



Akshara Foundation

Every child in school and learning well

Analysis of Assessment Data
Akshara's Preschool Programme in Non-notified Slums of Bangalore
Supported by Anuradha Foundation

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Research and Evaluation



Context

Akshara Foundation's preschool programme is an initiative to demonstrate how this school preparedness programme helps children in adapting to learning levels at the primary stage. In this context Akshara Foundation has prepared a school preparedness kit to be used by preschools. It is a time-tested initiative and is being implemented in all the anganwadis in Bangalore district in Karnataka since 2009 and in nearly 200 private preschools in Bangalore city. Encouraged by its experience in government-run anganwadis in Bangalore, Akshara decided to explore the possibilities of setting up preschools for children who are at the under-privileged, bottom strata of society.

After an extensive research based on secondary data and primary data¹ it became clear that non-notified slums are the worst affected settlements in urban areas. None of the local urban bodies or government institutions has any obligations to make public amenity provisions in these areas, thus making the living conditions of the households dreadful.

It was against this background that Akshara Foundation found a number of children living in non-notified slums without access to preschool education either at government or private centres.

The Approach

Akshara's School Readiness Kit follows an approach of helping children to develop basic skills that are aligned to child development processes.

The methodology covers 7 broad, fundamental competencies that represent the basic concepts necessary for the 3-6 age group of children to get prepared for primary schooling.

- 1. General Awareness**
- 2. Gross Motor and Fine Motor Self-help Skills, Eye, Hand Coordination**
- 3. Language Development**
- 4. Intellectual Development**
- 5. Socio-emotional Development**
- 6. Pre-academic Reading, Pre-academic Writing**
- 7. Pre-academic Mathematics**

Akshara's School Readiness curriculum helps children develop these skills through teaching-learning methods and through play.

The Assessment Process

Children between the ages of 4 and 6 were selected for the assessment.

¹ A feasibility study by Akshara Foundation. www.Akshara.org.in

The tests were created with the objective of testing to measure the learning/development levels of children at the 'entry level.' There are 56¹ activity-based test indicators developed with the help of child development experts that constitute a Baseline Assessment. All the indicators were field-tested before being rolled out. Preschool instructors of non-notified slums conducted the assessment for the children of their centres in a span of six working days as per Akshara Foundation's guidelines. These instructors were trained by the Akshara resource team.

Assessment Map

Child assessment was designed on the basis of components or skills that are included in the School Readiness Kit. The assessment tool included 56 skill based indicators to be assessed for each child. The following analysis was carried out on the assessment results.

Domains	Number of Indicators
General awareness	5
Gross Motor	4
Fine Motor Self-help skills	4
Fine Motor – Eye, Hand Coordination	2
Language Development	13
Intellectual Development	5
Socio-emotional Development	4
Pre-academic reading	3
Pre-academic writing	9
Pre-academic Mathematics	7
Total	56

Coverage of the Programme

Akshara Foundation has set up 10 preschool centres in Bangalore. These centres were set up after conducting a feasibility survey across six non-notified slums in the city. The assessment was administered to all the children who were present at the time of assessment, be it pre-test or post-test. But for analysis purposes the data of children who appeared for both the pre- and post-tests was considered. Child assessment was administered across all the centres in Bangalore. There were around 246 children in the pre-test in September 2010 and at the time of the post- test around March 2011 there were around 182 children.

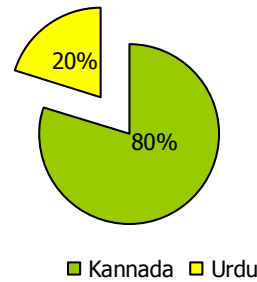
	Pre-Test, August 2010			Post-Test, March 2011		
	Boys	Girls	Total	Boys	Girls	Total
Ashraya Nagar	7	13	20	3	7	10
Pantharapalya -1	16	13	29	5	8	13
Pantharapalya - 2	14	16	30	10	9	19

Pantharapalya - 3	13	15	28	7	10	17
Pantharapalya - 4	13	12	25	13	12	25
Veerabhadra Nagar -1	12	20	32	10	16	26
Veerabhadra Nagar - 2	8	12	20	6	4	10
Yarab Nagar -1	12	19	31	11	18	29
Yarab Nagar - 2	15	16	31	9	11	20
OMBR	6	5	11	7	6	13
Total	110	136	246	81	101	182

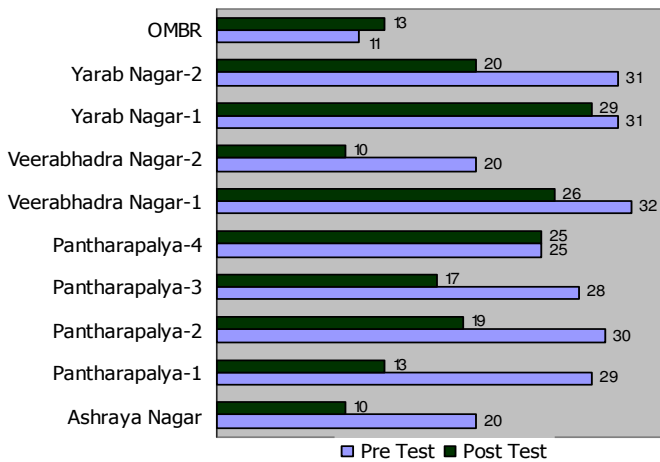
Overall Attendance for Assessment



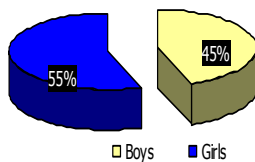
Participation of children by Home Language



Participation of Children by Centres



Participation of children by Gender

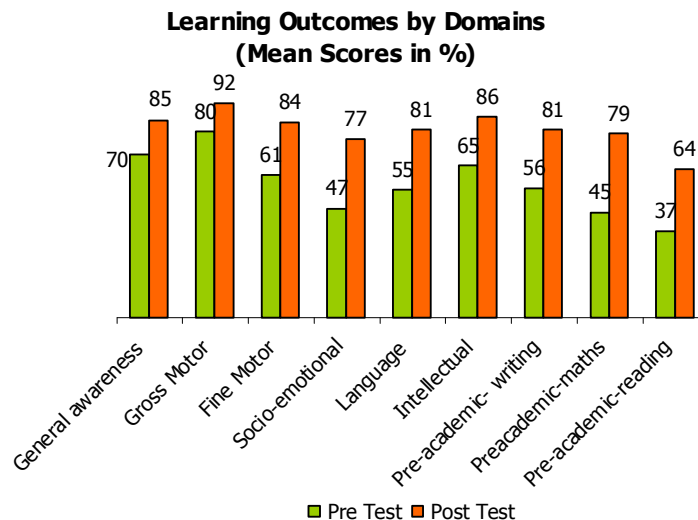


- Around 50 children seem to have moved out of these centres. One of the reasons could be the floating nature of the population. The families of these children tend to migrate to other parts of the city or may go back to their native places.
- The attendance of children ranges between 10 and 30 across the centres.

- Except in Pantharapalya 1, 2, 3 and 4 and in Ashraya Nagar the children seem to be moving in and out of the centres.
- Yarab Nagar 1 seems to have the maximum number of children.
- In fact only around 182 children were found in both the pre-tests and the post-tests.
- 80% of the children who participated in both the assessments had a background in Kannada, which is the language they speak at home.
- 55% of the children who participated in both the assessments were girls. This could be taken as a proxy for attendance.

Child Assessment Results

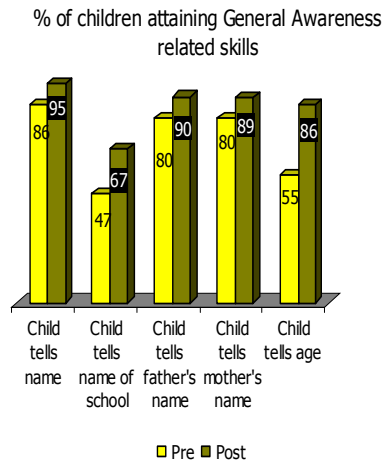
The assessment was broken into 7 learning domains as described above. Within each learning domain, each child was asked a series of questions. Some of the questions necessitated oral answers, some of them were task-related expecting the children to perform a task, and some were overall observations made by the examiner.



General Awareness

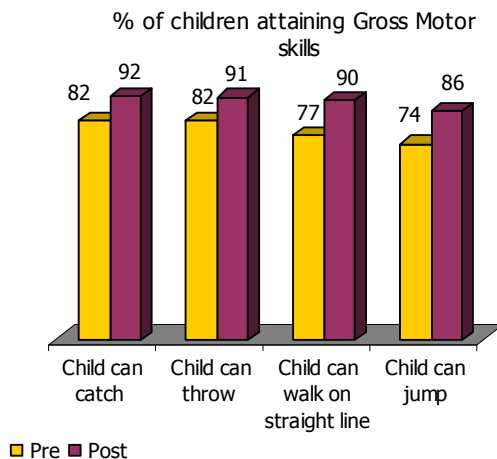
The children's general awareness of their identity and surroundings was tested to ascertain whether they knew unchanging things like their names, their parents' names, their age. The data shows that the overall gains between pre- and post-tests were around 15% in the competencies related to general awareness.

- Overall general awareness seems to have improved between pre- and post-tests.
- 86% of the children could tell their complete name during the pre-test and by the post-



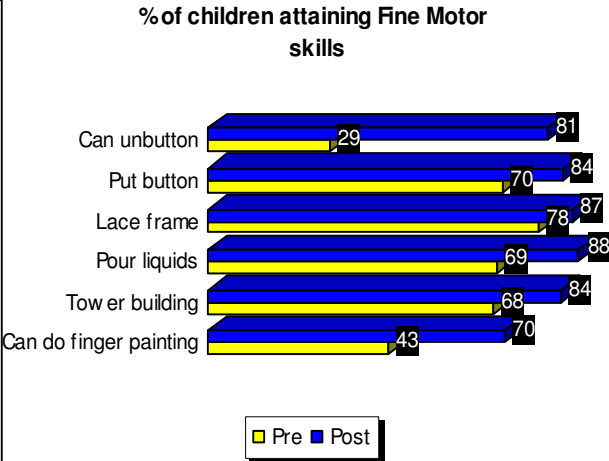
Motor Skills

The next two parts of the assessment cover a child's motor skills. Overall gains show that there was an improvement of 12% points (mean scores) between pre- and post-tests in Gross Motor Skills. The results from the pre-test show that over 90% of the children are able to catch, throw and jump, and a sizeable proportion – 90% - are able to walk along a straight line. When it comes to Fine Motor Skills, children have more difficulty. Half of the children are unable to lace the tree frame or build a tower, activities that require precision and focused attention. These are also the tasks that children may be least familiar with. Conversely, many children are able to button, unbutton and pour liquids, fine motor skills that are required in their daily lives.



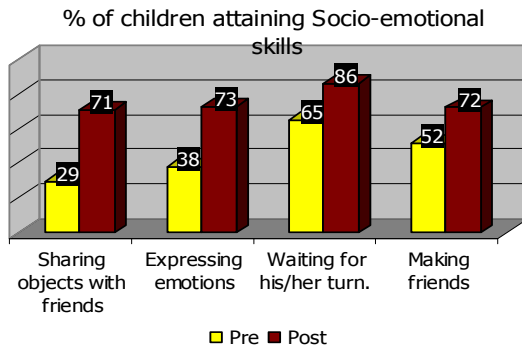
- The overall performance seems to be encouraging.
- Around 90% of the children could catch a ball thrown to them and could throw it back.
- Walking on a straight line seems to have been practised between the pre-test and post-test.

- The overall performance seems to be satisfactory in fine motor skills.
- Only 29% of the children knew how to unbutton their shirts but the instructors seem to have trained the children in this in the period between the pre- and post-test.
- Children seem to need practice in artwork, like painting with the index finger.



Socio-Emotional Development

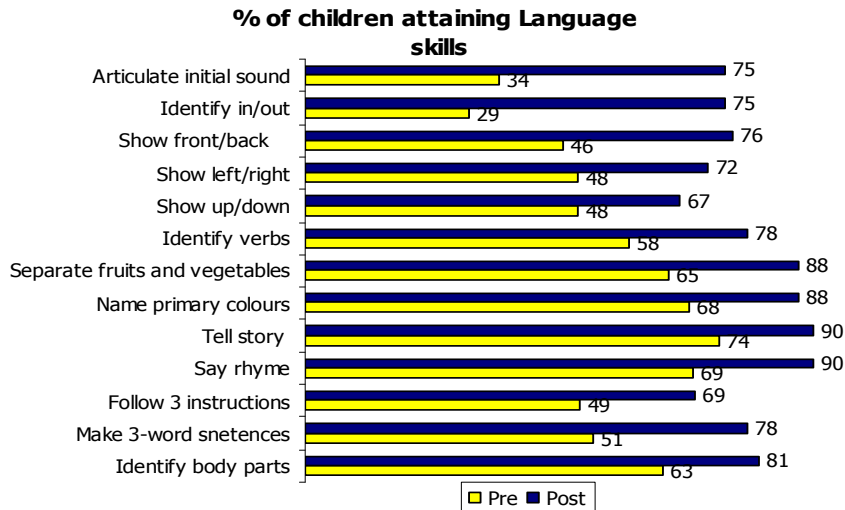
Socio-emotional skills help children learn to socialize with other children in an appropriate and peaceful way right from the young age of 3 or 4. The data shows that the overall gain increased from 47% to 77% across the competencies related to socio-emotional skills between pre- and post-tests. The Akshara child assessment has four questions within this sub-heading. The results show that more than 3/4th of the children share toys and make friends easily. All this information was collected with the help of the instructor who has observed the children over an average span of eight months.



Language Skills

The language part of the assessment brings out the difficulties children have with verbally expressing themselves. Many children are able to identify body parts and articulate “up/down,” “in/out,” and “front/back” movements when instructed to do so. A slender majority of the children are also able to identify fruits and vegetables, primary colours, sing rhymes and follow three-sentence instructions. However, when it comes to other tasks, such as identifying initial letter sounds and verbs, and less passive tasks like saying three-word sentences and telling a story, the children fall short of the assessment’s

learning goals. The data shows that the overall gain increased from 55% to 81% across the competencies related to language acquisition between pre- and post-tests.

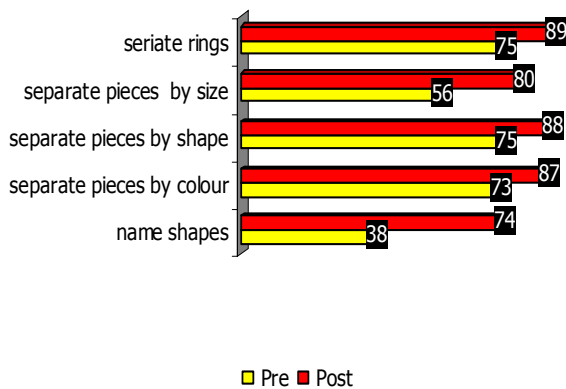


- 90% of the children could narrate a story and recite a rhyme.
- 75% of them knew what “up and down” means, a score attained only by 29% during the pre-test, but by the post-test 50% more children had picked it up.
- More than 78% of the children could identify verbs.
- 72% of the children could identify their left and right hands.

Intellectual Development

The Intellectual Development portion assesses the differentiation and critical thinking skills of the children. Rather than simply asking children to name categories of things at random, these questions test whether or not children can associate specific labels to specific colours, shapes and sizes. It turns out that a majority of the children are unable to do any of the above. It goes beyond identifying size: even the concept of “bigger” and “smaller” is difficult. Many children are unable to seriate rings by size. It is evident from the data that the overall gain increased from 65% to 86% across the competencies related to intellectual development skills between pre- and post-tests.

% of children attaining Intellectual skills

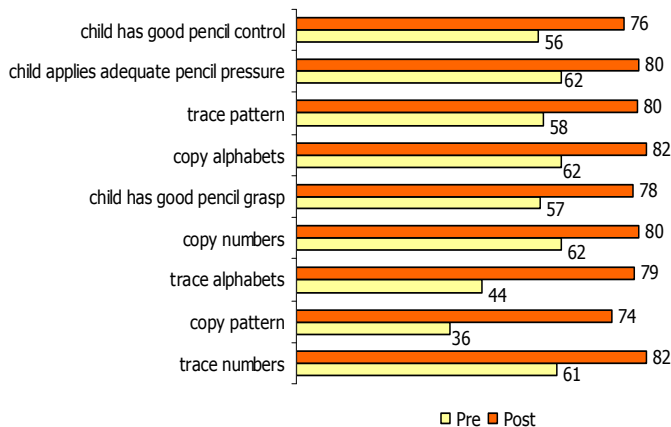


- It is clear from the above graph that Akshara preschool centres work hard to teach shapes, colours and size, both by categorising objects as well as naming them.
- Only 74% of the children could recognise and identify the size.
- There is also a possibility of children lagging in regular attendance in some centres which may be hindering learning.

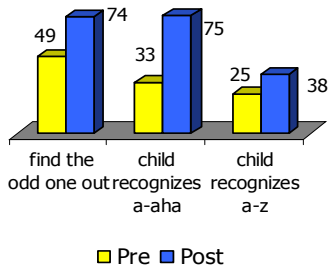
Pre-Academic Skills

Questions that test Pre-Academic Skills are perhaps the most indicative of a child's academic readiness for primary school. Most of the questions centre around two foundational principles: literacy and numeracy. Children are assessed on their recognition of letters and numbers, as well as their ability to reproduce letters and numbers. The data shows that the overall gain increased from 56% to 81% across the competencies related to writing skills between pre- and post-tests.

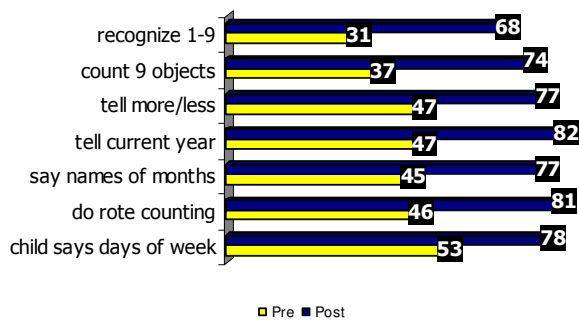
% of children attaining Pre-academic- writing skills



**% of children attaining Pre-academic-
Reading skills**



**% of children attaining Pre-academic-
Math skills**



Writing Skills

- It is clear from the above graph that a remarkable effort has been put in by Akshara’s preschool instructors in training the children in writing skills.
- More than 80% of the children have learnt to copy numbers, alphabets, trace patterns and numbers.

Reading Skills

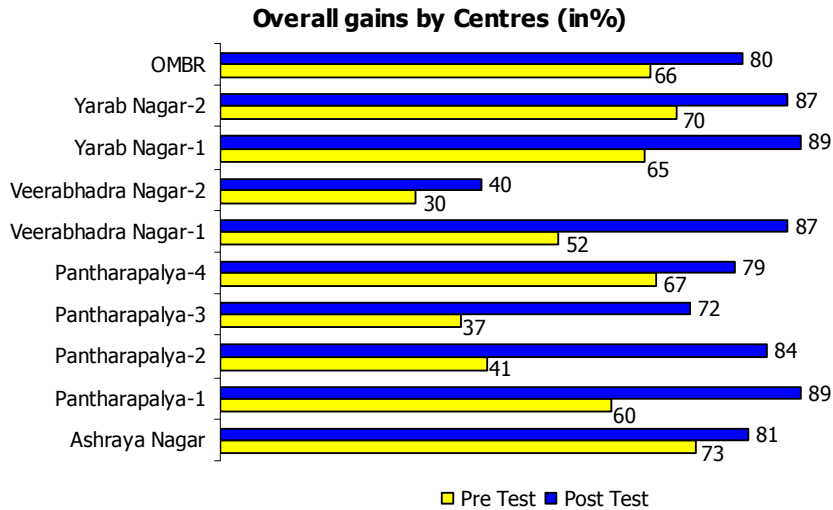
- The data shows that overall gains increased from 37% to 64% across the competencies related to reading skills between pre- and post-tests.
- While only 33% of the children were able to recognise Kannada alphabets at the time of the pre-test this number increased to 75% by the time of the post-test.

Math Skills

- Overall gains increased from 45% to 79% across math competencies between pre- and post-tests.
- Less than 50% of the children were able to achieve all the skills related to maths at the time of the pre-test.
- By the time of the post-test more that 70% of the children were trained in these skills.

Centre wise Analysis

An analysis was carried out across the centres and the graph below shows that centres like Pantharapalya 2 and 3 have shown remarkable gains between the pre and post test periods. Yarab nagar and Pantharapalya 1 seems to be performing well compared to Veerabhadra nagar-2.



Concluding Observations

- 246 children participated in the pre-test in September 2010, and at the time of the post-test around March 2011 there were approximately 182 children. Around 50 children seem to have moved out of the centres. One of the reasons could be migration when families leave the city in search of work or return to their hometowns.
- The attendance of children is in the range of 10 to 30 across the centres. Except in Pantharapalya 1, 2, 3 and 4 and in Ashraya Nagar the children seem to be moving in and out of the centres. Yarab Nagar 1 has maximum number of children.
- 80% of the children who participated in both the assessments spoke Kannada at home. 55% of the children who participated in both the assessments were girls. This could be taken as a proxy for attendance.

Child Assessment Results

General Awareness

- The data shows that the overall gain increased by 15% in the competencies related to General Awareness between pre- and post-tests. Overall, general awareness seems to have improved between the pre- and post-tests.
- 84% of the children could tell their complete name during the pre-test and by the post-test this percentage had risen to 93%.
- Children seem to be struggling to say their names and the names of their schools.
- Children seem to have found it difficult to say their age but they seem to have been trained between pre- and post-tests.

Motor Skills

- Overall gains show that there was an improvement of 15% points (mean scores) between pre- and post-test in the case of Gross Motor Skills. The results from the pre-test show that over 90% of the children are able to catch, throw and jump, and a sizeable proportion, 90%, are able to walk along a straight line. When it comes to Fine Motor Skills, children have more difficulty. Half of the children are unable to lace the tree frame or build a tower, activities that require precision and focused attention.

Socio-Emotional Development

- The data shows that the overall gain increased from 51% to 91% across the competencies related to socio-emotional skills between pre- and post-tests.

Language Skills

- It is evident that the overall gain increased from 54% to 91% across the competencies related to language acquisition skills between pre- and post-tests.
- 90% of the children could narrate a story and recite a rhyme, 75% of them knew what “up and down” means, a score attained only by 29% at the pre-test but around 50% more seem to have picked up by the post-test.
- More than 78% of the children could identify verbs and 72% of the children could identify their left and right hand.

Intellectual Development

- The overall gain increased from 27% to 52% across the competencies related to intellectual development skills between pre- and post-tests.
- It is clear from the analysis that the Akshara preschool centres are working hard to inculcate in children shapes, colours and sizes, both by the categorisation and the names of objects.
- Only 74% of the children could recognise and identify sizes.
- There is also a possibility of lack of regular attendance in some centres hindering learning.

Pre-Academic Skills

- The data shows that the overall gain increased from 38% to 82% across the competencies related to writing skills between pre- and post-tests. More than 80% of the children have learnt to copy numbers, alphabets, trace patterns and numbers.
- The overall gains in reading skills increased from 71% to 92% between pre- and post-tests. While only 33% of the children were able to recognise Kannada alphabets at the pre-test this number increased to 75% by the time of the post- test.
- The overall gains increased from 67% to 88% across math competencies between pre- and post-tests.
- Less than 50% of the children were able to achieve all the skills related to maths during the pre-test.
- By the time of the post-test more than 70% of the children had been trained in these skills.