## Baseline Study of Elementary

 Education: Chamarajanagar District

DISTRICT QUALITY EDUCATION PROJECT


## SUMMARY REPORT

 October 2003
# BASELINE STUDY OF ELEMENTARY EDUCATION CHAMARAJANAGAR DISTRICT 

## SUMMARY REPORT

DISTRICT QUALITY EDUCATION PROJECT<br>SOCIOLOGY AND SOCIAL ANTHROPOLOGY UNIT<br>in collaboration with<br>Government of Karnataka - Sarva Shiksha Abhiyan



NATIONAL INSTITUTE OF ADVANCED STUDIES
IISc. Campus, Bangalore 560012


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GHPS, Siddaiahanapura, Chamarajanagar
Ashram Shala, Bandipur, Gundlupet anahy \& butumen i Atwm GHPS, Shivakote, Bangalore Rural My Institute, Bangalore Urban
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## CONTENTS

CHAMARAJANAGAR - $\backslash$ PROFILE3
OVERVIEW OF EDUCATON FROMSECONDARY DATA5
THE BASELINE STUDY ..... 6
The Sample .....  6
FINDINGS .....  7

1. Schools ..... 7
2. Heads of Schools .....  8
3. Teachers and Teaching .....  9
3.1 Academic Background and Training
3.2 Perceptions of Chidren's Learning and School Performance
3.3 Teaching Practices
3.4 Classroom Observations
3.5 Academic Performance
4. SDMCs and Parents ..... 14
4.1 Social Backgrounds
4.2 Involvement with ichooling
5. Block and Cluster Resource Centres ..... 16
6. Panchayat and Elected representatives ..... 17
7. Children ..... 18
7.1. Out of School Children
7.2. School going Children
PROFILING CHILDREN'S LEARNING ..... 21
8. General Features of test \& Method
9. Sampling Process
10. Analysis and Grading
11. Results
4.1 First Language Kannada \& notes on Englishand Urdu4.2 Mathematics
4.3 Environmental Studies
SUMMARY ..... 42
ANNEXURE - A : LIST OF INSTRUMENTS ..... 45
FEEDBACK FORM ..... 47

## TEAM MEMBERS

1. Ganesh
2. Lakshmamma
3. Latha, $K$
4. Leena Pascal
5. Lohith
6. Lokesh
7. Madan
8. Mahadevaswamy
9. Mallanna
10. Mahendra
11. Munichoodaiah
12. Nanjundaswamy
13. Padma M. Sarangapani
14. Padmashree R
15. Rajanna
16. Rajeshwari
17. Vasavi A.R.
18. Veerabhadra Naika
19. Veerendra
20. Vijayalakshmi

## CHAMARAJANAGAR - A PROFILE

Chamarjanagar District was part of Mysore district and became an independent district in 1998. It is the southern-most part of Karnataka and has five taluks and five educational blocks. A characteristic feature of the district is its large population of scheduled caste and tribe communities. The district has 461 villages with 120 gram panchayats and 4 taluk panchayats. Much of the district lies in the leeward side of the Nilgiris, and consists of predominantly semi-arid rain dependent flat lands interspersed with forested hills. Since 2000, the district has been subject to severe drought conditions and many of the labouring poor migrate to the neighboring Mysore or to plantation belts of Coorg and Kerala in search of seasonal labour. Industrial activities are restricted only to Kollegal belt and with a narrow focus on sericulture development. With the decline of the sericulture industry several settlements such as Mullur, Mudigunda, Mamballi and Hannur have been subject to a process of deindustrialization.


The Hilly forest belt accounts for the presence of four major tribal groups consisting of Jenu Kurubas, Kadu Kurubas, Yeravas and Soligas who number about 82,000 in the whole district. Most of the tribals, who earlier occupied the forest region that covers about 48 percent of the total land area in the district, are subject to a process of displacement as their forest habitations have been declared wild life reserves and sanctuaries and they have been resettled in colonies in the fringes of the forest. All the Ashramshalas or schools run by the Dept of Tribal Welfare and Development are located near the tribal settlements.

## LITERACY LEVELS:

The literacy level of the district is 51 percent and is much below the state average of 67 percent, which ranks the district as one of the low literacy districts in the state. According to the 2001 census the total literacy rate in the rural areas is 47.6 percent and 71.4 percent in the urban areas. The district has few institutions of higher education and the district headquarters Chamarajanagar has no science college. The presence of

Lingayats accounts for the JSS Math's establishment of several schools, high schools and one college in the district.

## OVERVIEW OF EDUCATION FROM SECONDARY DATA

Following the efforts of DPEP, the district is fairly well positioned in terms of access to schooling and gross enrollment ratios. With the exception of remote and forest habitations most have lower primary schools within 1 km . The GER for the district is about $95 \%$. However access to higher primary schools is not as good and stands at 5 kms to the nearest school. According to the recent EMIS report (2002-2003) there are now (2003) 880 schools of which 453 are primary only, 403 are primary and upper primary, 11 which are included to secondary and higher secondary, 7 upper primary only and 5 are upper primary with secondary school. Of these 84 percent are run by the Department of Education, Government of Karnataka, 2.6 percent Ashramshalas run by the Tribal and Social Welfare Departments, 4.5 percent are private aided, and 7.8 percent private unaided schools. 89 percent of the schools are in the rural areas while 11 percent are in the urban areas. There has been an improvement in accessibility to schools, but infrastructure and the facilities available in schools are uneven. For example, 32 percent of govt. schools have no
electricity, 59 percent have no drinking water facilities, and 77 percent have no toilets. On the other hand, private and aided schools have these basic facilities but have overcrowded classrooms and no compounds, playgrounds or libraries.

46 percent of teachers in the district are women. But there is gender disparity in the higher levels of the education department. Only 26 percent of the Government school heads are women, in contrast to 46 percent in private schools. The percentage of women in administrative and higher positions in schools, as Block \& Cluster officers/resource persons is below 5 percent.
On an average the teacher-population in the government school is good at 1:33. Private unaided schools also enjoy the same T-P ratio, but in private unaided schools, the ratio of 1:43 is much higher. In a large number of government schools multigrade teaching in the lower primary classes is common.

## THE BASELINE STUDY

As part of a project to enhance the quality of elementary education in Chamarajanagar district, the DISTRICT QUALITY EDUCATION PROJECT team of the National Institute of Advanced Studies, Bangalore designed and conducted a baseline study of elementary schools in the district. The objectives of the baseline study were to:

- Provide a detailed ground level picture of the schools, the classroom culture, teachers and teaching
- Understand the nature and extent of the community's involvement with schools and education.
- Profile children's learning.

Data was gathered through instruments developed for the study (see Annexure A). The study was conducted between February 15th and end March 2003 by a team of twenty trained persons.

THE SAMPLE

1. Schools

36 schools in 24 settlemerts

|  | Government (DoE) | Tribal and Social Welfare | Aided | Unaided |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kannada | 24 | 4 | 1 | 1 | 1 |
| Urdu | 2 |  |  |  |  |
| English |  |  |  | 3 |  |
| 2. Persons interviewed 2 |  |  | 2490 |  |  |
| Students \& their Parents |  |  | 334 |  |  |
| Teachers |  |  | 139 (120 werealso tested) |  |  |
| Cluster Resource Person |  |  | 21 |  |  |
| SDMC Members |  |  | 80 |  |  |
| Young Adults |  |  | 208 |  |  |
| Panchayath Members |  |  | 46 |  |  |
| Out of School Children and |  |  |  |  |  |
| their Pare | ents |  | 186 |  |  |
| 3. Students tested 13 |  |  | 1356 |  |  |
| Class II |  |  | 343 |  |  |
| Class IV |  |  | 341 |  |  |
| Class VII |  |  | 672 |  |  |

## FINDINGS

## 1. SCHOOLS

We found that the schools run by the department of education were generally well maintained and had basic infrastructure in place. Compound walls and toilets were being constructed or proposed to be built with SSA funding. Walls were painted attractively, but the drawings were a little repetitive in their chosen motifs of national flag, state laureate poets, national symbols and maps. In a few schools HMs, teachers and children maintained little gardens. The state of the Ashramshalas was not as good. In most cases, sleeping and studing arrangements were combined. Many did not have toilets or bathrooms and water was a problem. The private schools varied widely depending on their financial situation.

In all schools, morning assembly was carried out regularly. With the exception of the Ashramshalas, teachers were generally regular. However, in the GHPS schools, on our visits, we found that always one or two teachers were missing, ostensibly on official work. Apart from morning assembly, the break time when children played, and a little
singing in the classrooms, all activity in the school focused only on the textbook. We gave children paper and crayons to draw. We found that in many of the smaller and remote schools, children were very unfamiliar with using crayons and making drawings. They were not confident, and wanted to copy from each other. Often the motifs were repetitive. Only in the larger, urban schools children used the crayons confidently and with imagination. Art and other creative activities do not seem to have much of a place in the school curriculum. Sport activities also did not seem to be a regular part of the curriculum.


## 2. HEADS OF SCHOOLS

Thirty five School heads were interviewed. Most of them cited infrastructure improvements, introduction of uniforms, and enhancing the contribution of parents and community members to the school as key ways in which they could improve schools. Most of the heads of government schools thought that their contribution to the school lay in making it become more like a private school and indicated that they could do so by introducing uniforms, English, or starting Lower and Upper KinderGarten in the government schools. There was little or no awareness of the need to improve the contribution of teachers and that of the learning levels of children. Most heads of schools did not consider improvements in children's learning levels to be a major goal in the plans they had for their respective schools. 29 percent had not received any Head Masters training.


## 3. TEACHERS AND TEACHING

Our survey of the 36 schools included a detailed interview with 138 teachers who had different socio-economic backgrounds and different academic levels and orientations.

### 3.1 Academic backgrounds and training

Of the teachers we interviewed, only 6.5 percent had studied upto SSLC only. These teachers were either senior teachers in the government schools or were from Ashram shalas. Most teachers, that is 35.50 percent, had completed their PUC and the TCH. Those with SSLC, TCH training were 30.4 percent, while those with PUC, TCH were 4.3 percent. We were pleasantly surprised to note that 21 percent of teachers had completed their degree. Most of them had done it through correspondence.

A significant proportion (74 percent) of teachers in the government schools had received in-service teacher training. However, there was an unevenness in the number
of training that the teachers had attended. Many cited the need for more training to handle multi-grade classes and for teaching subjects in the higher classes. In contrast, a larger proportion of teachers in the private schools had not received any in-service teacher training. This was

particularly so among teachers in the English medium schools where we found that a majority had received higher degrees but had not received any additional training in elementary education.

Many teachers had hobbies such as reading, playing musical instruments, sports activities, and learning computers, etc. Although most teachers read newspapers regularly (with sports columns being the favourite for a majority), not many were in the habit of reading novels and storybooks.

Seventeen government school teachers, of the 139 teachers we interviewed, have received awards for teaching. Very few of the teachers in the aided and unaided private schools received awards. More than being a commentary on the lack of abilities of the non-government teachers, this indicates the range of incentives and award schemes that government teachers are entitled to.

### 3.2 Perceptions of children's learning and school performance

We assessed teachers' perceptions of children's learning and school performance. 16 percent considered children to
learn by 'analysis \& reasoning'; 16 percent indicated 'imitation' to be important; 19 percent indicated 'memorisation' and 23 percent upheld "observation" as being important.

This co-incides with our observation that for many teachers making children repeat after them or practice reading and writing was the dominant pedagogy. Almost nowhere did children ask questions or give answers of their own. When asked about the reasons for children's poor performance in school, 42 percent of them cited parental lack of interest or poverty. In addition most teachers were not fully aware of the family and social conditions of children and did not have regular contact with parents. They did not consider school related problems, especially their own roles, as possible reasons or factors for children's poor performance.

A positive characteristic about teachers was that most diu not consider children from low-ranked caste groups or religious minorities to be less intelligent or less capable than general students. In addition, we did not receive any complaints from parents regarding discrimination against students nor did we observe this in most schools. However, in the Ashramshalas, teachers, who were primarily from non-tribal backgrounds, considered tribal children to be
less intelligent and incapable of studying. It is also from these schools that parents criticized the poor treatment that their children have been subject to. It is important to note that most Ashramshala teachers are not trained and are on contractual employment.

### 3.3 Teaching Practices

A large percentage (42) of teachers indicated that they preferred to teach standards V to VII, as they considered the children in these classes to be able to grasp the lessons fast or understand well and that such children also 'listened to the teachers" and were "eager to take help from teachers". Only 25 percent of the teachers preferred to teach standards I and II, while 24 percent preferred to teach standards III and IV. When asked about their favourite lesson to teach, many teachers cited lessons that had morals as the ones that they and the children enjoyed the most. Examples of such lessons were that of "Punyakoti", "Tipu Sultan", "national movement and leaders". They also named"action-based lessons" such as dramatising songs and poems etc. Very few of the teachers cited analytical lessons and or lessons on environmental issues/science as lessons that they enjoyed teaching.

Sixty-nine percent of teachers noted that they could

complete the teaching of the syllabus or cover all the lessons in the assigned textbooks. However, many teachers indicated that they had problems in completing the syllabus for Maths and Social sciences in the higher classes. A larger number of teachers in the private schools indicated their inability to complete the syllabus and that they had to resort to taking extra classes especially forstandardsVIand VII.

Given the debate over the introduction of English, we asked teachers about their opinions on this. Although a significant proportion did not support the introduction of English in Standard I, about 33 percent thought it could be introduced at standard III.

With reference to the receipt of grants for teaching aids, 48 percent had received the grant (Rs 500 per year per teacher) Most of them had used this grant to make or purchase display items such as charts, posters, maps, or had pooled in the grants (with the school grant) to have the walls painted with alphabets, numbers, poems, etc. Very few teachers used the grant to develop teaching learning materials.

### 3.4 Classroom Observations

We observed and analysed about 52 classes where teaching was in progress. Of these, 44 were from the LPS (classes I up to V), and the others of classes VI and VII. Our comments here relate to general aspects of the classroom atmosphere and specific ones relating to teacher pupil relationships and teaching methods.

Almost all the rooms were quite well lit and had black board of fairly good quality. But in five of the schools, the black boards were small, badly positioned and not of good quality. About 23 of the LPS classrooms in Government schools, had reasonably good charts and wall decorations in the room. Following workshops, teachers seem to have responded and organised such displays. There were only three classrooms where children's own drawings and
handwork was displayed. In others there was a mix of teacher-made and standard or artist produced displays. There was very little additional teaching learning materials. In only four schools teachers brought in or took existing teaching learning materials, such as cards, etc. for use. Almost all the classrooms in the private schools were quite barren. The higher primary school classrooms were almost all very bare with nodisplays.

Nineteen of the 44 LPS classes that were observed had multi grade situations. This was either because they were one or two teacher schools or because there was a shortage of teachers in the school and hence the classes had been combined. Only in a few cases classes had been combined because a teacher was absent.

The following are a few observations recorded during our classroom visits to various schools.

- In almost all schools, the teachers were affectionate with the children.
- The children spoke freely with the teachers. The teachers also used the same Kannada dialect spoken by the children to communicate with them.
- In multi-grade classrooms, teachers were often unable
to deal with more than one group or section.
- Most of the time a large section of the children were left to themselves. They had to wait for an hour or even more, for their turn with the teacher. As a result the children were distracted and noisy.
- Although children enjoyed activity based learning, in many classes formal methods of learning were used to teach.
- Singing and reciting poems were used as classroom management techniques to keep the children engaged.
- The presence of a class monitor was significant in the private schools. These monitors resorted to corporal punishment.
- Teachers on the whole did not have any prior planning for the class and their teaching consisted of verbal communication mostly to explain or read from the textbook.
- Most teachers did not use the black board as a teaching aid. It was used only occasionally to write Kannada words or maths problems.
- Teaching, especially in the language classes, involved making the child read aloud, repeat poems and answer in chorous or just copy from their text books.


### 3.5. Academic preparedness

We gave teachers a test at the class VII level to assess their content knowledge and training needs. The assessment test included language (Kannada/Urdu and English), Maths, Science, and Social Science (content and method) and general knowledge. Theaverageperformance on the content section was 43 percent with no teacher scoring over 50 percent. The problem areas were Social Science content (avg 33 percent), Science content (avg 37 percent), and English (avg 38 percent). Teachers fared reasonably well in math content (avg 60 percent). But more than half the teachers did not attempt any questions on the maths-teaching methodology. Most of the teachers from the Ashramshalas performed very poorly in all sections of the test.


## 4. SDMCs AND PARENTS

Despite the introduction of the School Development and Monitoring Committee (SDMC), with the purpose of inducting parental input into the functioning of schools, most teachers did not consider SDMC members to be able to make significant contributions. Most teachers expressed the view that SDMC members were primarily non-literate and therefore unable to contribute to the school and its functioning. However, our survey and interviews with SDMC members indicated that 35 percent of SDMC members had at least basic literacy and in fact a large proportion ( 45 percent) had education levels between Std VI to X . Far from being non-literate and inactive, SDMC members saw this as an opportunity to contribute to schools and most had contributed money or items such as furniture, pictures, clocks etc to the schools: But the functioning of the SDMCs indicates a complex picture. Of the 22 SDMCs that we studied, about half of them were functioning adequately and the other half had problems. Much of the problems that the SDMCs faced were not due to lack of interest or ability but to the lack of adequate training and support from the
school system. Only 43 percent of SDMC members had received training and were aware of the rules, regulations and responsibilities related to the SDMC and in many cases the school head had not encouraged the regular conduct of the SDMC.

Ashramshalas, private aided and unaided schools did not have structures to encourage parental participation and contribution. This is a serious drawback which needs to be addressed immediately.


### 4.1 Social Backgrounds

In an attempt to understand the family conditions and social backgrounds of children who attend school we interviewed 334 school-going children and their parents/guardians. Most of the parents ( 52 percent) were non-literate and 32 percent had only basic literacy levels. This is important to understand as many teachers expect parents to be able to supervise the homework of their children. However, with such low literacy levels it is difficult for parents to support children in their studies at home or contribute to their learning levels in any substantial way. Although 36 percent of children noted that their parents helped them with studies, it is possible that this is just supervision rather than any substantial contribution to learning levels. That they are unable to do so is also observable in the fact that many parents considered their children to be doing well in school, although we observed that many of these children were having problems with their studies. Children with older siblings who were educated or in higher classes seemed to have had an advantage in receiving inputs and support from them.

### 4.2 Involvement to Schooling

Despite conditions of poverty and several social and political disadvantages, we found parents believed that education is very important for their children. Even in government schools, where there is no fee and a number of
incentives are offered, parents spent an average of about Rs. 550 per year per child. The amounts were larger for private schools where it is about Rs. 2600 per child, per year in private unaided schools and about Rs. 2200 in aided schools. Parents of children in Ashramshalas spent an average of Rs. 225 per child per year.

Most communities were progressive and did not discriminate against girl children by withholding them from education opportunities. With an average family size of 6.58 persons (with relatively higher proportion of joint families in the upper caste groups) and with only 1.58 children per family, girl children were on the whole not subject to discrimination. It is only among the caste groups of Devangas, Shettys and Vishwakarma (who are also primarily traders and financiers) that we observed that girls were withdrawn from schools at puberty, typically between standards six and seven.

There was a sharp variation in the parents' assessment of schools. Most parents who were non-literate and who had not attended schools considered present schools to be good as there were a number of incentives for their children and the schools were functioning. However, literate parents, especially those with higher education such as degrees, noted the current decline in the standards of schools to be a concern.

## 5. BLOCK AND CLUSTER RESOURCE CENTRES

Since the introduction of the District Primary Education Programme in the district, the supporting structures for decentralizing teacher education and administration have improved. As many persons indicated to us, the establishment of the Block Resource Centres (BRC) and Cluster Resource Centres (CRC) had helped provide in-service training opportunities to teachers. However, only mostly teachers from government schools had received in-service teacher training. Only 15 percent of teachers in the private-aided schools had received teacher training, and 33 percent of teachers from Ashramshalas had received in-service teacher training. None of the teachers from the private unaided schools had received in-service teacher training.

Although the BRCs offer a range of courses for different subjects and classes, most teachers indicated that these training programmes were for teaching Stds I to III. The inputs for both multi-grade teaching and for teaching more difficult concepts were not found to be adequate. In addition, teachers from higher classes, especially VI
onwards, expressed the need to have training for teaching subjects in the higher classes.

The CRCs were established to provide continuous academic support to teachers and monitor the learning levels in schools. Of the 21 CRCs that we studied, 9 percent were functioning well. These CRCs were well-maintained, had resource material in them, which were used by the CRPerson (CRP) and teachers, and the CRPs were actively engaged with the schools assigned to them. Of the others, 38 percent were medium performers 29 percent, were dysfunctional. That is, the resource centers were unutilized, did not have resource materials and the CRP did not have regular contacts and links with the schools in the cluster. 47 percent of the interviewed teachers said that they were in regular contact with the CRP, and about 55 percent had received inputs from them. Many noted that the quality of inputs had not been adequate, nor were these inputs regular. Several CRPs noted that their work had become more administrative and much of their time was spent collecting data or providing information to teachers.

## 6. PANCHAYATS AND ELECTED REPRESENTATIVES

The establishment of the School Development and Monitoring Committees (SDMCs) has meant that the Panchayats are no longer directly responsible for the functioning and administration of schools. Of the 21 Panchayats we surveyed, in 56 percent school featured as a concern and they had contributed from the Panchayat funds to improve the infrastructure of schools in their areas. Panchayats in single and two-caste group villages functioned better than in multi-caste villages and hence their contributions to schools were also more significant. Given that SDMCs had to be composed with only parents, some Panchayat members felt marginalized as they were not directly involved with the functioning of schools. This has led to tentions between SDMC and Panchayat members. In some cases, there have been contestations over the rights of SDMC members, especially those from lowranked castes, to be involved in matters related to school. Elected representatives in the towns, such as in Chamarajnagar, Kollegal, Gundlupet, Hannur and Yelandur were not conscious of the need for the Nagar

Palika to be concerned with issues related to the government schools. They had not only not made any substantial contribution to schools but were not aware of the problems that the schools in the towns faced.



## 7. CHILDREN

### 7.1 Out of School Children

Enrolment rates have improved over the years and the number of out of school children has decreased, still we found that there are significant number of children who are out of school. The child survey conducted by the department of education, Government of Karnataka in 2003 identified only 4785 children to be out of school in the district. This number may be an underestimation as there were more children out of school in some of the settlements that we surveyed than that noted in the survey.

The enrollment levels have improved in the district. This is observable in the fact that of the 186 out of school children from the 26 settlements that we surveyed, only 2 percent had never been enrolled. Of the children who were interviewed, most had dropped out from school. 48 percent of these children came from marginal and poor agricultural

and agricultural labour families. 13 percent were from nonagricultural labour families, 9 percent were from families that have petty businesses, and 5 percent were from artisan and skilled worker families. 8 percent of children were from families who were dependent on animal husbandry and forest produce. Only 5 percent of the dropped out children were from migrant families.

It is of significance to note that 24 percent of children had dropped out in Standard VI, and a larger percentage, ( 65 percent) had dropped out by standard V.

Children and their parents ( 30 percent) cited financial reasons to be one of the key reasons for dropping out of school. Another 16 percent cited family crises such as death, illness and problems in the family as reasons and another 13 percent cited domestic responsibility as a reason for dropping out. This suggests the vulnerability of children from poor families to sudden crises and unexpected events. Although many the children cited family related reasons for dropping out, about half of them ( 52 percent) also cited school related reasons such as lack of interest in school, boredom, failure, distance from home etc., for having dropped out.

## Current Status

32 percent of the children contributed to the family income by either working with the family or being employed. The fact that 19 percent of children, mostly boys, are working as herders indicates the importance of animal husbandry as an alternative or supplementary form of livelihood for many households. 36 percent of children, predominantly girls, are engaged in performing household chores. Ten percent of children are neither in school nor are they doing any domestic chores nor are they employed. Moreover, urban poverty areas have large numbers of children who are out of school and in working conditions. Hotels, garages, smallscale industries absorb a large number of young boys. Girls, especially between the ages of 9 to 14 years, are employed as domestic workers. Although the Chinnara Angala programme has been functioning, we met several children who had not attended these programmes, or who had attended the programme but were not re-enrolled in school.

A large proportion of children ( 57 percent) did not wish to return to school, if given the opportunity. Although the rest (43 percent) wished to return to school, they were not aware of how to be re-enrolled into school.

### 7.2 School going Children

In our interviews with children we sought to understand not only children's assessment of schools and teachers but also their orientation and experiences of school life. 59 percent of children identified Kannada to be their favourite subject as they considered it to be "easy" and or "interesting", but most did not perform very well in the language test administered by us. Maths was the second most favourite subject for children. Children also considered teachers who "taught well" and "who did not punish" them, to be their favorite teacher/s. Although children attend school, a significant proportion also perform household chores; a fact which teachers need to recognize and understand. In addition to these chores, children from poor families fetch firewood and also graze cattle.

Many children said that they received more corporal punishment in the school than at their homes. We noted that private schools tended to discipline children more than governmentschools.

When asked about their reading habits, most children (34 percent) said that they did not read material other than their textbooks. About 32 percent did say that they read newspapers and about 24 percent said they read story books. Although many schools, including government schools, have library books, most of the children did not have access to them.

An indication of the pervasive presence of television can be seen in that 56 percent of children said that they watch television, especially the weekly films and serials, either at their own homes or at the neighbours. This coincides with teachers' observations that television viewing now distracts children.


## PROFILING CHILDREN'S LEARNING

Our tests to profile children's learning covered the areas of first language (Kannada/English/Urdu), mathematics and environmental studies. We were interested in understanding to what extent children have developed capabilities and learnt skills in the basic areas of school related, academic aspects of the curriculum. We studied children at three levels in the school: class II, class IV and class VII. Based on a detailed study of the textbooks, assessments given at the school level, talking to experts, studying earlier research work and our understanding of children's cognitive development, we developed criteria on which to assess children's learning (these are called criterion-referenced tests). These were pilot tested in Chamarajnagar district, Mysore and Bangalore rural government schools. Our testing method was designed to tell us firstly how well or badly children perform on the whole and secondly to tell us about the areas in which they are competent and confident, and where they need more support from the school system. In order to give children in class II and class IV the maximum opportunity to share their
knowledge and capabilities, our tests were designed using activities to be done with the support of and guidance of the examiner, and involved both oral and written work.

## 1. General Features of test and method:

## Class II \& IV:

Children in the primary school are in the concrete operational stage of development ( 7-12 years). A paperpencil test cannot capture all their capabilities at this stage. Moreover, it is also important to ensure that children have understood the nature of the task by explaining, and giving them hints and exploring why they make certain mistakes. Therefore we designed our tests to be activity based and to be conducted on a one-on-one basis. Children's responses were recorded by the interviewer on a specially designed observation sheet. Our test had three parts. We began with environmental studies which had a few open-ended activities and questions. This gave children a chance to
warm up and get used to the interviewer and also establish the testing pattern. After EVS, we moved on to language and finally mathematics. If children were unable to read, the question was read out to them, and repeated if necessary. For some of the items, cues and hints were provided. Most of the questions especially in class II, required only oral answers, though they also wrote out some of their answers. We made sure to encourage them to rewrite any answer by giving them an eraser and telling them they could erase when ever they wished to change their answers. If children were not able to write, we recorded their oral responses.

Tests in class II language and Classes II and IV mathematics had items graded for difficulty. This was so that we could find out how much the child could do, rather than only finding out how much they could not do. There was no time limit, and unless children were unable to answer, they were allowed to take their time for each item. Most children took about an hour to run through the whole test. At the end of the interview, the child's answer sheet was stapled along with the observation sheet for the child.

Class VII: In class VII, as children are more used to schoolbased academic learning and are also cognitively more
mature, we designed a paper-pencil group test for them. Only the "reading aloud" section was conducted on a one-on-one basis. At the beginning of the test, the purpose of conducting the test, was explained to them. It was clarified that no marks would be sent home. Unconventional items were explained with detailed instructions. Two supervisors were present to answer any doubts and queries the children had, and also to check copying from each other. Here also there was no time limit. On an average, children spent about 2 hours on these tests.


All the tests included a variety of items both close and open ended, to test for areas such as specific knowledge and abilities, conceptual development, understanding, expression, creativity, observation, application, skills, etc. Some items related closely to school based learning. Others drew on children's everyday knowledge and skills.

## 2. Sample

Table 1 : Class II Sample details: Total children 343

| Type of school | Boys | Girls | Total | Total acc. to <br> medium |
| :--- | :---: | :---: | :---: | :--- |
| Government (Urdu) | 10 | 14 | 24 | Urdu: 24 |
| Government (Kannada) | 103 | 95 | 198 |  |
| Ashram Shala (TW \& NGO) | 21 | 21 | 42 | Kannada: 290 |
| Pvt. Kannada Medium <br> (Aided \& unaided) | 26 | 24 | 50 |  |
| Pvt. English Medium <br> (Aided \& unaided) | 14 | 15 | 29 | English: 29 |
| Total | 174 | 169 | 343 |  |

Table 2: Class IV Sample details. Total children: 341

|  | Boys | Girls | Total | Total acc. to <br> medium |
| :--- | :---: | :---: | :---: | :---: |
| Government (Urdu) | 7 | 16 | 23 | 23 |
| Government (Kannada) | 99 | 99 | 198 |  |
| Ashram Shala (TW \& NGO) | 21 | 23 | 44 |  |
| Pvt. Kannada Medium <br> (Aided \& unaided) | 25 | 25 | 50 | 292 |
| Pvt. English Medium <br> (Aided \& unaided) | 12 | 14 | 26 | 26 |
| Total | 164 | 177 | 341 |  |

Table 3: Class VII Sample details. Total children: 672

|  | Boys | Girls | Total | Total acc. to <br> medium |
| :--- | :---: | :---: | :---: | :---: |
| Government (Urdu) | 6 | 19 | 25 | 25 |
| Government (Kannada) | 172 | 202 | 374 |  |
| Ashram Shala (TW \& NGO) | 25 | 14 | 39 |  |
| Pvt. Kannada Medium <br> (Aided \& unaided) | 52 | 55 | 107 | 520 |
| Pvt.English Medium <br> (Aided \& unaided) | 75 | 52 | 127 | 127 |
| Total | 330 | 342 | 672 |  |

As each test was time consuming only a few children from each class could be tested. Stratified random sampling was used. Children were chosen to ensure thatt (a) there were representatives from each caste group in the sample and (b) there were also the representatives of the children who the teacher considered the 'brightest' and the ' $w_{\text {reakest }}$ '.

Table 4: sampling sizes

|  | School type | Average time spent | Sample size |
| :--- | :--- | :--- | :--- |
| Class II \& IV | LPS | 2 days | 8 children |
|  | HPS | 3 days | 12 children |
| Class VII | HPS | Usually on day 2 | Whole Class <br> (one section) |

## 3. Analysis and Grading

In mathematics and language, we marked eeach item based on the criteria on which it was evolved: depending on whether it was regarded as a necessary part t of the skills and capabilities of the age group in consideraticon, its difficulty level, and children's familiarity with the itenm. Thus for each class there is a minimum expected marr (MEM) for language and for mathematics which is baased on an item wise analysis of the entire paper. Averagees and standard deviations give us information regard ${ }^{\text {fing }}$ children's performance. A better understanding of thow much and
how well children have learnt can be got by examining their performance against the MEM.

Based on this information we were able to analyse the learning profile of children from different back grounds (girls/boys, caste group, etc.) and in different types of class situations (single/multi-grade classrooms), schools (large/small schools, $\mathrm{lps} / \mathrm{hps}$ and different types of managements).

> The Minimum
> expected mark on our test is based on the analysis of the difficultly level of the item with reference to the age group/class of the child.

A more detailed picture of children's learning emerges from the item-wise analysis. Here we not only noted children's answers, but also tried to explore the kinds of 'wrong' answers they were giving. We also recorded the strategies used by children to answer the questions.


## 4. Results

### 4.1 First Language

Language is the most basic and important area of schoolrelated learning. The child's ability and confidence in speaking, listening, reading and writing determine its ability and confidence in thinking and expressing effectively and creatively. Basic language skills are thus the foundation of good quality learning. By the same measure, failure in acquiring good language capabilities is the single most important determinant of failure in school. This is particularly important for first generation learners in areas that already have lower enrollment and retention in schools. Our language tests were designed firstly to capture basic literacy capabilities. We then also investigated the development of reading through an oral reading test, the development of comprehension (listening and reading), and the development of written expression.


## 

```
Graded reading:
alphabets (sarala and gunita)
words (sarala,gunita,ottu)
matching picture to word
simple text
graded writing:
dictation: alphabets and words
writing names of objects in picture
listening comprehension: listening to a short passage followed by
close and open ended answered in writing or orally.
A similar test was designed for Urdu and English
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## tive If \& Cll frammaty

Reading a short passage/comprehension (listening and reading) with closed and open ended questions folk story and factual passage/writing; answers to questions, grammar and sentence construction/and free writing in response to a picture stimulus.

A similar test was designed for Urdu and English

## Performance of children

Table 5: Percentage of Children scoring above the minimum expected mark

|  | CLASS II |  | Class IV |  | Class VII |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| School Type | $\%$ of total | Boys-Girls | \% of total | Boys-Girls | \% of total | Boys-Girls |
| Government (Kanada) | $15 \%$ | $13-16$ | $30 \%$ | $29-30$ | $10 \%$ | $21-17$ |
| Ashram Shala | $5 \%$ | $1-1$ | $27 \%$ | $7-5$ | $5 \%$ | $2-0$ |
| Pvt. Kannada Medium | $26 \%$ | $6-7$ | $56 \%$ | $13-15$ | $33 \%$ | $14-21$ |
| Total | $\mathbf{1 5 \%}$ | $\mathbf{2 0 - 2 4}$ | $\mathbf{3 4} \%$ | $49-50$ | $\mathbf{1 5} \%$ | $\mathbf{3 7 - 3 8}$ |

Only about $15 \%$ of the children seem to have acquired basic literacy capabilities by the end of class II. In general, a larger proportion of children from private schools seem to have acquired these minimum capabilities. The performance of children in the Ashram Shalas was much poorer. In class IV, about $34 \%$ of all children seem to have achieved minimum expected marks. It may be that with more years spent in school at least some children do catch up. But at the same time, the difference between the private school and government school performance has widened. There is a drop in perfomance levels in class VII with only about $15 \%$ of children performing above the minimum

expected mark. On the whole children from Ashram Shalas are found to be much more disadvantaged in matters of language.

## Analysis

We examined their performance in more detail to get a better understanding of the dimensions that seem to be related to their performance.



The average marks in class II was far below the minimum expected level. Only about $2 / 3$ of the minimum expected was achieved by children. We compared the performance of children in multi-grade and non multi-grade classrooms and found that the performance in both groups was quite similar.

In class IV, the average performance con-inues to be below the minimum expected level. When we examined the performance of children, we found that there was a bimodal distribution (i.e. a double hump), and a large number of children had scores between $35 \%$ and $50 \%$. We also found that in class IV, children who were in multi-grade classes seemed to have a disadvantage and on the whole they performed more poorly. About $30 \%$ of all children scored below $35 \%$. These low levels of performance in language at the Class IV level coincide with our experiences with out of school children also. We found that there was a fairly high drop out at the class IV level and we also found that several of these children had trouble with reading and writing.

We tried to understand the areas that children found easy or difficult by doing an item wise analysis of their performance. In class II we found that children were familiar with sarala alphabets and simple words. They found it difficult to read and write gunita and ottakshara letters and words. Reading was a problem. Only about $20 \%$ of the children were able to read a simple text with sarala words, with a reasonable fluency. Many children still sounded out alphabets and some $(6.5 \%)$ even repeated the varnamala in order to read. Only about $3 \%$ of all the children seemed to read the
paragraph for meaning. We found that children's listening comprehension capabilities were good. Their oral answers indicated that they had understood what they had heard. However only about $11 \%$ were able to write their answers in sentences. Over $60 \%$ were only able to write one or two words, when we encouraged them. We noted that the process of writing was laborious for most children. This was also visible in the uneven alphabets and inefficient ways of formingalphabets.

In class IV we found that reading was still a problem. Almost 42\% of the children were still using very inefficient strategies such as alphabet-by alphabet reading or were unable to read. While writing answers, only about 12 to $17 \%$ of the children were able to compose full sentences. Almost $38 \%$ of the children preferred to answer only orally, and had to be prompted and encouraged to write as much as they could. In the free writing also we found that children had ideas and imagination, but their language did not support their writing. The word count was restricted to about 5 per sentence. About $41 \%$ of the children only listed words and phrases related to the pictures and $28 \%$ refused to write anything. Almost none of them used punctuation (full stops). Their handwriting was legible, but many made frequentspelling mistakes.

We found that children's oral and listening capabilities in language were better than their writing capabilities. About $65 \%$ of the children performed reasonably well in the listening comprehension item. But in comparison, in the reading comprehension item only about $49 \%$ did reasonably well. It was a concern that as many as $22 \%$ did not get any answers correct. Common mistakes that we found seemed to arise from children's inability to use the information provided in the passage to answer questions. Many also resorted to copying directly out of the text rather than explaining in their own words. In the process, many irrelevant things were included in the answer. In general, they did not write full sentences and often restricted their answers to key phrases and words.

## Kannada Class VII:

The roughly bimodal distribution seen in class IV continues in class VII. This seems to suggest that there is a persistent group of children who are unable to keep up. The overall average marks was only $43 \%$. Over $90 \%$ of children from ashram shalas were found not to have reached minimum expected levels of language capability. About half of the children were able to read fairly fluently, but about $13 \%$ of children were very poor and inefficient readers. Children's
writing abilities had generally improved as compared to the Class IV level. But about $20 \%$ of the children continued to write only words and phrases, and were unable to write in full sentences. In free writing $30 \%$ still used only phrases. The word counts had improved, handwriting was more legible, but spelling mistakes and punctuation persisted. More than half the children also performed poorly in the reading comprehension test, often copying sentences including irrelevant ones from the text, in their answers.


## Some Observations about Urdu and English (First Language)

We also studied language learning of children from two Urdu medium schools:

24 class II, +24 class IV and 25 class VII, and from three English medium private schools: 29 class II, 26 class IV and 134 class VII. Some significant observations on their language abilities are mentioned below.

Urdu: We found that almost all the children in class II knew the simple alphabets. But very few children were able to read even simple words. They frequently recited the alphabetic series and sounded out each part of the word. A few of the children tried to go one step further to reframe the alphabets into the syllabic sounds and the word, but they frequently made mistakes at this. Similarly, while writing they were able to write alphabets but not words. We were concerned that many of the children seemed to have poor listening abilities they were unable to concentrate and listen to the story we told them, and seemed to expect that they must repeat each sentence that we spoke. This problem was seen also with children from class IV. We were also concerned that about half the children in class IV were still only at the alphabetic stage of reading and writing. None of the children we interviewed had any idea
what to do when we asked them to make a sentence with a word. They were completely unfamiliar with the term 'jumla', much to the surprise of other adults who were around. Even modeling did not help. In class VII, most of the students were girls. We found that most of them had learnt to read quite fluently. But the quality of their answers suggested that they were not used to reading for comprehension. For the free writing exercise they were also unsure and hesitant to write on theirown.

English (in private schools only): At the class II and class IV levels, we found that there was a lot of variation between schools in the quality of children's learning of English. Either it was very poor, or quite good. The quality of reading was generally good in class IV and VII, but during reading comprehension questions, very few children wrote answers on their own. Most children copied out sections of the passage, both relevant and irrelevant as their answers. In making sentences and free writing, the quality of sentence formation in writing was not adequate, and children made frequent errors in grammar. We found that in general, children had a lot of imagination, but their written language abilities were not developed enough for them to express themselves.

Sample of children's writing - Class IV Free Writing Test

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 $\angle J g>9$ PT LU
3) one day the hoot see the fruits ore He want Eat to The fruits. He trued bat his donal gat that frulicts. That Time on harse come. The goof tull Please give me that fruit He try to nat gat the goat Take and come the one coot long stich their was one

## What could be the reasons for children not performing and achieving the minimum expected levels for their gradelevel?

Although performance in language has shown a marginal improvement in some aspects, from class II to IV, there seems to be a decline between class IV and VII. The appearance of a large group of children in classes IV and VII, whose language competencies are far below the required level, is also a matter of concern. It suggests that there is need to address this group of children specifically, with alternative materials, pedagogies and classroom management strategies

On the whole children do not seem to have developed adequate competency in the first language, the language of thinking, expressing, reading and writing. Our study of the classroom processes suggests that many of the reasons for this failure lie within the classroom and curriculum. We think that in spite of the efforts of the government to reform language teaching and the development of new textbooks, very few teachers are using these methods in classes I and II. The children in these classes are by and large neglected. Routine repetition of the varnamala
continues to dominate the classroom. Also teachers are not able to adapt their practices to multi-grade classroom situations and provide for individualised attention. As help from home cannot be expected for a majority of children who are in government schools, such individualised support in learning to read and write is crucial. In this context it must be mentioned that in the one Nali Kali classroom, where materials were individualised and a lot of individually directed activities were taking place, the reading levels of all children was better than the average. Possible areas for focus which can assist in the improvement of language learning include (a) better orientation of teachers to the kinds of classroom practices that are beneficial, and (b) development of curriculum materials that could be used for individualised learning and multi-gradesituations.

In the higher classes we found that there was excessive focus on the textbooks and memorisation of questions and answers. Children rarely were given oppartunities to express their independent opinions, ideas or interpretations of text. On the whole, the development of understanding, meaning and the ability to use language to

### 4.2 Mathematics:

Children develop the ability to think and reason mathematically in the course of their daily lives. They develop the sense of numbers, learn to count, to judge large and small quantities and even to add and subtract, in the course of doing things everyday. The mathematics learnt in school develops the ability to write and read numbers, to do computations, and to learn new operations such as division, multiplication and new properties of numbers.

Keeping in mind the general and school specific aspects of mathematics learning, our tests for classes II, IV and VII were designed to capture both aspects of conceptual development and knowledge. We examined the areas of number sense (i.e. understanding of number, number sequences, and number representation), place value and operations, conceptual understanding, and computation. In the class II, IV tests, many activities involving concrete objects were included. Several questions were orally asked, allowing the children to use and demonstrate their conceptual understanding and capabilities, even if they were unable to write. In one item children were asked to name basic shapes. There were a few questions involving logical reasoning and interpreting pictographs. The class

VII tests followed a similar pattern. The main difference being that this was completely a paper pencil test. In all, the test items relating directly to school based knowledge accounted for about 60 to $65 \%$ of the marks. The remaining questions involved application or general reasoning with mathematical ideas and logic.


## Heathesign fiar (lass If and It (Mames)

Number knowledge: naming/reading and writing numerals, sorting and arranging in order, continuing a sequence and a series, using number cards and paper pencil. partitioning a number (concrete activity)
Place value: beads and place value cards reading and making numbers.
Number operations (concept): concepts of addition and subtraction, using concrete activities and word problems, and context of money.
Knowledge of written
Algorithm/computation addition, subtraction in column form, with and without carry. (for class IV) computation:multiplication division and reading a pictograph
Shape work: naming of basic shapes.
(class II: upto 2-digit numbers, class IV 3- and 4digit numbers)

## lest Design fin ( las: : II (ilam

Number knowledge: reading and writing 4 and 5-digit numbers, involving zero. ordering 4 -digit numbers (same digits, different values)
Operations (concept): word problems, proportional reasoning.
Operations (computation): addition (decimals), subtrction, multiplication and division.
Fractions: representation Logical thinking situation and pattern series to be continued.
Handling data reading a histogram. Area: of irregular shape by method of counting squares.


GOK $\square$ private - non multigrade -anlitigrade

PERFORMANCE IN MATHEMATICS CLASS IV


GOK private $\rightarrow$ non multigrade $\rightarrow$ multigrade
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OOC, No ............. $29=07-2004$


Performance of children: Percentage of children scoring above the minimum expected mark.

|  | Class II |  | Class IV |  | Clas VII |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| School Type | \% of total | Boys-Giris | \% of total | Boys-Girls | \% of total Boys-Girls |  |
| Totai number of children |  | $174-169$ |  | $164-177$ | $330-342$ |  |
| Govermment (Kannada) | $45 \%$ | $51-39$ | $52 \%$ | $48-56$ | $\mathbf{1 2} \%$ | $30-16$ |
| Govemment (Urdu) | $50 \%$ | $6-6$ | $22 \%$ | $2-3$ | $0 \%$ | $0-0$ |
| Ashram Shala (Social Welfare \& NGO) | $36 \%$ | $10-5$ | $50 \%$ | $14-8$ | $5 \%$ | $2-0$ |
| Pvt. Kannada Medium (Aided \& unaided) | $64 \%$ | $16-16$ | $76 \%$ | $21-17$ | $36 \%$ | $\mathbf{1 7 - 2 2}$ |
| Pvt. English Medium (Aided \& unaided) | $86 \%$ | $12-13$ | $92 \%$ | $24-14$ | $67 \%$ | $49-37$ |
| Total | $\mathbf{5 1 \%}$ | $\mathbf{9 5 - 7 9}$ | $\mathbf{5 6 \%}$ | $\mathbf{1 0 9 - 9 8}$ | $\mathbf{2 5 \%}$ | $\mathbf{9 8 - 7 5}$ |

## Analysis

In mathematics, it was very heartening to see that, comparatively a large number of children (more than 50\% of children) in classes II and IV performed above the minimum expected level. This suggested that generally conceptual development in the area of mathematics was strong. We also found that the average performance on our test was only slightly below the minimum expected level.

Proportionally a larger number of children from the private schools performed well. When we did our item analysis we found that this was because their written capabilities were better. More boys than girls had acquired minimal capabilities, though the average performance of the two groups was comparable. The relatively poorer performance of children in Ashram schools in class II and of children in the Urdu medium schools is cause for some concern.

The class VII test was designed as only a paper pencil test. This was more like a conventional school test. Though there were items to explore children's understanding and ability to apply concepts and skills, we were not able to capture their oral and mental capabilities. The test also included items with high levels of abstraction, which are expected in class VII. We focused on arithmetic and did not
have items from algebra. The level of performance dropped and barely $26 \%$ of the children were able to score above the minimum expected level. The situation in the Urdu schools and one school with many tribal children is a matter of concern, as none of the children in these schools were able to achieve the minimum grade. The performance of children in the private schools was not much better. Boys continued to do better than girls.

We found that children generally had developed a fairly robust conception of number. They also seemed quite competent in doing arithmetic sums mentally. They were also able to answer word problems when asked orally. In these computations, they mainly used counting as a strategy to solve the problems. And they were quite effective in this. Most of them used the 'counting all', rather than 'counting on' strategies and very few directly recalled simple arithmetic facts. This suggested that although they were capable, schooling was not providing them with enough opportunities to practice and consolidate these capabilities. We also found the ability to do written computation, using standard algorithms was very poor. This again suggested they did not have enough learning opportunities in school.

Some of the key problem-areas have to do with the written form of
mathematics. The understanding of place value, in both class II and class IV, was a problem. Even at the class IV level, about $30 \%$ were not able to read or write four digit numbers - $20 \%$ of these children did not have even class II level place value concepts. On account of this, many children failed at written problems of simple addition and subtraction. Interestingly, while over $74 \%$ were able to do the problems in the concrete mental mode, only $30-40 \%$ were able to do them in the written form. Only about $30 \%$ in class IV were able to multiply, and $27 \%$ were able to divide. Even by class VII, only about $50 \%$ of the children had learnt to compute correctly. $50 \%$ in class VII had difficulty with 5 -digit numbers. We found that the majority of children were not able to recognise and name the basic geometric shapes. This suggests that there is little or no exposure to geometry and other aspects of mathematics.

We compared the performance in the three grades of government school children with others. We found that until class IV there isn't much difference in the performance of government and private school children. But by class VII, there was a change and most government school children were performing below the $35 \%$ mark. This suggests that middle school is not able to build on the gains of primary school. This is a matter of concern. Many of the
children in class VII seemed to be very unsure of themselves and wanted to copy from each other. This was in contrast to the class II and IV children, who seemed to enjoy our testing activities and were willing to attempt unfamiliar questions.

### 4.3 Environmental Studies

The teaching of environmental studies aims at helping children develop their knowledge of the environment around them from both everyday experiences and the textbook. The development of abilities of reasoning, observation, categorization and application are important.


Through our activity based tests we investigated the extent to which children have developed these capabilities, with reference to both text and non-text based content.

The items involved activities using manipulands: we kept in mind the importance of classification in science, the child"s abilities appropriate for their age, and the expectations from the textbook. For Class II picture cards and objects were used for identification, sorting and reasoning. Class IV instruments were a mix of a few activities and a little writing. One item involved performing an experiment followed by questions relating to the same, where children had to observe, reason and predict. Class VII test included questions on open-ended classification, reasoning, recalling facts and map work. Unlike the tests for language and mathematics, the EVS tests did not follow a criterion-referenced pattern.

## Analysis

In class II, we found that about $53 \%$ children fared well in doing different kinds of exercises on classification. They used criteria drawn from their own observations in everyday life, rather than the textbook. For example, they described the food of a dog as "anna" (rice), and said that cows eat grass. When we asked them to classify the animals into
herbivorous/carnivorous/omnivorous, depending on the food they eat, we found that the classification was inconsistent. It seemed that classification according to food type is still an abstract idea. This is a concept developed in their text books. and this may not be accessible to children. In the classification task which involved sorting objects according to their materials, we found that most children focussed on functional aspects ( $66 \%$ ) rather than an abstract quality of the material ( $21 \%$ ). This again suggests that the science curriculum should include more functional rather than abstract concepts.

In Class IV, we expected the children to be more proficient at classification and to be able to handle more than one dimension simultaneously. Many science concepts taught at this stage involve/imply classification. We gave them a task of classifying organisms into things living and nonliving. $75 \%$ of the children were able to classify but of these, about $71 \%$ of them tended to base their judgement on only one dimension. 'Movement' or 'growth' was among the most commonly cited criteria. Not unexpectedly it led to contradictory results and children concluded that egg and tree were non-living (because they cannot move); hair and anthill were living (because they can grow). School learning does not seem to have assisted children in forming more
complex conceptual understanding of living and nonliving things involving more than one criterion. Only 4\% who cited more than two criteria (breathing, giving birth, having organs such as heart / lung / appendages, etc) seem to have more robust concepts and had developed the capability of using multiple criteria for classification.

We also found that children's conception of an "animal" was dominantly "fleshy, four legged mammals" and very few extended to reptiles and fish. When a familiar question was posed in an un-familiar way we found this. For example : To give an example each for 6 legged, 4 legged, 2 legged and no legged animals. Most children needed cues ( $78 \%$ ) before they named insects, birds or snake. Very few children named "man" as an example for a two-legged animal. The school text has a topic on adaptation of birds with a focus on beaks and feet. We gave them pictures of a few birds to look at and then asked them: "why do different birds have different kinds of beaks?" Only about 10\% referred to the food habits. $57 \%$ gave answers which suggested taken-for-grantedness: "they are created so by God" "as they are different birds" "they have different names" etc.
A simple experiment on displacement of air was done by
both the researcher and the children. Later a few questions based on observation, hypothesizing, inference and conclusion were asked. Answers to questions based on observation and hypothesizing were well answered (42\% and $58 \%$ respectively). But for the questions related to conclusion, the children were unable to apply their knowledge of properties of air here. Although this experiment is included in their textbook, we found that they did not connect the textbook conclusion to this experiment.

On the item based on the position or location of their village on earth, only about $16 \%$ of the children could go up to country level, $1 \%$ beyond continent and $1 \%$ beyond the earth (Planet earth). $33 \%$ were able to just name their village.

Our findings seem to suggest that, in Class II, though rudiments of classifications are in place, ihey are still at ar intuitive level. Children need more opportunities to practice and use classification so as to develop their capabilities. They need opportunities to share and talk about what they have done or observed. Textbooks do not draw on classification and categorization as the way to develop concepts. Hence we find that children have learnt definitions butseem unable to apply these. It could also be that textbook knowledge is not
appropriate for the developmental stage of the child. Experiments taught without actually performing them seem to have a similar consequence as textbook knowledge is not being connected to experience.
In class VII the children are capable of handling classification independently and should be able to assign criteria independently. But in an open ended classification based question where children were asked to classify a few objects (fabrics, metal, non-metal, etc ) into any number of groups stating the basis of their classification, $46 \%$ of the children were able to classify. $18 \%$ stated the criterion for classification (source, texture, electrical properties etc). $30 \%$ of the children never attempted to classify. Children from urban/private schools used text-based criteria like conductors/insulators, while children from remote areas used their own experience to attach a criterion. For the questions based on facts taken from the textbook, $20 \%$ alone were able to recall facts or concepts like artificial satellites and the material media for transmission of sound. Only $68 \%$ of these were unable to relate the facts with application.
The children were asked to locate the probable time of events that included items from history text, personal events, mile stones of their village and event of their choice on a time-line. $39 \%$ could represent a few events on the line.

Children from private schools generally chose items from textbook, and for the event of their choice they indicated historical events like the "Regulating Act". Government school children chose the milestones of their village and for the events of their choice they mentioned events like birth in their family, the day they were able to swim/ climb a tree/ or ride a bicycle etc.

In geography we included simple map work. We found that $37 \%$ were able to locate the neighboring states and rivers in Karnataka and about $28 \%$ were able to locate the Indian Ocean/Equator/ etc, on an out line map of India. Only $2 \%$ of the total correctly marked the equator and most of the others drew the equator right across the centre of the map.

Generally we found that girls tended to do better on text based (school taught) questions while boys predominantly attempted open-ended questions.


## SUMMARY

1. The new $B R C$ and $C R C$ structures have been established in all areas and were staffed. Resources were found to be inadequate in the CRCs. This along with the lack of continued support and overburden with administrative responsibilities has meant that CRPs have been unable to attend to their academic duties. Within the system, planning and training have become routinised. There is inadequate systematic school monitoring with a focus on academic issues
2. New initiatives to involve community, such as the establishment of SDMCs, have taken root. While some SDMCs are effective and have contributed to the functioning of schools, others need support and training. The focus of the SDMCs has been more on material management and attendance of teachers and there is need to evolve their capacities to stpport/monitor the academic dimensions of schools. The relationship and coordination between SDMCs
and Panchayats need to be developed. In urban areas, the awareness and contribution of the Nagar Palikas to education issues needs to be strengthened.
3. Among the people there is widespread endorsement of the need for education among the people. The conditions of poverty and loss of livelihoods due to drought and the absence of economic development in the region are a serious challenge to achieving UEE in the district. In such a context, poor performance at school leads parents to withdraw children from school and place them in employment/ work.
4. The infrastructural conditions of the schools are generally adequate and most are well-maintained. Ashramshalas and the schools in the urban areas need more support. By and large, schools were functioning regularly. Only in some remote schools and the Ashramshalas there was a problem of teachers' absenteeism.
5. Heads of Schools need training and capacity-building inputs to enhance their leadership and their abilities to develop their schools as comprehensive local institutions.
6. A majority of teachers were found to be concerned about the welfare of children and were accessible to them. However, most teachers were not adequately knowledgeable in the subject areas. This despite the fact that a majority of teachers had attended multiple in-service training programmes. Teachers were also found to be in need of updated training and skill development in subject areas, including methods to teach in multi-grade classes.
7. Children's learning: Children's performance in language, including Kannada and Urdu, is not adequate and needs more improvement. Children are especially disadvantaged in reading and comprehending texts and formulating independent answers to questions. Children's understanding of Mathematics is generally good but their written work is very inadequate. There is a sharp decline in academic standards in Class VII. The poor quality of teaching-
learning levels in Ashramshalas is of great concern. The curriculum is too focused on academics and does not provide adequate opportunities for children to engage in creative expressions.

Children's conceptual development is generally on track, however school curriculum and classroom practices do not seem to provide ample opportunity to practice and develop the same. Also lacking are opportunities to integrate their everyday knowledge with school and textbook based learning, and to express the same in written form. In Science and Sociai Studies, the textbook does not seem to support or follow children's cognitive development


## The way forward:

1. Develop collaborative work with SSA and DIET at the district level for purposes of both institutional strengthening and capacity building.
2. Develop school-community inter-linkages and work with community to assist parents develop better understanding of children's learning and support at the home.
3. Work with focused action research to address the question of multigrade teaching, particularly language learning, and provide inputs for slow-leaners, dropouts and for higher primary/middle school subject-related teaching.
4. Reinvigorate both in-service teacher education and develop appropriate support materials for teachers.
5. Improve in-service training and school monitoring to include both primary and middle schools.

6. Focus on capacity building of midlle level functionaries: BRC, CRC and develop \& pool of resource persons at the district level.



## Annexure A : List of Instruments



1. CSP Community Settlement Profile
2. CPM Community Panchayath Members
3. CSM Community SDMC Members Profile
4. COC Community Out-Of-School Children
5. CYA Community Young Adults Literates and Non-Literates
6. CPP - Community Parents Profile
7. SPA School Profile Part A: Fact Sheet
8. SPB School Profile Part B: School Culture
9. SPC School Profile Part C: Residential School
10. SHP School Head Profile
11. STA School Teacher Profile Part A: Professional
12. STB School Teacher Profile Part B: Academic
13. SCR School Classroom Observation
14. SAS School Student Attendance Sheet
15. SSA II School Student Profile Part A : Academic (Kannada, Urdu, English)
16. SSA IV- School Student Profile Part A : Academic (Kannada, Urdu, English)
17. SSA VII- School Student Profile Part A : Academic (Kannada, Urdu, English)
18. SSB School Student Profile Part B: Child's Interview
19. CSC Community and School Contact List
20. ECP Education Department, Cluster Resource Person Profile

## FEEDBACK FORM

## Dear Reader,

Wie are happy to share the findings of this study and we welcome your feedback. We will be grateful if you can spare some tirne and fill-in this form and mail it to us / or hand it over to your CRC's/BRC's. You may use this feed back form to give us your opinions and make suggestions.

1. From your experience, please tell us which parts of the report confirm/agree with your experiences in schools and in communities.
2. According to you, which of these finding is most significant and what suggestions can you give to tackle the problem?
3. As a member of the community (teacher, elected representative, student, parent) have you tried any experiments / innovations that you would like to share with us?
4. Do you have any suggestions / ideas on how we can work together to improve the quality of schools?

Name $\qquad$
Address

Mail to:
DQEP
National Institute of Advanced Studies
IISc. Campus
Bangalore 560012
Phone : 23604351 / 23606594
Fax : 23606634

