Hoskote – An Education Report Card
2010 - 2013

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Hoskote Education Profile – Executive Summary

Hoskote Education Profile is an Akshara Foundation publication, of wider significance to government, the education fraternity and civil society. A product of Akshara’s Research and Evaluation unit, this actively researched document is a Report Card for Hoskote Block for 2012-2013, a snapshot in time of where it stands with respect to education. The facts and figures have been collated by Akshara’s field teams over two years of work that covered the ground extensively through school surveys, classroom observations, teacher interviews and administering learning assessments.

Situated in Bangalore Rural District, Hoskote Taluk enjoys location-conferred advantages of being closer to Bangalore city. In education indicators Hoskote Block is one of the top rankers with an average literacy rate of 70%, which is way higher than the national average of 59.5%.

Section One is a fact sheet on education in Bangalore Rural District. Section Two facilitates a quick and easy understanding of the Right to Education (RTE) Act and examines how RTE-compliant schools are in Hoskote Block. A sample of the facts presented in the report. 96% of the block’s 260 government schools do not have all the RTE indicators of electricity, compound wall, midday meals, store room, library, playground, usable toilets for girls, and drinking water. While 81% of schools are housed in good, solid buildings, 45% of schools have only 1-2 rooms. Teachers are not entirely qualified. 72.3% have cleared their SSLC and are trained in T.C.H; only 10% are graduates, and trained in T.C.H; only 8% hold B.Ed degrees. 75% of lower primary schools were found to have at least one teacher per classroom and 96% of higher primary schools complied with the RTE-laid-down pupil-teacher-ratio.

The Block’s 260 schools are an arena for Akshara’s in-school programmes in Mathematics and English, now entering their third consecutive year. Section Three explains their methodology and sets forth the learning gains achieved. The programmes could not be more relevant or better targeted, as basic literacy and numeracy are an urgent social goal. About 40% of the children enrolled in 1st standard drop out before 8th standard and nearly 70% before 10th standard. A rigorous research method of assessing the programmes for year-on-year efficacy confirms concrete, verified learning outcomes in most parameters in Mathematics and English across classes and schools, detailed elaborately and competency-wise in the report.

There is, however, no room for easing the focus. There is much that needs to get done, for which the community too must take onus. Hoskote Block’s villages, its people, are a diverse, multilingual, multicultural mix, responsive to change and progress. The Report Card calls for community involvement in education, with all stakeholders coming together to formulate a cohesive, united, progressive approach to take it forward.
Prologue

Ensuring universal education and improving the status of education have been of primary importance over the years, which gained urgency with The Jomtien Accord. A change in government policies and plans since 2010 due to the enactment of the new Right to Free and Compulsory Education Act (RTE) has made monitoring progress easier.

This report focuses on the status of education of Hoskote taluk in Bangalore Rural District. Hoskote, the biggest taluk in Karnataka, is one of the four Talukas of Bangalore Rural District. It consists of five Hoblis, namely, Anugondanahalli, Jadigenahalli, Kasaba, Nandagudi and Sulibele, which are broken into 20 educational clusters.

Geographically, Hoskote Block is located in the south eastern part of Karnataka and reflects great diversity as it houses people of different religious and cultural beliefs as well as a multi-lingual mix of people that speak a wide range of languages such as Kannada, Tamil, Telugu, Hindi, Urdu etc. Census 2011 recorded its population as 56,613 – males constitute 52% and females 48%. It also has an average literacy rate of 70% which is higher than the national average of 59.5%.

As of 2012, the average enrolment of 6 to 14 year old children was over 90% nationally and over 98% in Karnataka. Additionally, the number of 5-year-old children who do not go to either school or anganwadi/balwadi is less than 2%, indicating an enhanced awareness of the importance of pre school education.

Over the last three years, schools in Karnataka have shown significant improvement in compliance with RTE indicators of playground (73.1% in 2012 and 66% in 2010), boundary wall (70% in 2012 and 59% in 2010), drinking water provision and availability (81% in 2012 and 76% in 2010), usable toilets (56% in 2012 and 38% in 2010), available and usable girls’ toilets (54% in 2012 and 31% in 2012) and library books (39% in 2012 and 28% in 2010).

In almost all of these indicators, Karnataka scores significantly above the national average, at least by over 10% in most of them. Along with schools moving closer to desired goals, the State has incorporated a revolutionary method of teaching children called Nali-Kali, where the students of Classes 1, 2 and 3 sit together in a common learning environment under a multi-level, multi grade concept.
About Akshara’s reach in Hoskote

Established in the year 2000, Akshara Foundation is working with government-run schools and Anganwadis to improve the learning environment and produce better learning outcomes for students in Karnataka.

Hoskote is a block where Akshara’s in-school programmes in English and Mathematics are being implemented in all the government schools. The present report looks at the different dimensions of education, analysed, separately and together, to generate a comprehensive picture of government schools in Hoskote Block.

This report covers the following aspects of government primary schools of Hoskote—infrastructure facilities, teaching faculty, school administration and enrolment- attendance of children as well as learning outcomes of children in Mathematics and English and finally community participation in Education.

The report extensively uses primary data collected by Akshara Foundation through surveys, assessment tests, field visits and classroom observations between years 2011 to 2013. Each of the 260 government primary schools were surveyed during the period 2011-2013 for physical characteristics, teachers, student strength and composition. In the year 2011-2012, all children of 1st, 2nd and 3rd standard were assessed in English and all children of 4th and 5th standard were assessed in Mathematics. Baseline assessments were administered in the beginning of the assessment year and the end line assessments at the end of the school year.

In addition, all the 12 schools of Sulibele cluster, which is the ‘experimental’ setting for Akshara’s Randomised Controlled Trial, were visited for children’s assessment in English and Mathematics three times a year for classroom observations and children were tested to assess the effectiveness of the program in terms of teacher’s comfort levels with the new teaching-learning materials (TLMs) to teach English and Mathematics and its impact on children’s learning levels.

The aim of this report is to present a picture of the education status of Hoskote Taluka, which could help for future directions and ensure improvement in the quality of education in this block.
Section 1: Bangalore Rural District and Hoskote Block – A Socio-Economic and Educational Profile
Bangalore Rural District- an educational overview

Bangalore Rural District, one of the 30 revenue and 34 educational districts of Karnataka, was formed in 1986, when Bangalore District was divided into Bangalore Urban and Bangalore Rural. Bangalore Rural has four blocks, namely, Nelamangala, Devanahalli, Doddaballapur and Hoskote.

The Bangalore International Airport located in Devanahalli accentuates the significance of the District. Census 2011 recorded its population as 987,257 (507,514 males and 474,743 females); children between 0-6 years as 102,019 (52,400 boys and 49,619 girls). The literacy rate of people above 7 years of age is 78% (85% males and 70% females).

There has been visible change over the years in the status of education in Bangalore Rural. Some of the key facts are:

- More than 99% of 3-5 year old children in Bangalore Rural were found to be enrolled in anganwadis. (ASER 2009 and 2010)

- The percentage of out-of-school children also shows positive results in Bangalore Rural. Only 0.2% of children were found to be out-of-school compared to the state average of 1.9%. (ASER 2012)

The proportion of children in Bangalore Rural District who could read and do basic Mathematical operations in their standard categories was found to be equal or better than national and state averages.

<table>
<thead>
<tr>
<th>Bangalore Rural</th>
<th>% Children(Std 1-2) who can read letters, words or more</th>
<th>% Children(Std 3-5) who can read Level 1 (Std 1) text or more</th>
<th>% Children(Std 1-2) who can recognise numbers (1-9) or more</th>
<th>% Children(Std 3-5) who can do subtraction or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASER 2007</td>
<td>85.1</td>
<td>66.9</td>
<td>84</td>
<td>57.5</td>
</tr>
<tr>
<td>ASER 2010</td>
<td>87.2</td>
<td>75.2</td>
<td>85.3</td>
<td>79.4</td>
</tr>
<tr>
<td>ASER 2012</td>
<td>96.4</td>
<td>65.8</td>
<td>91.9</td>
<td>58.5</td>
</tr>
</tbody>
</table>

Source: ASER Reports

The percentage of children in classes 1 and 2 who can read simple paragraph has increased by more than 10% over the years (2007 to 2012). Even though there was an increase in 2010 to 75%, in standards 3-5, % children who can read Level 1 text remained the same as in 2007.
There was also an increase in the percentage of children in classes 1 - 2 and 3-5 who performed well in Mathematics. If one takes the learning outcomes of the public/board exam as a calibrator for the educational status of the district, it is worth noting that Bangalore Rural has consistently performed above the Karnataka average in the SSLC examination.

For example, in 2011, 88% of students passed Kannada, 86% of students passed Mathematics and 88% passed in English.

![SSLC Result for Karnataka and Bangalore: All Subjects, Government School](image)

*Source: KSEEB*

This indicates that Bangalore Rural district has a track record of overall good performance in school education in Karnataka. In the following section we give a brief account of the Socio-Economic profile of the block which often has close links with the educational development.
Hoskote – A Socio-Economic and Educational Profile

Hoskote Taluk with a geographical area of 546.95 Sq. Kms (54,857 hectares), constitute 9% of Bangalore Rural District, falls in 'Maidan' agro climate zone. Nearly 6% of the geographical area covered by forest.

The Taluk has five hoblies with 255 villages, 34 Grama panchayats with a total population (2001 census) of 2,22,430. 84% of the population lives in rural areas and remaining 16% population in urban centres. Density of population is 407 persons / Sq. km. Overall literacy is 69.20% as against district average literacy of 64.70%.

Agriculture and more importantly Horticulture is the major economic activity in the Taluk. The Taluk has a reasonable Industrial base with presence of many medium and large-scale industries. The Taluk have a total road length of 673 kms. (Source: Taluk Industrial Development Plan- Hoskote Plan)

Hoskote comprises of multi-lingual and cultural population, majority of the people speak Telugu and Kannada.
According to a copper plate grant dated 1494, given to a Veerashaiva Matha the place was founded by Thamme Gowda, the chief of Sugatur. Thammegowda’s successors ruled till 1638 A.D. Shortly after, the territory was conquered by the Bijapur army and subsequently conferred as a Jahgir on Shahji, who resided at Bangalore. On the capture of these districts by the Mughal army under Khasim Khan in 1687, they became part of the Sira Province. In 1756, Hoskote was taken by the Mysore army, but was subdued by the Marathas (Peshwa). It changed hands several times until it was finally annexed by Haider Ali in 1761 A.D.

**Demographic Characteristics**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Urban Population</td>
<td>16.3</td>
</tr>
<tr>
<td>Sex Ratio</td>
<td>931</td>
</tr>
<tr>
<td>Sex Ratio (0-6 Years)</td>
<td>929</td>
</tr>
<tr>
<td>Sex Ratio (SC)</td>
<td>959</td>
</tr>
<tr>
<td>Sex Ratio (ST)</td>
<td>949</td>
</tr>
<tr>
<td>% Proportion of SC</td>
<td>22</td>
</tr>
<tr>
<td>% Proportion of ST</td>
<td>3</td>
</tr>
<tr>
<td>% Literacy Rate</td>
<td>69</td>
</tr>
<tr>
<td>% Work Participation Rate</td>
<td>46</td>
</tr>
<tr>
<td>% Main Workers</td>
<td>39</td>
</tr>
<tr>
<td>% Marginal Workers</td>
<td>7</td>
</tr>
<tr>
<td>% Non-Workers</td>
<td>54</td>
</tr>
<tr>
<td>% Cultivators</td>
<td>35</td>
</tr>
<tr>
<td>% Agricultural Labourers</td>
<td>22</td>
</tr>
<tr>
<td>% Household Industry Workers</td>
<td>4</td>
</tr>
<tr>
<td>% Other Workers</td>
<td>39</td>
</tr>
</tbody>
</table>

Source: Indian Census 2011
# Educational Profile

## Distribution of Govt Schools

<table>
<thead>
<tr>
<th>Distribution of Govt Schools</th>
<th>No. of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kannada Medium LPS</td>
<td>129</td>
</tr>
<tr>
<td>Urdu Medium LPS</td>
<td>15</td>
</tr>
<tr>
<td>Kannada Medium HPS</td>
<td>103</td>
</tr>
<tr>
<td>Urdu Medium HPS</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total Schools</strong></td>
<td><strong>260</strong></td>
</tr>
</tbody>
</table>

(Source: Akshara Foundation, 2011-12)

## Total Enrolment of Students (Grade wise)

<table>
<thead>
<tr>
<th>Standard</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Boys</strong></td>
<td>2170</td>
<td>2114</td>
<td>2024</td>
<td>2051</td>
<td>2040</td>
<td>2170</td>
<td>2123</td>
<td>1983</td>
<td>16675</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4133</td>
<td>4076</td>
<td>3988</td>
<td>3918</td>
<td>4046</td>
<td>4234</td>
<td>4128</td>
<td>3985</td>
<td>32508</td>
</tr>
</tbody>
</table>

(Source: Akshara Foundation, 2011-12)

## Indicators as per DISE 2012

- 29% had a separate room for HM
- 96% had a library
- 56% had a playground
- 100% had some form of drinking water provision
- 75% had a boundary wall

## Enrolment of children by social groups

<table>
<thead>
<tr>
<th>Standard</th>
<th>SC</th>
<th>ST</th>
<th>OBC</th>
<th>Muslim</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>37</td>
<td>7</td>
<td>35</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>38</td>
<td>7</td>
<td>36</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>33</td>
<td>6</td>
<td>39</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>35</td>
<td>6</td>
<td>38</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>36</td>
<td>6</td>
<td>39</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>33</td>
<td>5</td>
<td>40</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>35</td>
<td>6</td>
<td>40</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>29</td>
<td>8</td>
<td>28</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35</td>
<td>6</td>
<td>38</td>
<td>18</td>
<td>3</td>
</tr>
</tbody>
</table>

(Source: Akshara Foundation, 2011-12)
Section 2: Right to Education in Hoskote Block
Infrastructure

School Building: In order to ensure a comfortable and holistic learning environment for students, it is important for schools to maintain basic infrastructural facilities. At Hoskote, it was observed that 81% of the school buildings are pakka and 19% are working towards meeting the building requirements as stipulated by the RTE rules. The data presented in this section was collected by Akshara Foundation (2011-12).

Almost all schools have already electricity, mid day meal, usable toilets for girls and drinking water.

It is worth noting that 73% of schools in Hoskote have more than half of the most essential facilities in school.

Despite receiving and utilizing the School Development Grants, it was observed that half of the schools do not have a store room, 60% do not have a usable play ground and 83% do not have a library. All schools should work towards ensuring availability of these facilities as well.
- Over 96% of the schools have provision for safe drinking water.
- 74% do not have a separate office-cum-Head-Teacher-room.
- 86.8% of overall schools do not have a separate teachers’ room.
- 92.8% have a kitchen to cook the midday meal.
- 70% of the schools had charts, maps, globes, models and other TLMs.
- The SDMC meetings were held in all the schools.
- While Edusat Programme was in 31% and Radio Programme was implemented in 86% of the schools.
- 96.4% of schools seem to have organised medical check-up camps in the last 6 months.
Teachers and School Administration at Hoskote

More than 850 teachers across all the government schools were interviewed and observed.

- Female teachers clearly dominate the teaching fraternity in Hoskote primary schools. Overall, the strength of female teachers (68%) was double that of their male counterparts (32%).

- There were 32% of schools with all-female teachers and in 31% schools had more than half of the staff was female teachers.

- The proportion of male HMs (at 24%) was double that of female HMs (at 12%).

- The teacher qualification graph shows that 1.3% had university degrees but were not specifically qualified as teachers.

- Only 8% have B.Ed degrees. Moreover, over 6% of teachers were found to be teaching without any teacher training; of these most teachers were either at SSLC or PUC level. This observation is true for both male teachers and female teachers.

- Both male and female teachers have spent an average of 16 years in service as teachers.

<table>
<thead>
<tr>
<th>Schools that had...</th>
<th>% Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women Teachers</td>
<td>12.70</td>
</tr>
<tr>
<td>1-25% Women Teachers</td>
<td>2.80</td>
</tr>
<tr>
<td>26-50% Women Teachers</td>
<td>21.90</td>
</tr>
<tr>
<td>51-75% Women Teachers</td>
<td>25.50</td>
</tr>
<tr>
<td>76-99% Women Teachers</td>
<td>5.60</td>
</tr>
<tr>
<td>All Women Teachers</td>
<td>31.50</td>
</tr>
</tbody>
</table>
In 18% schools, a large number of teachers were found absent. Most schools (75% had no absenteeism) and a large majority (92%) had no teacher on deputation on the day of the visit.

### Lower Primary Schools (LPS)
- 99% of Lower Primary Schools were found to be in compliance with the RTE norm on pupil-teacher ratio of 1:30.
- A majority (54%) of LPSs who appointed 2 teachers; however, 18% of schools were single teacher schools.
- 78% LPSs were found to have at least 1 teacher per classroom.

### Higher Primary Schools (HPS)
- 96% of Higher Primary School were found to be in compliance with the RTE norm on pupil-teacher ratio of 1:35.
- Only 45% of HPSs were found to have at least 1 teacher per classroom.
Section 3: Akshara Programmes and Learning Outcomes in Hoskote Block
Akshara’s In-School Programmes in Hoskote

Akshara implements in-school programmes in Hoskote with a focus on achieving basic literacy and numeracy skills. The fact that of the children enrolled in 1st standard, about 40% drop out before 8th standard and a total of 70% drop out before 10th standard, makes basic literacy and numeracy an urgent social goal.

The programme design follows the vision of the National Curriculum Framework (NCF), 2005 and draws from pedagogical best practices, the experience of teachers, subject experts, and Akshara’s own ground level insights, to lay a foundation that will help children get better in their educational pursuits.

Basic English Programme – ‘Swalpa English Thumba Fun’

In Karnataka ever since it was decided in 2007 to introduced English from 1st std in Government schools, there has been an acute need for appropriate material for both Teachers and pupils. While the NCF, 2005 stipulates what is age-appropriate learning content for children, it is also essential to ensure that the content is within the grasp of the teacher in our system today. Akshara’s English programme –Swalpa English Thumba Fun-looks at the twin aspects of capacity building for teachers of std 1-4, in basic English and the course-content for classroom teaching which is appropriate at the ground level. Towards this end, the programme starts with building skills in understanding and speaking English, reading-readiness and writing readiness among students.

The programme is a multi-year program aimed at supporting primary schools student’s spoken English competencies through the use of new pedagogy and classroom resources. The program was initiated in the summer of 2011 in all clusters in Hoskote Taluk of Bangalore Rural District, covering classes 1, 2 and 3 in all 260 schools.

The key elements of the programme are teacher training and TLM. The training programme uses a cascade method in which Akshara personnel train Resource Persons drawn from the Department of Education who in turn train teachers for five days, with a two-day refresher session halfway through the academic year.

Training follows the LSRW -Listening, Speaking, Reading, and Writing – method with a focus on correcting common errors through the use of examples and practice work.

Basic grammar rules are explained to teachers and their oral skills are improved through reading aloud from simple texts. The TLMs of the programme provide schools with new teaching and learning materials specifically designed for students in lower standards. The TLM content concentrates on four areas that will improve students’ oral knowledge of English and its sentence structures: rhymes, conversation, storytelling and activities. The TLM and teacher guide /manual is aligned with the syllabus and covers some of the contents of teacher resource book and hence was designed to ease the teaching learning process.
English Programme - Teaching Learning Materials

- **Flash Cards**: These introduce the sound of letters using words that are common and known to the children. The reverses of the cards have a list of common English words that have the same letter sound, drawn largely from the Dolch list of sight words.

- **Work Books**: These contain both the reading cards and a series of exercises for developing the skills necessary for English writing and the formation of letters and words. These are chiefly handwriting exercises with the higher standards receiving more complicated exercises that involve writing English letters and words.

- **Calendar**: This uses a combination of pictures and written words to introduce children to a range of English vocabulary in different topics. It can also be used in conjunction with the activities detailed in the Teacher’s manual.

- **Reading Cards**: These are contained in the workbooks given to each child. Their role is to introduce sight words and phonic sounds to children in a structured fashion. These cards use short and phonically regular words in texts that do not exceed six sentences.

- **Story Chart**: This contains a series of pictures that illustrate a simple story. It will be used by the teacher for storytelling in English or for the students themselves to create English stories based on it. The main concept is to expose students to spoken English while providing visual elements that they can use to identify the meanings of the words in the story.

- **Teacher’s Manual**: This contains a complete set of lesson plans and activities using the Akshara method that are appropriate for the different standards and topics.
Mathematics Programme – ‘Akshara Ganitha’

The aim of the Mathematics program is to improve students’ maths abilities to a level where they are capable of meeting the key goals laid out in the National Curriculum Framework and the Karnataka State Curriculum Framework. Survey work conducted by ASER (2012) in rural areas of Karnataka indicates that 80% of fifth standard students cannot perform simple division exercises. The mathematics intervention is attempts to achieve a fundamental shift in teaching methods while maintaining links to the Government syllabus and its priorities. The intervention uses a combination of training in new pedagogical methods with the provision of new learning materials to schools to facilitate these methods.

The program covers most of the topics that are in the current syllabus for first to fifth standards. The program covers areas such as – Number Concepts, Place Value, Fractions, Money & Measurement, Geometry and Data Handling. This has been broken down and its elements subsumed into the other areas as appropriate.

The new teaching methods can be divided into three overlapping categories: Understanding by doing, co-operative learning and continuous evaluation. In the first of these mathematical concepts are introduced through activities using concrete materials and once the students have internalised the concepts in this practical form the teacher then presents it in mathematical notation. This introduction of concepts includes real-life problem solving, finding patterns, mental maths and understanding of approximations and estimates.

The second of these, co-operative learning, shifts the emphasis in teaching mathematics away from rote learning and onto students exploring and discovering concepts themselves, under the guidance of the teacher. Once the teacher has introduced a concept to the class, they then explore it and self-reinforce the lesson by conducting activities in groups of 4-6 using concrete materials. The aim here is also for more able students to assist in explaining the concepts to less able students – acting as leaders in their groups and showing other students how to perform the exercises.

The third element – continuous evaluation – is designed to act both as a test of students’ progress and a mechanism for reinforcement of the concepts covered. After the introduction of a set of linked concepts the students understanding will be evaluated both through hands on group exercises and inter-group quizzes based on chapter end evaluations. This evaluation will take place at the group level but individual students will continue to take mandated mid-term and year-end exams.

The training given to teachers and the distribution of teaching and learning materials is designed to introduce and facilitate the change to these new teaching methods.

The program used a cascade methodology for teacher training. Akshara personnel train the Resource Persons selected from the government schools of Hoskote block.
and these RPs are then responsible for the training of other teachers in their areas of responsibility.

This has the benefit of embedding the new methodology and the necessary training practices for teachers directly into the existing systems of the Karnataka State Department of Education.

Teacher capacity building consisted of a 3-day training course before the academic year began and a one-day refresher course was conducted later in the year. Cluster Resource Persons were also given a one-day orientation to enable them to support the maths teachers in their area. The training concentrated on refreshing teachers’ knowledge of maths concepts and pedagogy and introducing them to the new program teaching materials and on how to use co-operative learning in their classrooms.

The Akshara Ganitha Programme being a multi-year programme was initiated in the summer of 2011 in all 20 clusters. It now covers 260 schools. The programme provides a Mathematics kit with teaching learning materials, trains all teachers from the 1st to the 5th standard through practical hands-on sessions.

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**Mathematics Programme - Teaching and Learning Materials**

**Mathematics Kit:** This is composed of concrete materials to be used to introduce all the Arithmetic and Geometry concepts in the lower primary syllabus as well as to reinforce them through co-operative learning activities. The 20 item kit includes: an abacus, replica currency, a series of 2D and 3D shapes, plastic counters, scales, a clock, a protractor, a number line with division blocks and a measuring kit.

**Co-operative Learning Work Cards:** These set out in detail the group activities to be performed in class for particular topics.

**Student Workbooks:** These square ruled books are for individual practice of concepts either in the classroom or as homework.

**Teacher’s Manual:** This contains lesson plans to cover the syllabus using concrete materials and draws from insights gained during teachers’ trainings. The Manual supports teachers in imparting learning through constructivist principles.
Learning Outcomes of Children

At Akshara, the successes of the programmes are partly gauged through the learning outcomes of the children. The learning assessments are carried out in the 260 government schools of Hoskote by Akshara Foundation 2011-12 and 2011-12. The tests were designed keeping in mind the learning goals of the programs and are aligned with the NCERT assessment guidelines.

This section presents the learning outcome data collected through tests administered by two categories of assessments.

Census: All Schools, All Children Assessment: In this assessment children from all the schools of all the clusters (247 schools) of Hoskote, except schools from Sulibele cluster participated. This assessment was carried out once a year by the teachers of the schools with the help of Akshara’s field coordinators to determine pre- and post-test results.

Randomised Controlled Trial (RCT) Assessment: Akshara has designed a longitudinal research to capture the effectiveness of the program. Research followed a Randomised Control Treatment method and has randomly selected a cluster from Hoskote block as treatment group and an adjacent cluster from Devanahalli block of Bangalore Rural district as control group. This assessment was carried out by the research investigators.

All the children of class 1, 2, 3 and 4 were included for the English Assessment. The ‘Tests’ were created with the objective of testing to measure the oral and aural skills and some basic writing skills. In case of Maths children from classes 1 to 5 were given a pen paper tests. The assessments are designed to test the children prior to the programme and at the end of the academic year of the programme. The content of the tests administered were universal and in non-RCT schools teachers were trained on the test administration process.

It was observed that the results presented during the assessments carried out by teachers varied from the RCT assessments that were carried out by the research investigators. This discrepancy may be due to: 1) the teachers still getting acclimatized to the procedures of conducting an assessment or 2) the misrepresentation of the results by the teachers. This section aims to bring forward these differences in assessment results.
Summary of English RCT Findings (2012-2013)

<table>
<thead>
<tr>
<th>Student Numbers</th>
<th>Treatment</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Schools</td>
<td>10</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Std.1 Students</td>
<td>82</td>
<td>60</td>
<td>142</td>
</tr>
<tr>
<td>Std.2 Students</td>
<td>97</td>
<td>79</td>
<td>176</td>
</tr>
<tr>
<td>Std.3 Students</td>
<td>104</td>
<td>66</td>
<td>170</td>
</tr>
<tr>
<td>Std.4 Students</td>
<td>109</td>
<td>75</td>
<td>184</td>
</tr>
<tr>
<td>Total</td>
<td>392</td>
<td>280</td>
<td>672</td>
</tr>
</tbody>
</table>

Note – Student numbers only represent those who were present at both the pre-test and the post-test.

Main Findings (2012-13)
Results by Competencies

Speaking

Improvement in the area of speaking across the grades was observed but more in standard 4. Standard 4 showed the highest level of improvement in terms 14% points followed by 12% points in Standard 3 and 9% percentage points in standard 2.

Reading

Improvement in the area of reading across the grades was observed but more in standard 4. Standard 4 showed the highest level of improvement in terms 29% points followed by 16% points in Standard 3 and 13% percentage points in standard 2.

Writing

Improvement in the area of writing across the grades was observed but more in standard 4. Standard 4 showed the highest level of improvement in terms 15% points followed by 2% points in Standard 3.

Sample English Questions

Ask the student to name these pictures in English.

Sample Oral Question
Std 1

Sample Writing Question
Std 2

Fill in the blanks

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>O</td>
<td>P</td>
<td>R</td>
<td>T</td>
<td>U</td>
<td>V</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
<td></td>
</tr>
</tbody>
</table>

Sample Question on Writing: Match each word with the correct picture

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>hat</td>
<td></td>
</tr>
<tr>
<td>pen</td>
<td></td>
</tr>
<tr>
<td>ball</td>
<td></td>
</tr>
</tbody>
</table>
Summary of Mathematics RCT Findings (2012-2013)

Student Numbers Breakdown

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Std.3 Students</td>
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<td></td>
<td></td>
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<tr>
<td>Std.4 Students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std.5 Students</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note – Student numbers only represent those who were present at both the pre-test and the post-test.

Main Findings
Summary of Assessment Findings (2011-2012)- Non- RCT Schools

As mentioned earlier the results presented below depict the data collected from the 247 schools where the tests were administered by the respective teachers of the schools. These assessments were administered during the beginning and end of academic year with the intention to help the teachers to assess the status of the learning levels of their pupil. The tests administered were identical to the tests administered in RCT schools (research schools).

English Assessment Results
It is interesting to see that 60% of the class 1, 75% of class 2 and 83% of class 3 children could follow instructions given in English by the teachers at the time of pre test and almost all by the end of Post test. Similar trends could be observed across all the competencies.

Math Assessment Results

4th standard children were assessed to establish their level in grade-appropriate Mathematics, by giving them a written test in addition, subtraction, multiplication, division, fractions, geometry, money, and time.

It is motivating to see that there have been improvements in both Mathematics and English results by the post test. It shows that the programmes have been effective and the teachers and students have reacted well to them.
Section 4: Working in the Community
Making an Impact-
Community Programmes at Hoskote

A shift in attitude towards education is the need of the hour. All those who affect a child’s life – teachers, parents, siblings, relatives, members of School Development Monitoring Committees, Panchayat members and villagers - need to perceive the positive effects of convergence of supportive efforts, in making education for their children a success.

While there were some educationally advanced villages and villagers in Hoskote’s diverse communities, Akshara Foundation’s interaction with them in the Block revealed some important dynamics towards education underlying the attitudes of parents and teachers.

In order to involve the larger community in the movement towards reaching higher standards of education, Akshara Foundation has initiated rigorous Community programmes in this block. These programmes not only help in generating interest among parents and other stakeholders in children’s education but also use good practices and successful examples to generate tips for others to learn. Akshara believes that the community has a decisive role in education; they can bring pressure to bear on delivery and impact and exercise influence that directs its course. The Foundation has a field team which maintains an on-going contact with the community.
Akshara believes that the community has a decisive role in education; they can bring pressure to bear on delivery and impact and exercise influence that directs its course. As a result Akshara Foundation initiated a community programme called *Namma Makkalu Namma Abhimaana* – “Our Children, Our Pride” – in 2012 keeping with its goal of increasing the demand for schooling and improving the quality of education in government schools. Under this initiative, Akshara field team visit communities and schools every first and third Saturday of the month. Hold discussions with parents, Gram Panchayats, SDMCs, the teacher community, self-help group members, youth groups, and convince them of the cause and enlist their support for education. So far 17 such meetings were held.

Under the program a series of events such as Summer Camps are organised to sustain children’s interest for learning during the holiday season. Volunteers in the villages are given opportunities in order to involve the youth in education so that they can be change propellers. These camps are meant to spread awareness and a ground level response to education. Group learning activities and sports during these sessions also lead to pure fun and continuous excitement among participants that strengthen the community. Around 7 summer camps have been organized in 7 villages in Hoskote block.

Events like Makkala Habba—children’s festival during summer camps were designed to bring children and parents together by organising various fun learning activities and serving as a cultural podium for children’s talents and skills. By organising games and competitions, the progress of students was also assessed and was made visible to the community. It created a web of solidarity for building greater accountability and ownership of the schooling system. It also acts as a platform to provide testimony of children’s learning abilities and their cultural aptitudes to parents.
Akshara’s Summer Camp at the Government Higher Primary School, Hasigalla

Children are latecomers that first day of the Akshara summer camp. The Government Higher Primary School, Hasigalla, Hoskote Block, wears a wind-blown, deserted look - dry curls of leaves in the verandah, dust everywhere. Headmaster (HM) Hanumantarayappa is opening doors that have remained locked most of the summer. Akshara’s Cluster Facilitators arranging the classrooms, shifting the furniture and setting things up for the formal inauguration. The children troop in, faces radiant with expectation, all decked for an occasion. Somashekhara, the President of the School Development Monitoring Committee (SDMC), says the summer camp will increase children’s knowledge. The HM calls it “a special event, a special three days favourable to our children.”

The Mathematics quiz is the first item to start off. The children form four groups and sit in large circles. Quietude settles, but there is no fear or performance anxiety on any face. These children seem capable Mathematics students, springing up to answer even before Cluster Facilitator Srinivas has completed his question. The quiz has more than 45 questions compatible with children’s competencies, not of the textbook variety, but questions of a general nature that apply across classes. A Spell of Drawing followed by Math quiz then by English Quiz. The children wait with bated breath for the English quiz to begin, wary yet expectant. It is every child’s dream – to become conversant in English. It is also a language that intimidates, as their grounding is weak. Some of the questions have to be interpreted in Kannada, but, overall, they acquit themselves creditably. A Session with LEGO the learning-oriented play material is exhilarating for the children. It is their first encounter with the pile of multi-coloured pieces and bricks.

A Solemn Pledge

Cluster Facilitator Manjunath gets the children to take an Akshara Foundation pledge that they will learn well and obey and respect their teachers; that they will study their subjects, take part in extracurricular activities and all school programmes; and follow the rules of the institution. The children solemnly repeat after Manjunath with a feeling of piety.

A Village Map

The next item is the delineation of a Village Map, an activity that fosters awareness in children of their surroundings and gets their bearings right. It helps them identify important locations, know what is available, where to access services. Children map their world with sure precision and knowledge – access roads leading off the highway and clusters of dwellings and trees drawn with remarkable agility. Featured are the village pond, the village square, the temple, the Hasigalla anganwadi, school and higher primary school, the ration shop and health centre. Prizes are judged on the basis of the most comprehensive picture of their village the groups can come up with.

Testing the Learning Levels of Children

One of the highlights of the summer camp is the ASER-style testing of students of classes 4, 5, 6 and 7. ASER is the Pratham-facilitated Annual Status of Education Report, an authoritative statement on the state of education in India. The survey’s format is a simple testing tool for reading and arithmetic. Cluster Facilitators sit down with the children and administer the tests to each of them – passages for reading in Kannada, English words and sentences and arithmetical operations.