school programme. The results also indicated that a higher percentage of teachers in Andhra Pradesh demonstrated awareness of the importance of inculcating habits of sharing and cooperation in children. The Rajasthan 'known practice' centres stand out above others as the only category where all centres demonstrated either planned or unplanned opportunities for children to learn sharing and cooperation, either through sharing of materials and/or through cooperative learning activities in small groups.

In terms of emotional adjustment, a favourable observation was that only less than 20 percent children were observed to be crying in response to presence of strangers, indicating that about 80 percent children across the three states

appeared relatively secure. An interesting finding was that under-age children located in the primary-school setting tended to have the least number of children crying. It is possible that since these children accompany older brothers and sisters, they may be feeling more secure and confident in that setting. Another observation in support of this hypothesis is that among the 'known practices', the *Ka-shrenis* in Assam demonstrated more confident children as compared to other categories of centres, and *Ka-shrenis* are also located as adjuncts to primary schools. This may also be reflective of the same factors operating.

These observations, therefore, lend weight to the concept of establishing ECE centres in the premises of the primary schools, as opposed to standalone centres, provided the schools offer a child-friendly activity and play-based programme for ECE. In such situations, the argument may not hold good that ECE centres located in primary schools tend to be very intimidating for younger children because of the presence of older children. On the contrary, the presence of their older siblings may be reassuring for them. However, this hypothesis needs further validation.



2.2.8 The ECE Teacher

The success of any educational programme rests on the presence of an effective teacher who is trained for that particular stage of education for transacting the curriculum appropriate for that stage and is interested and motivated to reach out to her students. This principle becomes even more significant at the early childhood and primary stages of education when the child is still very young and tends to idolize the teacher, is very influenced by the teacher's disposition and considers her/him as a role model. The teacher is, thus, the key to the quality of any ECE programme. To get a more comprehensive picture of the quality of the ECE programmes across the three states, information was also sought from the teachers through a dual mode. Teachers were observed as well as interviewed to explore their own perceptions and understanding of ECE its nature and significance. The descriptive data pertaining to teachers, such as educational qualifications, teaching experience, teacher training and age,

was also collected and analyzed, to assess to what extent these influence the quality of the teacher's performance.

Teachers' qualifications: In terms of educational qualifications, almost all teachers across categories were found to have completed secondary education with a very small number of teachers with schooling below secondary level. Considering that the *Anganwadi Workers (AWWs)* have conventionally been referred to as semi-literate or less educated workers, and not addressed as teachers, it is heartening to see that around 12 percent *Anganwadi Workers (AWWs)* were graduates and the majority had done secondary schooling; about 26 percent had completed senior secondary. This really raises the overall profile and image of the *Anganwadi* workers and enhances the possibilities of the role they can play as teachers to young children. The profile of teachers in 'known practice' centres was found to be better with 95 percent teachers having academic qualifications above secondary level. Of these, about 22 percent were senior secondary and 28 percent were graduates and above. In contrast to *Anganwadis*, about 65 percent of the teachers in private pre-schools were found to be graduates, with some post-graduates as well. About 28 percent had

Teacher is one of the most critical aspects for the success of any ECE programme. Teachers' attitude towards the children is the key for the development of the children.

completed senior secondary education and only about 10 percent had qualifications lower than these.

Teacher disposition: Teacher disposition relates to the personality and attitude of the teacher towards children, her sensitivity towards children's needs and her motivation and interest levels with regard to her work. An interesting finding emerged from the analysis undertaken to study the association between teacher disposition scores and educational level and training experiences of the teachers. When the disposition scores of teachers were associated with either their educational qualification or their training status separately, no association was established. However, the interaction effects of training and educational level on teacher disposition emerged as significant, indicating the vital importance of ECE specific training, provided the teacher has a certain level of academic proficiency to internalize it.

Perceptions of teachers regarding ECE: Questions on perceptions of teachers regarding ECE elicited programme-specific responses. The *Anganwadi* teachers appeared more focused on health, food and preparing children for school; the private pre-school teachers were more

inclined towards the 3 R's and the teachers from 'known practice' centres had better understanding of developmentally appropriate practices. These different points of view about the significance of ECE broadly reflect the philosophy of the different categories of centres. However, the common denominator across all programmes is the belief shared by all that a child with ECE experience performs better in primary grades as compared to the child without any ECE experience.



TABLE 2: Overview of Assessment of Developmentally Appropriate Curriculum

OPPORTUNITIES	ANGANWADIS (Widespread)	PRIVATE (Widespread)	INNOVATIVE (Scarce)
Learn to share	Low	Low	Low
Think and answer	Medium	Medium	Medium
Express curiosity & ask questions	Low	Low	Low
Learn to wait for turn	Medium	High	Medium
Play/work with other children	Low	Low	Medium
Rote Memory	High	High	Medium

2.3 Overview of Curriculum Quality and Variations

An overview of the trends across three states by types of centres is reflected in table 2 above. As evident, the distribution is overall more skewed towards formal teaching and rote memorization across types of centres. While the *Anganwadis* and private pre-schools tend to be similar and tilted towards developmentally inappropriate practices, the innovative programmes provide a ray of hope. However, activities for developing pro-social behaviour and higher-order cognitive skills in children appear to be uniformly on the lower side.

Overall, the results for the different developmental domains across states and sectors also vividly highlight the distinctiveness of each state, confirming even within the sphere of ECE, the immense diversity that defines the Indian sub-continent! The diversity is reflected in the practices that are observed within each sector or programme. The content and methodology of the programme followed in *Anganwadis* in Andhra Pradesh is quite different from that practised in *Anganwadis* in Assam and in

Rajasthan. Similarly, the private pre-schools may be broadly similar in terms of their structure and priorities across states, but the actual practice within each state differs depending on possibly both state and cultural factors. On the same lines, the ‘known practices’ in each of the three states are all innovative in their own way and yet they are so diverse! This makes it difficult to make any generalizations at all. Yet the findings serve to provide a better understanding of the nature of provisions across sectors. While there may be relative variations in a normative mode across programmes and states, as described above, an important finding that emerges from the high score of 9 out of 10 obtained by the ‘known practice’ in Rajasthan is the fact that it is possible for a low-cost programme to set a benchmark for ECE quality and demonstrate possibilities within the context of programmes for the underprivileged.

2.3.1 Emerging Low-Cost ECE Model

As we turn back to look at the larger picture that is emerging from the data, the ‘known practice’ centres, particularly in Rajasthan and to an extent in Andhra Pradesh as well, stand out as



good practices on most parameters. The known practice centres in Assam, that is, the *Ka-shrenis* could also have served as an effective model, particularly from the perspective of facilitating children's transition from pre-school to school. However, these tend to lose out on quality primarily due to the absence of a dedicated teacher for the class. On the other hand, the regular provisions for ECE under the public and private managements that is, the *Anganwadis* and private pre-schools, with some exceptions, tend to be less child friendly and either more academic or more minimalist in their approach. Do they present completely distinct models of ECE or do they overlap on some parameters? What constitutes these models? Are there any emerging patterns of interdependence/association of variables that indicate that these are prerequisites for good practices and are, therefore, non-negotiable in terms of inputs?

To answer the above questions, a two-way analysis was undertaken: (a) An item-wise analysis for different domains of ECEQAS was done across the different kinds of programmes studied to identify commonalities and differences

and (b) Correlations were computed between domains and between different items in each domain in the ECEQAS to determine significant associations, if any, which could reflect interdependence. The analysis elicited some interesting patterns.

2.3.2 Anganwadi Centres vs Private Pre-schools

Anganwadis and private pre-schools are the 'regular' ECE programmes running across the country. Majority of the children followed in the cohort were found attending these programmes. These centres are together categorized as 'regular' as they are available in almost all villages/urban slums. The study found that *Anganwadi* centres, which are public/government sponsored and free, were universally available in all sites studied under the project. But the participation of children in *Anganwadis* is showing a declining trend as more and more children are beginning to attend private pre-schools instead. Private pre-schools in this study are the low-budget primary/secondary schools running in the sampled villages and slums, which have a pre-primary section or class attached to them.



These private pre-schools are emerging as the preferred choice of parents for ECE with most parents perceiving these to be better quality, for which they are also willing to pay a fee. Our assessment of the quality of these community-preferred private ECE centres shows that they are not necessarily providing the recommended age and developmentally appropriate pre-school curriculum to young children; instead, they come across typically as a downward extension of primary or formal education. On the other hand, the government sponsored *Anganwadi* centres, which are available for every habitation with a 1,000 population and are providing free pre-school education along with a hot cooked meal, are not preferred by the parents since they are perceived to be of inferior quality, both by the community and the personnel themselves working in the area of education.

Interestingly, when the assessment scores on quality indicators for private pre-schools and the *Anganwadis* were juxtaposed, the correlation co-efficient was found to be 0.72, which shows a significantly high association between the scores of the two types of ECE centres; one which is free and easily accessible and the other which demands money for its

services and despite that remains the preferred service. In terms of aggregate scores, the two categories of centres seem to be providing programmes of more or less similar levels of quality. However, in terms of specifics, they did appear to be different. We, therefore, decided to probe further into the similarities and differences between the two models in terms of more specific indicators, so as to have a fuller understanding of the kind of ECE available to majority of children from the lower socio-economic backgrounds.

Relative Strengths of the *Anganwadis* and Private pre-schools

While there may be state-wise differences even among the *Anganwadis*, as highlighted in the respective sections of the report, this analysis looks at the more typical *Anganwadi* model across states as reflected by the aggregate scores, in comparison to the private pre-school model. (Figure 1) The strengths identified are essentially in relative terms in comparison to the private pre-schools; these should not be considered in absolute terms against any prescribed standard. The strengths of the *Anganwadi* model thus identified, which have been discussed in detail in the report, are (a) better classroom space



and adult-child ratio (b) higher component of recitation of rhymes and poems and free play with activity kit and (c) more opportunities for social interaction.

In comparison, the relative strengths of the *private pre-schools* were more in terms of (a) better infrastructure and sanitary conditions (b) more evidence of a planned timetable, although geared towards formal teaching of the 3 R's (c) homogenous age-wise groupings (d) more emphasis on personal grooming and social etiquette.

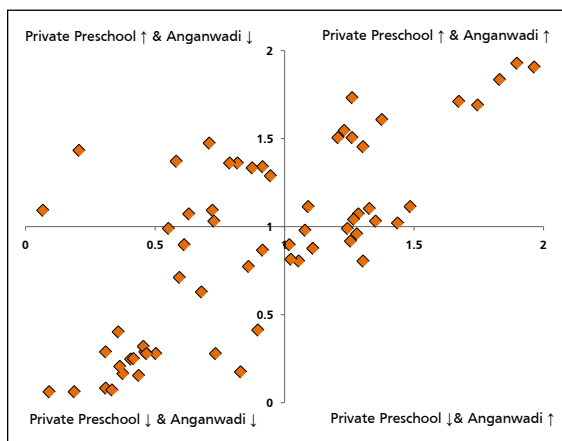


FIGURE 1: Mean scores for all indicators of ECEQAS for Private Pre-school and Anganwadis

Areas of concern in both *Anganwadis* and *Private pre-schools*.

Some of the areas of concern for both the regular practices were (a) both models demonstrate overall a lack of developmentally appropriate curriculum. The curriculum followed in most private pre-schools as well as in the *Anganwadis* was focused either on teaching of the 3 R's or in most *Anganwadis*, on some minimal songs and rhymes. In both cases, there was almost no emphasis on providing planned opportunities and experiences for all-round development of the child, as detailed in the report. (b) There is inadequate attention given to activity – wise sitting arrangement of children and to a good classroom display, as well as display of the children's work. (c) In both cases, the teachers are inadequately qualified and untrained for ECE. Even if the *Anganwadi* teacher has undertaken job training, it is for just 4 days of ECE, which is highly inadequate. (d) Across programmes, there are no facilities for children with special needs and (e) there is little attention given to personal hygiene and washing of hands after toilet and before meals.

Emerging Models of ECE Programmes

Anganwadi Centre

- Limited infrastructure and learning aids in classrooms
- More children in the younger age group & lesser number of 4-6 year olds
- Low participation, leading to a good teacher-pupil ratio
- No schedule is followed
- Formal teaching with some free play, songs-rhymes and better social interaction
- Under qualified community worker provided with on the job training

Private Pre-school

- Better infrastructure, but very few learning aids
- Homogenous age group
- High teacher pupil ratio
- Fixed weekly schedule with supervision
- Formal teaching with rote memorisation and no age appropriate activities
- Under-qualified and untrained teachers

Innovative ECE

- Limited infrastructure, but appropriate learning materials
- Heterogeneous age group
- Preferable teacher-pupil ratio
- Flexible weekly and monthly curriculum plans
- Age and developmentally appropriate activities
- Under qualified teacher provided continuous training and supportive supervision

Anganwadi Centres in Andhra Pradesh – a Better Practice

While *Anganwadis*, which run across the country under a centralized programme that is, the ICDS, have a standardized model, the study reveals significant state-wise differences, which may be reflective of differing political, administrative and socio-cultural priorities and processes. The Department of Women and Child Development, Government of Andhra Pradesh, has been giving specific emphasis on the pre-school education component of the ICDS for the past three years (2009-2012) and has sought technical help from state resource institutions to help with the designing of the ECE curriculum, the daily and weekly schedules, development and supply of teaching-learning material, manual for the educators etc. A cascade model has been

followed in the training at all levels; the Child Development Project Officers (CDPOs) and the supervisors have been trained on the designed curriculum, schedule and manual. The CDPOs and supervisors have, in turn, trained the *Anganwadi* workers on how to conduct the activities with children and transact the programme. As a result, the *Anganwadi* centres in the state have been receiving regular intervention and resource support, which is reflected in their conduct of the pre-school education curriculum.

The *Anganwadi* model in AP was, therefore, further analyzed in comparison to the centres in Assam and Rajasthan, the scores of which were combined for purposes of comparison. The intention underlying this analysis was to



explore the possibilities within the *Anganwadi* model, with some focused intervention. The relative strengths of the AP model that were identified and have been discussed in more detail in the report include (a) better physical facilities and infrastructure (b) more flexible and activity focused sitting arrangement for children (c) better planned and age-appropriate activities (d) emphasis on health habits and personal grooming (e) better social environment (f) more emphasis on language development.

Areas of concern: Two areas in which *Anganwadis* in the other states were found better were (a) children had better sitting arrangement either in terms of mats or other floor covering, whereas in AP children were seen more often on bare floors. (b) Some evidence was seen of gender bias in Andhra Pradesh while organizing play activities with children. The fact that this was observed more in Andhra Pradesh may also be because more activities were observed being conducted in the state *Anganwadis* as compared to the other two states!

2.3.3 Bodhshala in Rajasthan Emerge as a 'Good Practice'!

Bodhshala, the 'known practice' in Rajasthan, emerge as a better performing low-cost ECE

programme or model as compared to the regular ECE programmes that is, the *Anganwadis* and the private pre-schools, which are more commonly accessible to most children in the country. *Bodhshalas* are a composite of pre-primary and primary schools built in the educationally backward habitations of Alwar district in Rajasthan by an organization called *Bodh Shiksha Samiti*. *Bodhshalas* are essentially primary schools with pre-primary sections with two pre-primary levels known as 'pre-group' attached to them as the entry level. These schools, which are also called '*Bodh Samudayik Pathshaala*'/'*Bodhshala*' are built with financial help from the community.

To empirically explore the relative strengths of the *Bodhshalas* as compared to other models, the mean scores for each quality indicator for *Bodhshalas* and the 'regular' ECE programmes were plotted. The regular programmes include *Anganwadis* and private pre-schools. The scores of *Bodhshala* and 'regular practices' were found to have a moderate association, as the correlation coefficient was found to be only 0.37. This indicates that the mean scores on the different indicators of the two categories, the *Bodhshalas* and 'regular practices', have significant differences. It was, therefore, probed further to know what these differences were and what were the strengths and weaknesses of this

Proper training along with regular monitoring and on-site support is critical for the teachers especially at a time when the curriculum is more child-oriented

low-cost model vis-a-vis the regular practice. It was considered important to get the comparative profile of this model, particularly with a view to understand and derive lessons for strengthening the existing 'regular practices' in *Anganwadis* and private pre-schools, which share similar contexts and socio-economic settings with this 'known practice', with a view to make recommendations for them to make their respective models more developmentally appropriate and effective for children.

Relative Strengths of the *Bodhshalas*

Some of the indicators on the basis of which *Bodhshalas*, referred to as the 'known practice' centres in Rajasthan in our study, are being considered as 'good practice' are as follows:

(a) These centres have adequate and appropriate play and learning materials and these were not only there but were also seen being used by most children. The classrooms in *Bodhshala* had interesting and relevant charts and pictures displayed on the walls for the children at their eye level, which were also used as teaching and learning material.

(b) These centres had a well-planned schedule with age-appropriate and flexible class arrangement. The pre-group section in *Bodhshala* had

two groups or levels divided by age of the child. Each group of children was observed being given age-appropriate activities, which varied in complexity to match the age. The weekly and daily schedule was planned taking into consideration the age of the children and their abilities. At times, the teachers were also observed preparing a plan for an individual child (IEP), who needed special attention. Pre-group sections of *Bodhshala* were also observed to have a flexible classroom arrangement, which was adjusted according to the activities.

(c) The curriculum designed by the *Bodhshala* teachers was found to focus on language and cognitive development of the children. A number of activities and opportunities were observed being provided by the teachers where she involved the children in guided conversation and interacted with them in dialogical manner, in ways that would extend their thinking and curiosity. Teachers also created a number of opportunities and activities for concept formation, development of conceptual skills and readiness activities (Reading, Writing and Pre-number) for the children. The children at *Bodhshala* pre-primary section were much less exposed to formal reading, writing and arithmetic, which was a common sight in the private pre-schools and many a times at *Anganwadis* as well.



(d) Unlike other models, the children in *Bodhshalas* were given opportunities for free play, which was supervised by the teacher. The combination of supervised free and guided play gave children the freedom to choose their material and activity, while the teacher could use that time to work with a smaller group of children by rotation to develop their conceptual understanding using the activity material. The guided play time was also used for organizing activities and opportunities for development of fine motor and cognitive skills and for craft and music. The curriculum promoted development of social skills such as cooperation and sharing among children. An important observation was that *the teachers always ensured participation of all children in these activities.*

(e) The medium of interaction and instruction was the mother tongue of the children. Teachers

teaching at *Bodhshala* belong to the same community as the children; the children, thus, easily understood the language used by the teacher and the teachers also demonstrated sensitivity and awareness, especially regarding needs of children with special needs. They tried to create an inclusive environment by encouraging children with special needs to also participate.

(f) There was regular mentoring and on-site training and support. A key factor that stands out in the 'known practices', both in Andhra Pradesh and in Rajasthan, is the regular and supportive supervision and mentoring mechanisms in place. This process of need based and on-site resource support to the educators or teachers becomes even more critical when the effort is to reform classroom practice towards more child-centred methods. In the absence of any prior experience of these new methods by the teachers, they need



constant support and scaffolding as they further refine their knowledge, skills and attitudes in consonance with the principles of child-centred and constructivist pedagogy.

Concerns

A few areas of concern in *Bodhshalas* were (a) an unsafe environment; (b) no provision of meals to children; this was an opportunity lost not only to ensure children get a nutritious meal but also for peer and teacher child interactions and development of social skills; (c) The practice of greeting and using simple social etiquette was not observed in the *Bodhshalas* as the teachers, while sharing an informal and open relationship with the children, were not in the practice of greeting children and thereby inculcating the same habit in them. However, the liberal classroom environment certainly helped children be more comfortable, even in the presence of strangers in the class as compared to the other models. (d) No emphasis was given to personal hygiene; there were no toilets at the centres and even when there, children were seen going out; there was also little stress on personal grooming and washing of hands.

2.4 Emerging Associations Across ECE Models – Some Lessons

The data elicited on the quality domains across the different types of ECE programmes and across the three states was further analyzed to explore interdependence of variables, by computing correlation coefficients between the scores of the different domains. The analysis yielded some interesting and significant associations, which indicate some clear lessons or directions.

1. Physical facilities are a necessary but not sufficient condition for ensuring the quality of an ECE programme.

The analysis shows that physical infrastructure does have a high association with classroom management ($r=0.40$), but has no association at all with availability and use of learning materials or with the developmental appropriateness of the curriculum that is being practised, that is, the curriculum's focus on language, cognitive, motor and creativity development or on teacher's disposition. The association with classroom management can be understood if we analyze the indicators for this domain, which reveals a strong correlation with availability of

Sufficient physical space enriched with relevant learning and play material is essential for following an appropriate curriculum

classroom space ($r=0.42$), and also of storage space ($r=0.41$). These indicators relate to basic facilities necessary for organizing a flexible and activity-focused classroom arrangement, for planning and conducting age-appropriate activities that would require children to sit in groups, planned layout of classrooms into activity corners, adequate space for children's movement and activity and so on. A moderate association is also found between physical facilities and social-development activities ($r=0.34$), which again imply the need for space for movement and interaction, which is the key to development of social skills in children.

A strong association ($r=0.42$) is also found between availability of water, an infrastructure indicator, and personal hygiene and health habits, which are self-explanatory, since this is particularly linked to washing of hands.

All these aspects are logically related to availability and adequacy of space and these point to availability of physical infrastructure as a necessary requirement. This has special significance, given the widespread belief that ECE with quality can be organized in any available space, be it the small home of the

educator, or under a tree! However, the fact that no significant association is established between physical infrastructure and the critical quality parameters such as the curriculum and teacher's disposition implies clearly that it is *a necessary but not a sufficient condition* for ensuring quality in ECE.

2. Availability and use of learning and play materials is essential for a developmentally appropriate ECE curriculum.

While there was no significant association seen between nature of curriculum and physical facilities, the correlation of the curriculum scores with scores on availability and use of learning materials ranges from moderate to strong. This is a significant finding. A strong association is seen with fine motor development activities ($r=0.42$), a moderate association with cognitive development ($r=0.34$), creativity ($r=0.37$) and teacher disposition ($r=0.31$). The strong association with motor development activities can be explained by the fact that activities related to fine motor development have to necessarily be material based and individual activities, such as threading of beads or colouring, or playing with manipulative materials. This requires not only availability of materials but also in adequate numbers. The



fact that motor development was found to be a neglected area in the study across programmes may be attributed to lack of adequate play and learning materials in addition to it being a low priority. Similarly, activities for development of creative and cognitive skills and concepts also require interaction with appropriate materials and this is reflected in the moderate association. An interesting finding is the correlation seen of learning materials with teacher disposition. This can be interpreted in two ways. One, materials also facilitate the work of the teacher since she can engage children more meaningfully and easily if these are available at the centre; two, it also confirms the observation that ultimately it all rests on the teacher, for even if the materials are supplied, it is the teacher with a more favourable disposition who will make the actual effort to plan the learning environment for the children and ensure these are used meaningfully. There are innumerable instances cited where the teacher has kept the materials locked up in cupboards or trunks so as to ensure compliance at the time of stock taking!

3. Focus on classroom management and organization emerges as a key input for a developmentally appropriate curriculum.

Classroom organization and management emerges as a very strong requirement for a developmentally appropriate ECE programme. Overall, its correlation with the curriculum content scores is as high as ($r=0.58$). When analyzed in terms of each domain, it again shows a strong association, with activities for social development ($r=0.57$); with cognitive development ($r=0.44$) and with language development ($r=0.42$). It also has a moderate but significant association with motor development, creative activities and personal hygiene and habit formation. In terms of specific indicators of classroom organization, the correlation of each of the quality domains with planning and following of weekly and daily schedules emerges as significant and this ranges from strong on most domains to moderate in some ($r=0.52$ to $r=0.31$). A further analysis indicates a strong association between age appropriateness of activities and planning and implementing a weekly and daily schedule ($r=0.54$), indicating again the importance of prior planning and classroom organization to cater to multi-age and multi-level situations. Similarly, a significant correlation was found between age appropriateness of activities and classroom display at children's level, indicating a planned approach to curriculum development and



transaction informed by an appropriate understanding of children and their needs. This is a very important finding. Given that most training programmes in ECE focus on conducting of activities primarily, with little or no attention to this aspect of classroom organization and management in terms of the planning process, the meaning and significance of a balanced schedule, the demonstration of a child centred classroom layout etc. Again, as mentioned above, some of this is also possible or linked with availability of adequate physical space.

4. Democratic classroom environment with an interactive teacher is conducive for a developmentally appropriate curriculum.

As in the case of classroom organization, another strong association with the developmental appropriateness of the curriculum content is that of nature of teacher's disposition and resulting classroom environment. This association is consistently strong with all developmental domains but in particular with language development activities and opportunities, as evident in terms of specific indicators. The correlation between providing speaking opportunities for children and a liberal

democratic classroom environment is as high as ($r=0.45$), and with encouragement of teacher-child interaction it is ($r=0.46$). In a similar vein, scores on teacher using language to extend children's thinking correlates highly ($r=0.45$) with the democratic environment and also with encouraging teacher-child interaction ($r=0.47$). Extent of provision of activities for development of creativity in children is also significantly correlated with scores on teacher child interaction ($r=0.45$). More moderate associations are found with other domains of development also, such as motor development ($r=0.38$) and social development ($r=0.27$). These significant associations of the 'teacher factor' with the developmental appropriateness of the ECE programme clearly indicate a strong interdependence among the nature of teacher's disposition, her democratic attitude towards classroom organization and the planning and transaction of her curriculum. The liberal, interactive teacher will not only allow but also encourage meaningful conversation and interaction in her class, will allow free expression of ideas and creativity, and will try to promote children's thinking and reasoning skills.



5. *Close interdependence and association exists between and among activities for different developmental domains, indicating the value of an activity-based approach.*

A strong linear association is evident in scores on activities for different domains, particularly between language development activities and creative activities ($r=0.55$) and with social development activities ($r=0.55$). This is possibly attributable to the fact that rhymes and songs that are the most common activity at centres get classified as both language and creative activities, and since these are done in groups in most cases, these also tend to promote social interaction. Interestingly, there is also a strong association found between creative and fine motor activities ($r=0.52$), which is again understandable since the other kinds of creative activities seen at the centres are in the form of drawing, colouring or clay work, etc., which also promote eye-hand coordination and fine motor development. A related finding is that opportunities for free play for children also reflect a strong association with creative activities ($r=0.42$), cognitive activities ($r=0.44$) and motor activities ($r=0.53$) since these involve open-ended play with manipulative materials as well as art activities.

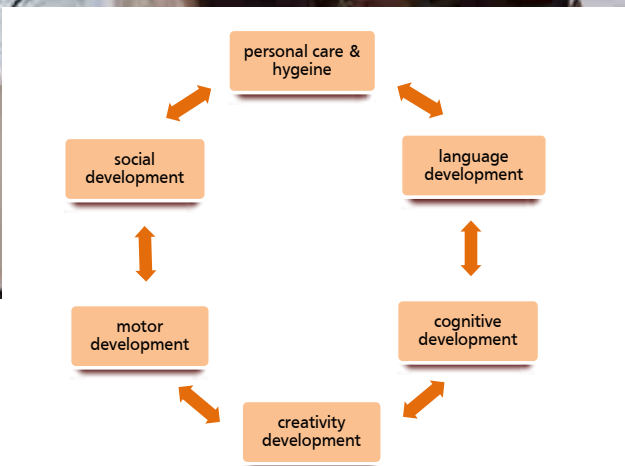


FIGURE 2: Interdependence Of Curricular Domains

A strong correlation was also found between meal time activity in centres where meal is provided and scores on language and social development ($r=0.56$). Meal time evidently provides a very valuable opportunity for the teacher and children to interact among themselves and has obvious benefits for their social and language development. These benefits clearly establish the need for a 'whole child' approach in designing the curriculum, with a focus on some key play and development-based activities and interactions that together nurture and promote all aspects of development in children.

6. *Formal learning and teaching of the 3 R's at this stage has an inverse relationship with developmentally appropriate activities.*

An analysis of various indicators within domains indicates an inverse relationship between formal teaching of reading, writing and arithmetic and the readiness activities described above, particularly in Rajasthan and Andhra Pradesh

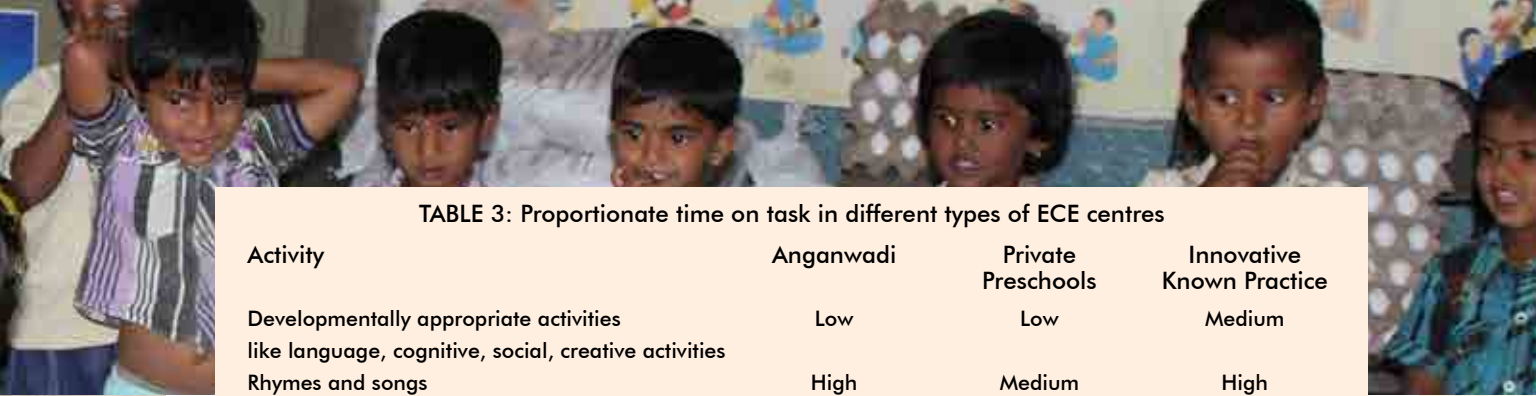


TABLE 3: Proportionate time on task in different types of ECE centres

Activity	Anganwadi	Private Preschools	Innovative Known Practice
Developmentally appropriate activities like language, cognitive, social, creative activities	Low	Low	Medium
Rhymes and songs	High	Medium	High
Conversation	Medium	Low	Medium
Formal teaching	High	High	High
Routine activity	High	High	High
No activity	High	Medium	Medium

($r = -.09$ to $r = -1.0$) implying that wherever formal teaching is being conducted there is no space for readiness activities. These, therefore, emerge as two different models of ECE, one focused on formal learning of the 3 R's and the other focused on nurturance of different aspects of a child's development. There is very little intersection between the two. Unfortunately, in the private pre-school programmes, the former is the dominant mode which is being practised at the cost of the latter. Across the programmes and states, there is also very little evidence of awareness or practice related to specific activities required for development of pre-reading, pre-writing and pre-number skills and concepts.

3 Some Conclusions and Recommendations

The preceding discussion of the different models and emerging associations highlights the wide range that is evident in ECE practices not only across models but also within a model across states, pointing to the significant

contextual determinants of any programme. Given India's phenomenal cultural, socio-linguistic and geographical diversity, one could celebrate these different models as a reflection of this diversity, had there been adherence to a common set of principles of developmentally appropriate curriculum and quality of the ECE programme. But the more common ECE practices in the public and private sectors conform to these only in a minimalist manner.

It is the above two models that are available to the largest segment of children in under-privileged communities in the country and these depict only a few elements of good practice, with a predominance of formal teaching and rote memorization and lack of essential facilities, with complete disregard of the age and developmental needs and capabilities of children at this stage of childhood. This is clearly evident in Table 2 and 3 where the time on task analysis of each model indicates this misplaced emphasis.

The innovative 'known practices', which are able to demonstrate relatively 'good practice' in low-cost settings, are few and scattered and available



to a very small number of children of specific communities. However an analysis of these practices does indicate some important lessons for the larger system.

Major Recommendations

1. Given the major tilt towards formal teaching and rote memorization in the system, particularly in the private pre-schools, which are mushrooming and establishing their presence in leaps and bounds even into the tribal and rural areas, there is a need for an effective system of regulation for quality and a common curricular framework across sectors.
2. This framework needs to be informed by a nationally developed quality standards and curriculum framework that needs to be contextualized in content to address the diversity in the country. However, this framework should reflect some non-negotiable criteria related to physical facilities, play and learning materials and principles of curriculum development and profile and training of the teacher.
3. The curriculum requirements need to be identified for each sub stage from 2 to 4 years, 4 to 6 years and 6 to 8 years with clarity so as to make it meaningfully aligned to the develop-

mental needs and characteristics of children at each sub stage of development. Currently, in the absence of this understanding, there is a definite and disturbing trend of children at all levels being made to do similar activities from 3 to 6 years and/or learn alphabets and numbers, moving from simple to complex in a linear mode, with no awareness of the need for school readiness and/or link to their needs and capabilities. These standards should be applicable to all models of ECE, whether in private, public or voluntary sectors, irrespective of the management, location or community that they are serving.

4. The study points to the need to ensure an exclusive teacher for ECE who has a good understanding of ECE and the required skills and attitudes and can devote time to planning the curriculum and to organization and management of the class in accordance with the curricular priorities, keeping in mind the age and development appropriateness of the activities.
5. The training of ECE teachers should be comprehensive and intensive and needs to take into account the six emerging principles discussed earlier in this chapter, so as to adhere to developmentally appropriate ECE practices,



irrespective of context. The principles relate to not only availability but also effective use of physical facilities; nature and adequacy of learning materials and their use; classroom planning, organization and management; a democratic class environment and an interactive teacher as facilitator; the importance of activity based methodology; and the adverse impact of emphasis on formal learning.

6. A major lesson learnt from the 'known practices' is that a one-shot training is not expected to lead to much gain in terms of systemic reform. The key to good practices demonstrated by them is a system of regular onsite support and mentoring. This becomes even more important since, unlike the traditional formal primary school method, the desired child-centred pedagogical practices in ECE are different and completely unfamiliar to the teachers; this shift in practice from formal teaching, therefore, needs to be supported with considerable hand holding and scaffolding for the teachers through well-trained and experienced mentors.

7. The fast expansion of the private sector is essentially a reflection of the trends in parental choice, which appear at present to be guided by some misconceptions regarding good quality ECE. There is a need to have a more focused and

comprehensive approach towards parent and community awareness creation in this regard and a system built into each programme of involving parents and/or community women in the running of the ECE centres. Use of media can produce effective results.

8. The health and nutrition component needs to be an integral part of any ECE programme, not only for its direct benefits to the child's development but also with the accompanying learning and socialization benefits when the meal is part of the daily routine of the ECE centre.

9. Given state variations, even within the same ECE model, opportunities need to be provided to the state personnel manning the nodal ICDS and education departments to visit other states to facilitate cross sharing and learning.

10. There is a need to have a more rigorous and systematic data-management system in the area of ECE, which can be attuned to the requirements of the system at different levels of implementation, to address at the local and district levels issues of enrolment vs. participation, dual enrolment and registration of all pre-schools across sectors and ensure meaningful transition of children to primary schools.

ANNEX - 1

DESIGN OF IECEI STUDY

DESIGN OF THE THREE STRANDS

STRAND	OBJECTIVES	SAMPLE
A Survey method	To derive district level estimates of (a) current trends in participation of 4-5 year olds (b) school readiness levels at 5 years	362 villages 13868 children 1616 centers
B Quasi-experimental & longitudinal	(a) To study quality variations across ECE centers, public, private & voluntary (b) To identify significant quality variables in ECE that impact school readiness and primary school outcomes	Sub-set of Strand A sample 75 villages 298 ECE centers 2767 children
C Qualitative Case Study	In-depth case studies of innovative practices in ECE	9 case studies, across many states







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