

# ACTIVITY BASED LEARNING

## EFFECTIVENESS OF ABL UNDER SSA

A report of the baseline and year-end surveys by SchoolScape, Centre for Educators and Sarva Shiksha Abhiyan, Government of Tamil Nadu, India

This is a representative study that includes the learning environment of the classroom and the academic assessment of children before and after the intervention of the Activity Based Learning Programme



SchoolScape  
CENTRE FOR EDUCATORS

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**JUNE 2007 – APRIL 2008**



## Acknowledgements

The surveys and the report have been made possible with the efforts of many in a variety of ways. Each of them has to be thanked for their collaboration and patience.

The SSA, for its focused attention and courage in making a system move ahead, while taking the majority in the wave, overcoming initial individual feelings of trepidation and creating an environment for different players to contribute.

For the administrative team in the SSA department led by Dr Elangovan, Mr. S. Kanappan and Mrs. N. Latha who have gone through many troubles of putting the data together, while helping from the first stage of developing the formats onwards.

The Block Resource Teachers who helped to make the process of observation, the interviews a systematic, routine process.

R. Akila, researcher, who gave me strength at the initial stages, who oversaw and contributed to the first stage of the survey.

Dharma, needs a big thank you from the entire team for cleaning and processing the data, and taking on a responsibility that was thrust upon him, in spite of his other commitments. He was always available from February onwards till the report was done.

For the team at SchoolScape, Shalini Swaminathan, R.Krishnaveni and Suganya who at the last stage of putting the report together, worked methodically, with dedication.

Inspired by the purpose of reaching quality education to the majority of the children in the state, all the team members worked crossing hurdles and humps that came by on the path.

## Foreword

The baseline and the year-end surveys that are reported here were done within the academic year of June 2007 and April 2008 to understand the effect of the Activity Based Learning intervention that was up-scaled across the state of Tamil Nadu in more than 37,000 schools.

Sarva Shiksha Abhiyan, TN took this courageous step under the leadership of M.P. Vijayakumar, Director SSA, and his motivated team. With support from the education department, from the teacher to the secretary, and the ministry, this intervention has become an example of how a quality programme could be introduced into the government system, within the existing framework. Many states have learnt and applied the method of up-scaling and the pedagogical approach to enable the country to move towards providing primary school children, the classroom environment that would enable meaningful learning to take place, while improving achievement levels simultaneously.

Hopefully this report will make it clear what the successes have been within a short period and what more needs to be done to add the next layers of quality to enhance the programme and make the mainstream education system itself a dynamic, learning entity.

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**Date : 24.06.2009**

Sarva Shiksha Abhiyan Tamil Nadu has been making great strides in grounding quality education in the state right from the inception of the scheme.

The Activity Based Learning programme after having being practiced in the schools of Chennai Corporation has been up-scaled to cover 37,500 schools all over the state from the academic year 2007-08. Before it was made a part of almost all the elementary schools a baseline was done and at the end of the year another survey was done to understand the effectiveness of the programme and what other improvements need to be made. This was done in collaboration with SchoolScape, Centre for Educators.

As the ABL initiative has spread across the country and some of the state teams have been trained by the resource faculty from Tamil Nadu, we hope this study will be useful for everyone to learn and understand the various aspects of a successful learning classroom, how it has made an impact within the short period on the learning achievements of the children and what further steps need to be taken.

**(R. VENKATESAN)**

## Profiles

### Amukta Mahapatra, Editor

Amukta Mahapatra is Director, **SchoolScape**, a centre for educators which focuses on the preparation of the teacher and enables schools, education departments and organizations to enhance quality of learning in the classroom.

She has been associated with the field of education since the 1980s when she started her teaching career at the Krishnamurti Foundation India school in Chennai. Since then, she has set up the **Abacus School**, Madras, where for the first time in India, in recent years, Montessori ideas of education were applied right up to the elementary level while following the mainstream syllabus. She has worked with several NGOs and schools; she has designed a programme for **public-private partnership** in Karnataka that still continues to function.

While working with **UNICEF**, she helped to develop along with a seven-member internal task force, a Quality Package to be implemented in government schools across ten states. Monitoring and observation formats were also designed and field-tested in different states along with training for field staff and third party evaluations.

She received Best Teacher's Award from 'Lady Kalyani Sivaswami Ayyar Best Teacher Award', 2001. She has been a member of several committees such as National Resource Group (NRG) for SSA; NEGAAE, NCERT, Delhi; R. Govinda Committee on teacher education; and CABE Committee (1987-'89).

She has organised many national and international conferences; some of them being – the International Democratic Education Conference in 2004 in Bhubaneswar; 50 years of Montessori in India at Kalakshetra, Chennai in 1989. She has participated and presented papers at national and international seminars.

She has published articles and papers; her work has been mentioned in 'Improving Government Schools, what has been tried and what works' published by Books for Change, 2005 and 'Back to School', Best Practices edited by Vimala Ramachandran, Sage Publications, 2004

### Kelly Lawyer Baker, Researcher

Kelly has worked in education research and teacher training in the United States. She was previously at Vanderbilt University and Vanderbilt Children's Hospital where she collected and analysed data to explore multiple areas of children's development and learning.

She earned a Master of Education with a concentration in Human Development and Psychology from Harvard University Graduate School of Education.

Kelly has developed a strong interest in the Indian education system. She has experience in India in both a small playschool and an urban Matriculation school where she has taught, designed curriculum and trained other teachers. She has also conducted workshops for government school teachers in villages in Andhra Pradesh.

She currently works for a company in Boston, Massachusetts U.S.A. where she helps students and families prepare for private school and college admissions testing.

### Rudra Narayan Sahoo, Researcher

He is associated as a Senior Consultant, Department of Educational Measurement & Evaluation, National Council of Educational Research and Training (NCERT)

His work involves planning, budgeting, coordinating monitoring Achievement Surveys in India. His major areas of specialization include development of tools, sampling design, quality control, data analysis and interpretation of data, development of indices and digitalization of data, development of

reports, developing Systemic Quality Index to reform the government schools in India, reforming examination system in India

Prior to joining NCERT as Consultant, he worked as Senior Research Associate with the same organization. He was also associated with Pragya – iNGO as a Senior Education Specialist where he developed strategies to address educational issues for hard to reach regions, develop relevant curriculum, promoting e-literacy and e- learning.

He has several publications to his credit - Learning Achievement of Class V Children: A Mid Term National Survey, National Council of Educational Research & Training, New Delhi, 2008; Conceptualizing the Value of Compassion: A Practical Approach for Students, Teachers and Teacher Educators (Journal of Indian Education, Vol.31, No. 3, Nov. 2005 NCERT, New Delhi); Dropout among Girls at Elementary Level – A Study of Causal Factors (Journal of Community Guidance & Research, Vol.22, No. 3 Nov. 2005).

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## Abbreviations

## Key Findings

- **Average achievement of children increased significantly in all subjects:** During the end-year study the average achievement was found to be 61.63% in Tamil, 74.45% in Mathematics and 70.62% in English in Class II; and in Class IV, the mean achievement in Tamil was 63.19, 63.01% in Mathematics and in English it was 52.33%. The figures revealed that as compared to the baseline study there was an increase of nearly 25% to 29% in all three subjects in both the classes. Maximum improvement was found in Thanjavur and minimum improvement was found in Chennai.
- **Gaps in achievement within gender, location and social groups was narrowed down:** During baseline study, there was significant difference in achievement between boys and girls, urban and rural children, and children from different social communities. However, during the end-of-the-year study, it was found that no significant difference was found in Tamil achievement between rural and urban children and among the children of different social groups; in Mathematics achievement, there was significant difference found between boys and girls and children of different social group children; in English achievement, there was no significant difference between rural and urban and among boys and girls.
- **More children shifted from low achievement range to very high and excellent achievement range:** Number of low achievers reduced by 30% to 40% in all three subjects in both the classes and number of excellent achievers increased by 20% to 40% in all three subjects and both classes.
- **Dispersion in children's achievement was reduced:** The standard deviation in achievement score in all subjects and most of the groups was reduced; it revealed a homogenous performance in learning achievement during the 2008 test as compared to 2007.

## CHAPTER ONE – Introduction

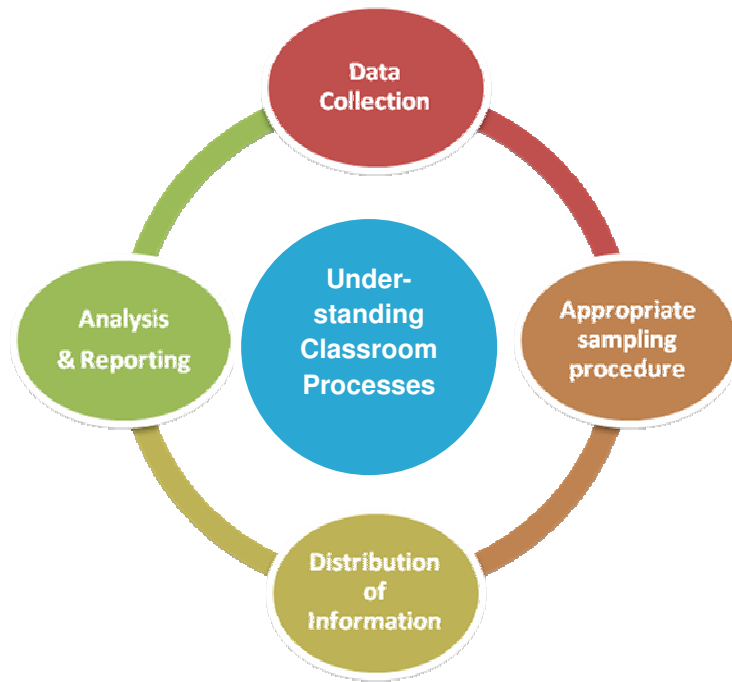
The Activity Based Learning (ABL) programme is an innovative, interesting and corroborated classroom transaction programme for standards one to four that has been introduced in the state schools of Tamil Nadu. Incubated initially in approximately 260 schools of the Corporation of Chennai from 2003 to 2006, it has been extended from June 2007 to government and government aided schools across the state under the direction of Sarva Shiksha Abhiyan, Department of Education, Government of Tamil Nadu, India. ABL, adapted from Rishi Valley's RIVER programme and select practices of Montessori pedagogy for multi-grade and multi-level classrooms. has been extended to 37500 government and government-aided schools in the state. The present study is the officially commissioned Baseline and year-end survey done by SchoolScape in collaboration with SSA Tamil Nadu.

It is a study that looks into the classroom processes and some aspects of the learning environment available to children in Classes II and IV. The survey is a representative study of the academic assessment of students in Classes II & IV; and looks at the progress made in Tamil, Mathematics and English after the intervention of the Activity Based Learning.

The study has the following objectives:

- To gauge the learning achievement of students of Classes II and IV in Tamil, Mathematics and English and the progress made within the base year under the ABL programme
- To study the differences in achievement with regard to social groups, gender and location
- To understand the factors of the learning environment offered to children before and after the intervention of the ABL pedagogy
- To assess the activities under ABL for facilitating the decision-making process for future course of action

In a large survey like this, one depends primarily upon appropriate sampling procedure, a uniform data collection and scoring procedure, statistical procedure and operating system and sensible dissemination of results.



## **SAMPLING PROCEDURE**

Sampling in educational research is generally conducted in order to permit the detailed study of a part, a slice, rather than the whole of a population. The information derived from the resulting sample is customarily employed to develop useful generalizations about the population.

Then a scientific sampling procedure is very much required to compare with a complete coverage of the population.

In research situations sampling is used under three broad categories like

1. Experiments
2. Surveys
3. Investigations

The baseline survey assessed the classroom environment and the students' achievement level across the districts in Tamil Nadu. There was a tripartite perspective to enable a more holistic picture, as the randomly selected teachers

filled in a questionnaire, children from the same schools were interviewed and observers filled in an appropriate schedule.

The sample of students were selected using established and professionally recognized principles of sampling, in a way that they represented the students studying in Classes II and IV in state government schools, ADW (Adi-Dravida Welfare) and private-aided schools. As the sampled students were given assessment tests under prevalent conditions in every district, therefore, first schools within the districts were selected and then sample students within the schools were drawn. Hence, a careful, rigorous sampling procedure was followed for the selection of schools and students. The sampling plan for the study has the following key components:

1. Defining the student population to be surveyed
2. Preparing a list of schools in which eligible students are enrolled
3. Selecting of the sample of schools from the list.
4. Random selection of eligible teachers and students within each sampled school

The entire sample, derived by using the random sampling method for both the surveys done within the academic year, June 2007 to April 2008 is given below. For the year-end survey, the sample was from within the larger original sample.

Table 1: Sample for Baseline 2007 and Year-end 2008 Surveys

| District Name    | Schools    |            | Classrooms Observed |            | Teachers    |            | Child Interviews |             |
|------------------|------------|------------|---------------------|------------|-------------|------------|------------------|-------------|
|                  | Baseline   | Year-end   | Base line           | Year-end   | Base line   | Year-end   | Baseline         | Year-end    |
| CHENNAI          | 34         | 10         | 66                  | 17         | 66          | 12         | 318              | 85          |
| COIMBATORE       | 21         | 5          | 41                  | 11         | 40          | 13         | 201              | 18          |
| CUDDALORE        | 30         | 15         | 61                  | 16         | 61          | 10         | 289              | 39          |
| DHARMAPURI       | 30         | 8          | 54                  | 13         | 56          | 12         | 262              | 66          |
| DINDIGUL         | 19         | 5          | 35                  | 10         | 36          | 12         | 158              | 22          |
| ERODE            | 28         | 7          | 55                  | 15         | 58          | 13         | 278              | 60          |
| KANCHIPURAM      | 28         | 7          | 52                  | 12         | 51          | 12         | 274              | 67          |
| KANYAKUMARI      | 40         | 10         | 73                  | 19         | 75          | 11         | 376              | 96          |
| KARUR            | 16         | 4          | 34                  | 7          | 34          | 11         | 162              | 20          |
| KRISHNAGIRI      | 23         | 6          | 44                  | 13         | 47          | 11         | 204              | 60          |
| MADURAI          | 37         | 10         | 72                  | 18         | 72          | 12         | 350              | 92          |
| NAGAPATTINAM     | 21         | 7          | 41                  | 9          | 41          | 13         | 200              | 29          |
| NAMAKKAL         | 14         | 4          | 30                  | 4          | 29          | 13         | 129              | 38          |
| PERAMBALUR       | 23         | 6          | 45                  | 11         | 41          | 12         | 216              | 29          |
| PUDUKOTTAI       | 12         | 3          | 23                  | 6          | 23          | 14         | 107              | 30          |
| RAMANATHAPURAM   | 18         | 5          | 35                  | 10         | 34          | 11         | 169              | 50          |
| SALEM            | 11         | 3          | 22                  | 6          | 22          | 17         | 103              | 21          |
| SIVAGANGAI       | 27         | 7          | 53                  | 14         | 52          | 11         | 263              | 70          |
| THANJAVUR        | 9          | 2          | 17                  | 2          | 18          | 11         | 85               | 17          |
| THE NILGIRIS     | 25         | 6          | 50                  | 12         | 52          | 13         | 123              | 30          |
| THENI            | 27         | 7          | 54                  | 15         | 54          | 11         | 254              | 68          |
| THIRUCHIRAPPALLI | 28         | 7          | 55                  | 14         | 53          | 11         | 240              | 33          |
| THIRUVALLUR      | 9          | 3          | 18                  | 2          | 17          | 12         | 85               | 23          |
| THIRUVANNAMALAI  | 34         | 9          | 60                  | 17         | 61          | 12         | 276              | 72          |
| THIRUVARUR       | 28         | 7          | 57                  | 16         | 51          | 11         | 277              | 34          |
| THOOTHUKUDI      | 25         | 7          | 44                  | 14         | 42          | 12         | 187              | 57          |
| TIRUNELVELI      | 42         | 11         | 85                  | 22         | 84          | 11         | 413              | 105         |
| VELLORE          | 23         | 6          | 46                  | 12         | 46          | 14         | 223              | 60          |
| VILLUPURAM       | 28         | 7          | 54                  | 13         | 52          | 12         | 253              | 35          |
| VIRUDHUNAGAR     | 36         | 9          | 69                  | 17         | 66          | 10         | 345              | 82          |
| <b>TOTAL</b>     | <b>746</b> | <b>203</b> | <b>1445</b>         | <b>367</b> | <b>1434</b> | <b>360</b> | <b>6820</b>      | <b>1508</b> |



**Table 2: Achievement Tests Sample of Class II Children: Baseline 2007 & Year-end 2008**

| District Name    | Class II        |             |             |                            |                  |            |            |                            |
|------------------|-----------------|-------------|-------------|----------------------------|------------------|------------|------------|----------------------------|
|                  | Baseline Survey |             |             | Tamil<br>Reading<br>Skills | Year- end Survey |            |            | Tamil<br>Reading<br>Skills |
|                  | Tamil           | Maths       | English     |                            | Tamil            | Maths      | English    |                            |
| CHENNAI          | 36              | 19          | 34          | 41                         | 7                | 5          | 6          | 7                          |
| COIMBATORE       | 198             | 174         | 184         | 428                        | 70               | 71         | 70         | 70                         |
| CUDDALORE        | 139             | 109         | 115         | 437                        | 33               | 36         | 34         | 33                         |
| DHARMAPURI       | 115             | 100         | 101         | 320                        | 31               | 29         | 29         | 31                         |
| DINDIGUL         | 123             | 113         | 113         | 361                        | 28               | 25         | 25         | 28                         |
| ERODE            | 113             | 89          | 103         | 298                        | 34               | 28         | 28         | 34                         |
| KANCHIPURAM      | 107             | 82          | 98          | 252                        | 38               | 34         | 32         | 38                         |
| KANYAKUMARI      | 85              | 76          | 85          | 144                        | 10               | 10         | 9          | 10                         |
| KARUR            | 60              | 53          | 51          | 135                        | 19               | 16         | 15         | 19                         |
| KRISHNAGIRI      | 132             | 115         | 120         | 224                        | 41               | 41         | 39         | 41                         |
| MADURAI          | 158             | 118         | 139         | 439                        | 33               | 32         | 30         | 33                         |
| NAGAPATTINAM     | 110             | 95          | 104         | 315                        | 41               | 35         | 38         | 41                         |
| NAMAKKAL         | 68              | 50          | 51          | 143                        | 29               | 23         | 24         | 29                         |
| PERAMBALUR       | 92              | 61          | 64          | 270                        | 28               | 27         | 25         | 28                         |
| PUDUKOTTAI       | 146             | 106         | 110         | 296                        | 42               | 43         | 46         | 42                         |
| RAMANATHAPURAM   | 70              | 69          | 65          | 156                        | 25               | 25         | 26         | 25                         |
| SALEM            | 139             | 115         | 127         | 381                        | 41               | 35         | 38         | 41                         |
| SIVAGANGAI       | 94              | 83          | 87          | 167                        | 27               | 26         | 27         | 27                         |
| THANJAVUR        | 140             | 115         | 121         | 340                        | 53               | 48         | 48         | 53                         |
| THE NILGIRIS     | 34              | 35          | 34          | 50                         | 7                | 5          | 4          | 7                          |
| THENI            | 57              | 52          | 51          | 161                        | 15               | 15         | 15         | 15                         |
| THIRUCHIRAPPALLI | 137             | 128         | 126         | 361                        | 37               | 31         | 38         | 37                         |
| THIRUVALLUR      | 119             | 101         | 91          | 268                        | 22               | 20         | 17         | 22                         |
| THIRUVANNAMALAI  | 152             | 146         | 144         | 406                        | 41               | 38         | 42         | 41                         |
| THIRUVARUR       | 86              | 86          | 83          | 222                        | 25               | 23         | 23         | 25                         |
| THOOTHUKUDI      | 82              | 66          | 65          | 167                        | 23               | 19         | 20         | 23                         |
| TIRUNELVELI      | 157             | 141         | 138         | 388                        | 61               | 60         | 60         | 61                         |
| VELLORE          | 246             | 232         | 220         | 457                        | 50               | 51         | 50         | 50                         |
| VILLUPURAM       | 193             | 164         | 182         | 357                        | 49               | 47         | 48         | 49                         |
| VIRUDHUNAGAR     | 94              | 85          | 84          | 123                        | 36               | 36         | 34         | 36                         |
| <b>Total</b>     | <b>3482</b>     | <b>2978</b> | <b>3090</b> | <b>8107</b>                | <b>996</b>       | <b>934</b> | <b>940</b> | <b>996</b>                 |

**Table 3: Achievement Tests Sample of Class IV Children: Baseline 2007 & Year-end 2008**

| District Name    | Class IV         |             |             |                      |                        |                  |            |            |                      |                        |
|------------------|------------------|-------------|-------------|----------------------|------------------------|------------------|------------|------------|----------------------|------------------------|
|                  | Base line Survey |             |             |                      |                        | Year- end Survey |            |            |                      |                        |
|                  | Tamil            | Maths       | English     | Tamil Reading Skills | English Reading Skills | Tamil            | Maths      | Eng        | Tamil Reading Skills | English Reading Skills |
| CHENNAI          | 41               | 34          | 41          | 47                   | 45                     | 13               | 12         | 12         | 13                   | 12                     |
| COIMBATORE       | 188              | 178         | 169         | 376                  | 422                    | 69               | 68         | 60         | 69                   | 60                     |
| CUDDALORE        | 179              | 167         | 169         | 482                  | 494                    | 33               | 29         | 30         | 33                   | 30                     |
| DHARMAPURI       | 288              | 272         | 244         | 676                  | 724                    | 33               | 31         | 30         | 33                   | 30                     |
| DINDIGUL         | 127              | 120         | 124         | 351                  | 345                    | 19               | 19         | 17         | 19                   | 17                     |
| ERODE            | 131              | 108         | 115         | 346                  | 346                    | 36               | 30         | 36         | 36                   | 36                     |
| KANCHIPURAM      | 109              | 93          | 102         | 216                  | 233                    | 38               | 33         | 36         | 38                   | 36                     |
| KANYAKUMARI      | 76               | 56          | 62          | 124                  | 142                    | 12               | 12         | 12         | 12                   | 12                     |
| KARUR            | 72               | 60          | 67          | 193                  | 192                    | 22               | 21         | 21         | 22                   | 21                     |
| KRISHNAGIRI      | 184              | 162         | 145         | 290                  | 274                    | 51               | 50         | 52         | 51                   | 52                     |
| MADURAI          | 165              | 162         | 159         | 460                  | 434                    | 35               | 32         | 32         | 35                   | 32                     |
| NAGAPATTINAM     | 121              | 113         | 116         | 324                  | 311                    | 22               | 20         | 23         | 22                   | 23                     |
| NAMAKKAL         | 67               | 58          | 58          | 142                  | 129                    | 17               | 21         | 18         | 17                   | 18                     |
| PERAMBALUR       | 92               | 80          | 83          | 254                  | 254                    | 33               | 21         | 19         | 33                   | 19                     |
| PUDUKOTTAI       | 158              | 150         | 141         | 296                  | 288                    | 33               | 32         | 33         | 33                   | 33                     |
| RAMANATHAPURAM   | 95               | 86          | 83          | 149                  | 149                    | 26               | 21         | 22         | 26                   | 22                     |
| SALEM            | 174              | 181         | 158         | 429                  | 404                    | 47               | 44         | 42         | 47                   | 42                     |
| SIVAGANGAI       | 115              | 103         | 101         | 180                  | 167                    | 23               | 20         | 21         | 23                   | 21                     |
| THANJAVUR        | 163              | 167         | 150         | 362                  | 350                    | 39               | 34         | 36         | 39                   | 36                     |
| THE NILGIRIS     | 33               | 32          | 32          | 60                   | 59                     | 7                | 6          | 5          | 7                    | 5                      |
| THENI            | 62               | 53          | 59          | 174                  | 174                    | 24               | 17         | 19         | 24                   | 19                     |
| THIRUCHIRAPPALLI | 145              | 137         | 139         | 377                  | 373                    | 44               | 40         | 41         | 44                   | 41                     |
| THIRUVALLUR      | 128              | 118         | 122         | 290                  | 292                    | 34               | 27         | 28         | 34                   | 28                     |
| THIRUVANNAMALAI  | 183              | 160         | 170         | 443                  | 427                    | 43               | 41         | 38         | 43                   | 38                     |
| THIRUVARUR       | 104              | 82          | 93          | 247                  | 252                    | 19               | 17         | 17         | 19                   | 17                     |
| THOOTHUKUDI      | 83               | 60          | 73          | 176                  | 171                    | 18               | 17         | 16         | 18                   | 16                     |
| TIRUNELVELI      | 162              | 148         | 144         | 450                  | 450                    | 59               | 64         | 61         | 59                   | 61                     |
| VELLORE          | 275              | 248         | 268         | 564                  | 557                    | 61               | 63         | 63         | 61                   | 63                     |
| VILLUPURAM       | 226              | 192         | 212         | 439                  | 423                    | 54               | 52         | 53         | 54                   | 53                     |
| VIRUDHUNAGAR     | 95               | 87          | 84          | 99                   | 86                     | 38               | 35         | 37         | 38                   | 37                     |
| <b>TOTAL</b>     | <b>4041</b>      | <b>3667</b> | <b>3683</b> | <b>9016</b>          | <b>8967</b>            | <b>1002</b>      | <b>929</b> | <b>930</b> | <b>1002</b>          | <b>930</b>             |

## TOOLS

The tools are comprised of -

1. School profile format (Format A, refer annexure for formats A to D)
2. Schedule for classroom observers (Format B)
3. Questionnaire for teachers to write in (Format C)
4. Child Interview schedule (Format D)
5. Achievement test papers for Class II in Tamil, Mathematics, English
6. Achievement test papers for Class IV in Tamil, Mathematics and English
7. Reading test sheets for Class II for Tamil
8. Reading test sheets for Class IV for Tamil and English

The following steps were followed for construction of all the formats:

- Identification of areas to be included in the survey
- Draft design of the formats
- Distribution and comments from all members of the team and from teachers and BRTs
- Development of tools - meetings and discussions were held with experts, researchers, teachers and teacher educators wherein the series of formats/tools were developed, improved and refined. Subsequently, the finalised versions were generated
- Modifications were made after comments from the various members of the peer group
- The same tools were administered during the baseline (July 2007) and at the end of the academic year (April 2008) survey

### Administration of Tools

For the smooth conduct of the survey, an orientation programme was organized centrally by SSA in Chennai, where it was emphasized by the authorities that a true picture of the schools, rather than a white-washed one was what was expected from the survey, by the department. It was also reiterated that strategies for improvement could be made only if one started from the reality of the actual conditions however good or bad they were.

An orientation for the entire team across the state was also conducted through Edusat just before the survey was administered so that clarifications and doubts could be cleared by the field staff.

### **DATA CLEANING AND INDEXING**

The information collected through school, teacher and student questionnaires and responses to test booklets (Tamil, Mathematics, English) generated an enormous amount of data and to maintain its quality was a huge challenge. So all the information on questionnaires and tests were processed through several data cleaning procedures to ensure that the procedures were followed and the data was accurate.

### Random Verification of Entered Data

About 5% cases in each of questionnaire and test booklets were randomly checked and verified one to one with the original sheets for each state to ensure the quality at data entry level.

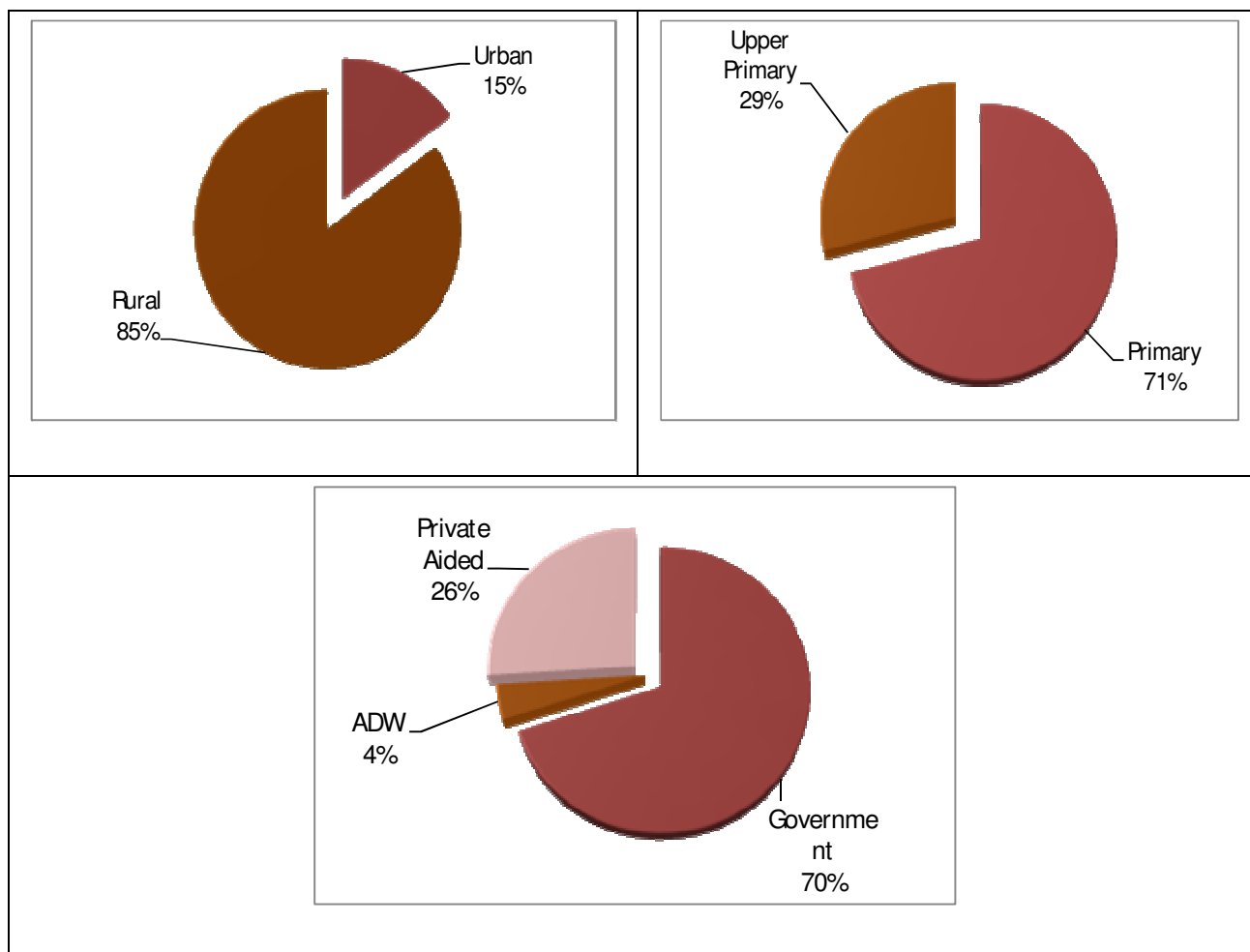
### **LEARNING ACHIEVEMENT ANALYSIS**

Knowing the progress of achievement of students from baseline study in school subjects, across area, gender and community is a matter of interest for one and all. For this, the Tamil, Mathematics and English were administered to students in the sampled schools in all the districts. The percentage of mean achievement, percentiles, frequency and cumulative frequency and standard deviation were computed to know the status of achievement of students across the state.

## CHAPTER TWO – Sample Profile

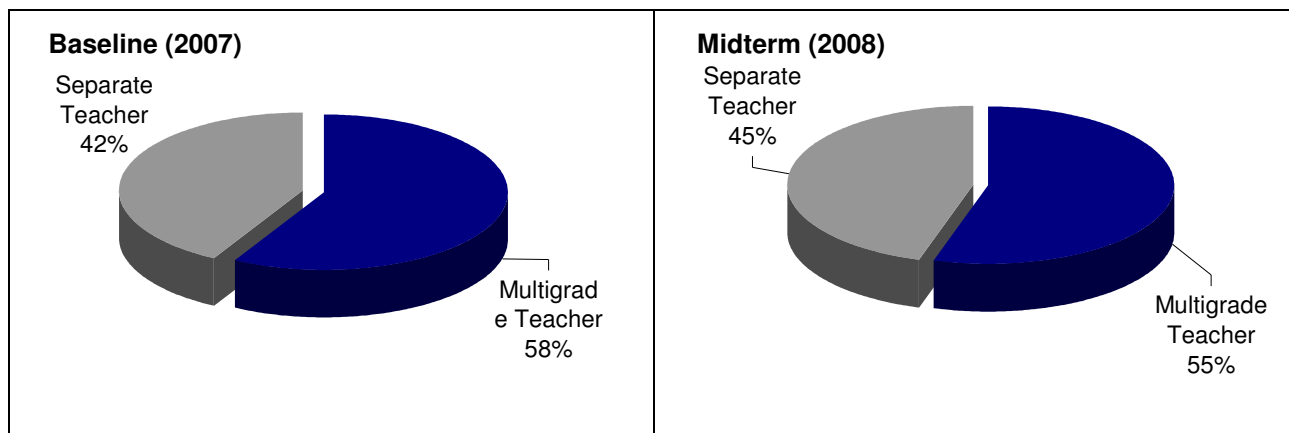
### Class II Sample

#### Distribution of Schools of Class II Students



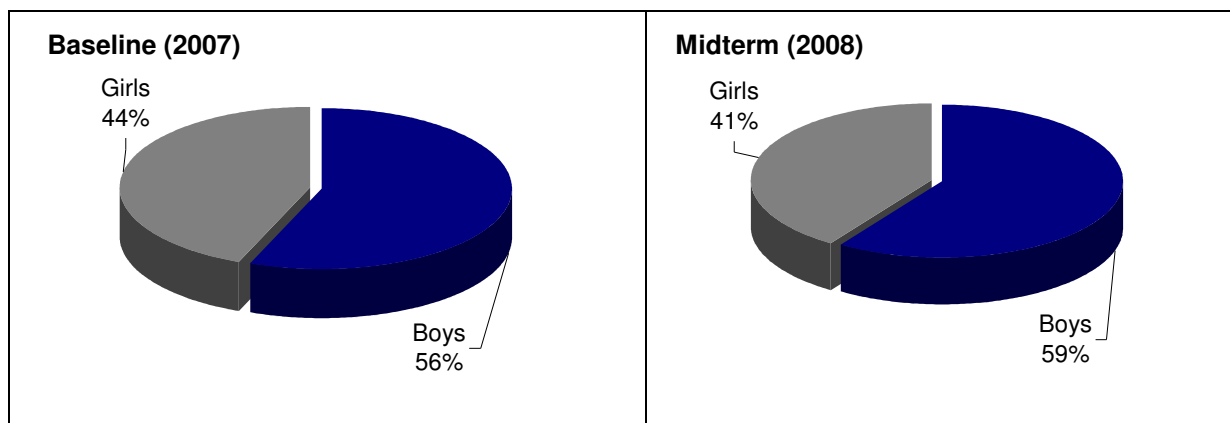
- Out of the total sampled schools, 85% were from rural area and 15% schools were from urban area
- School category wise, 71% schools were primary and remaining 29% schools were Upper Primary schools
- Management wise, 70% schools were government schools , 26% were private aided and remaining 4% schools were managed by ADW management

### Distribution of Class II children on the basis of Teacher Status



- Regarding teacher status, 58% children were sampled from multigrade schools during 2007 study as compared to 55% children during 2008 study
- During 2007, 42% children were sampled from mono-grade schools but during 2008 it was 45%

### Distribution of Class II Children by Gender

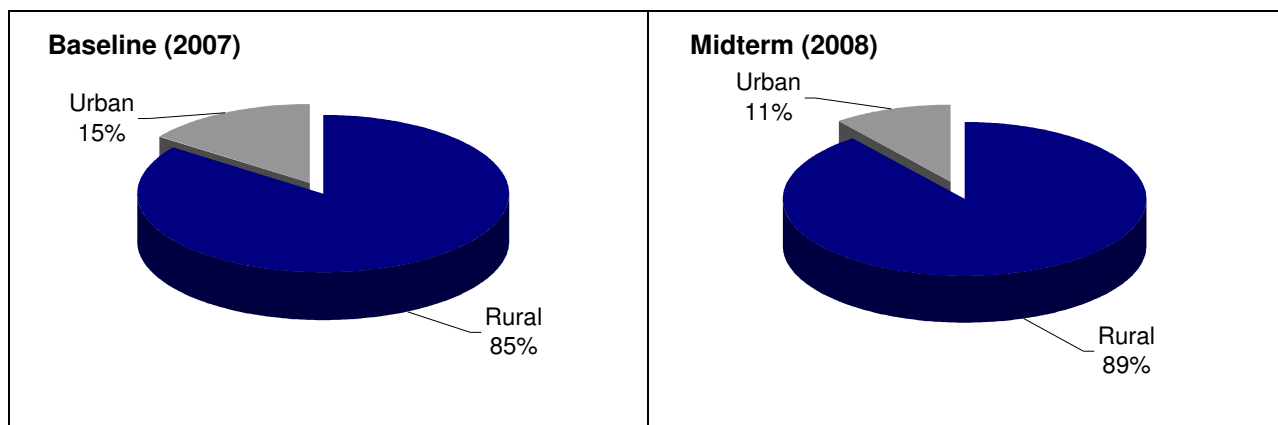


- Out of sampled children during 2007, 56% were boys and 44% were girls
- In 2008 study, out of the sampled children the boys and girls ratios was 59:41

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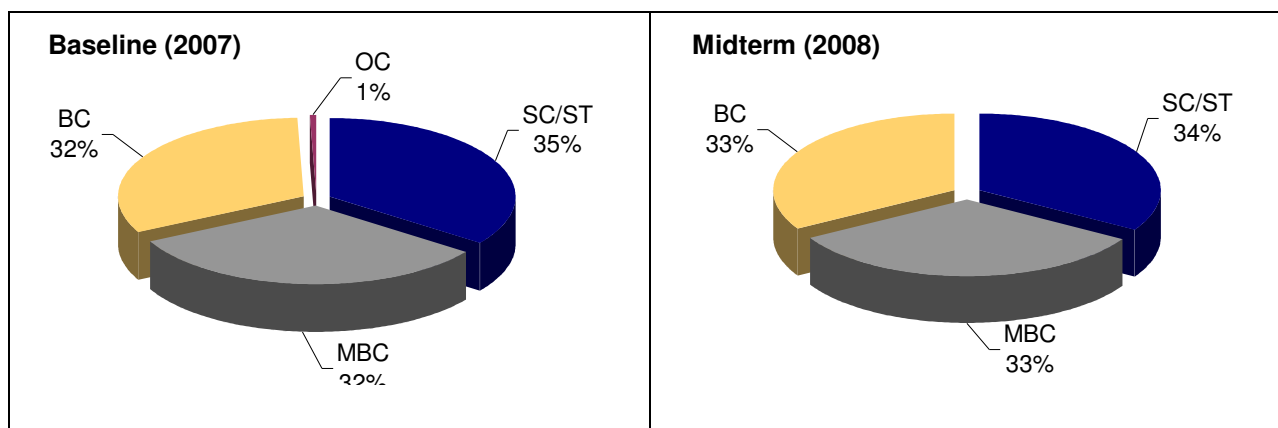
Note: At times the nomenclature mid-term has been used for the year-end study as another round of survey was envisaged at the end of two years.

### Distribution of Class II Children by Location

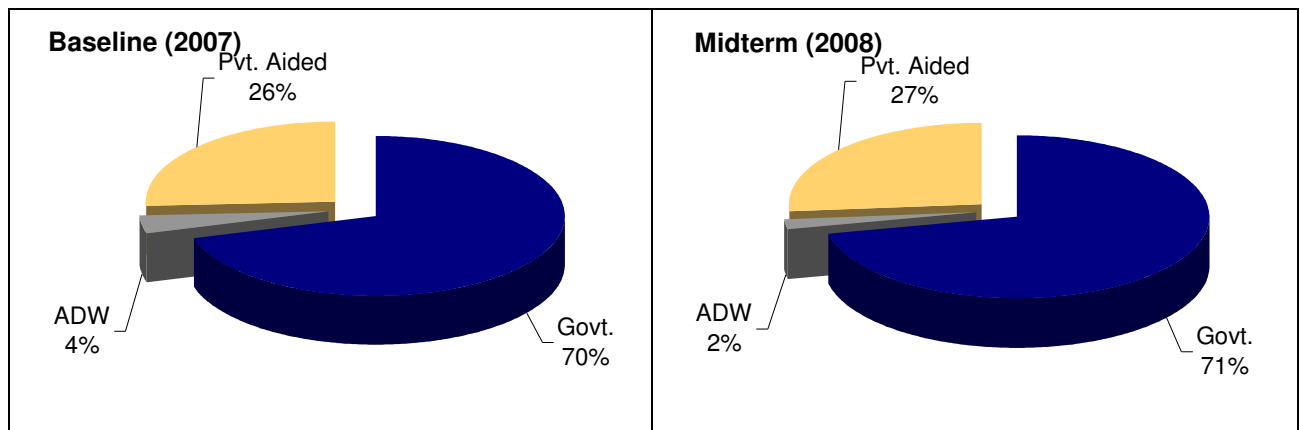


- Location wise, in 2007 study 85% children were from rural and 15% children were from urban area
- However, during 2008 study, 11% children were from urban and 89% children from rural area were included in the sample

### Distribution of Class II Children by Community



- Both in 2007 and 2008 study, the community wise distribution of children was almost the same

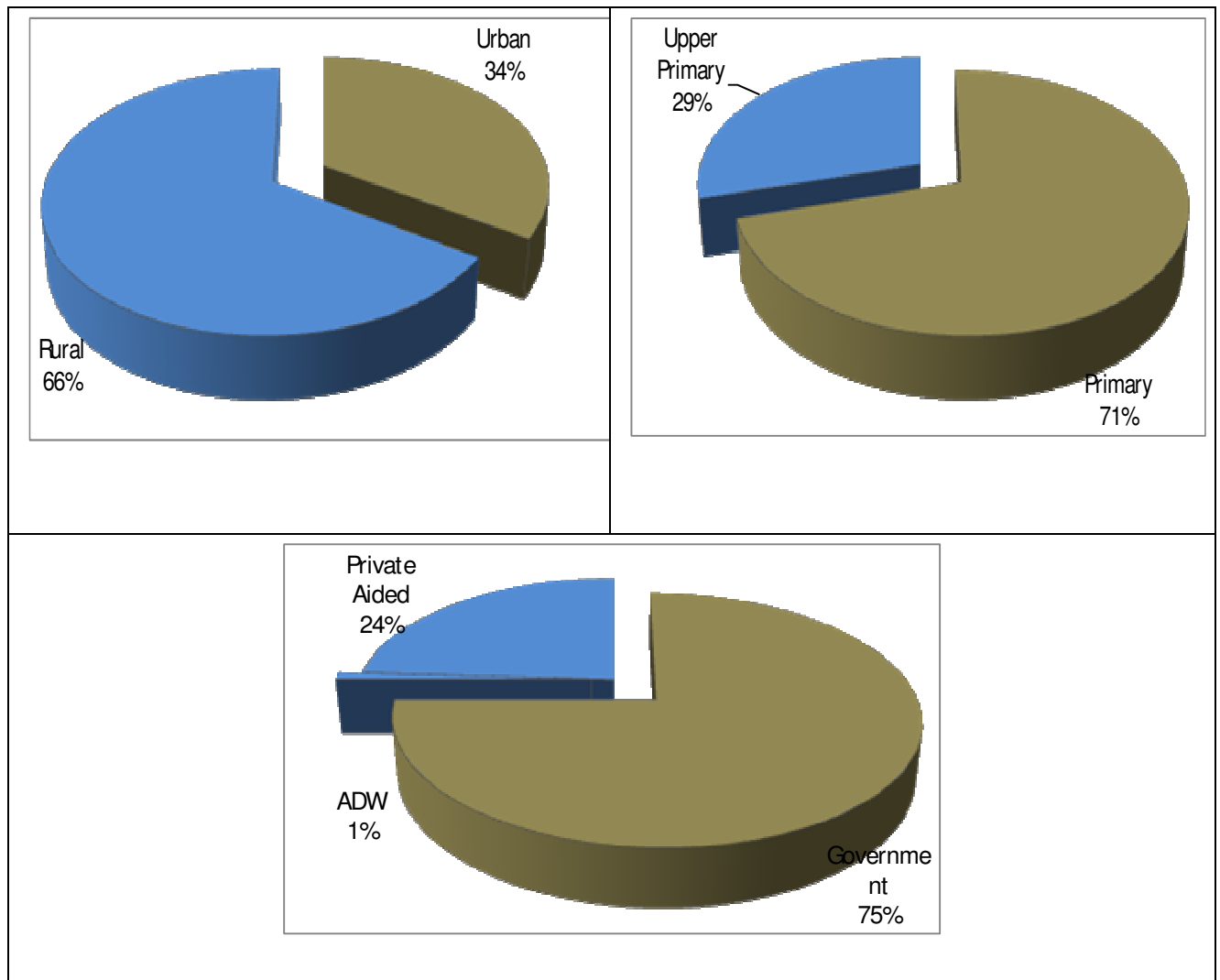
**Distribution of Class II Children by Management**

- Management wise, 70% children were from government, 26% children were from private aided and 4% children were from ADW managed schools during 2007 survey
- In 2008 study, management wise distribution of children was very similar to that of 2007 survey



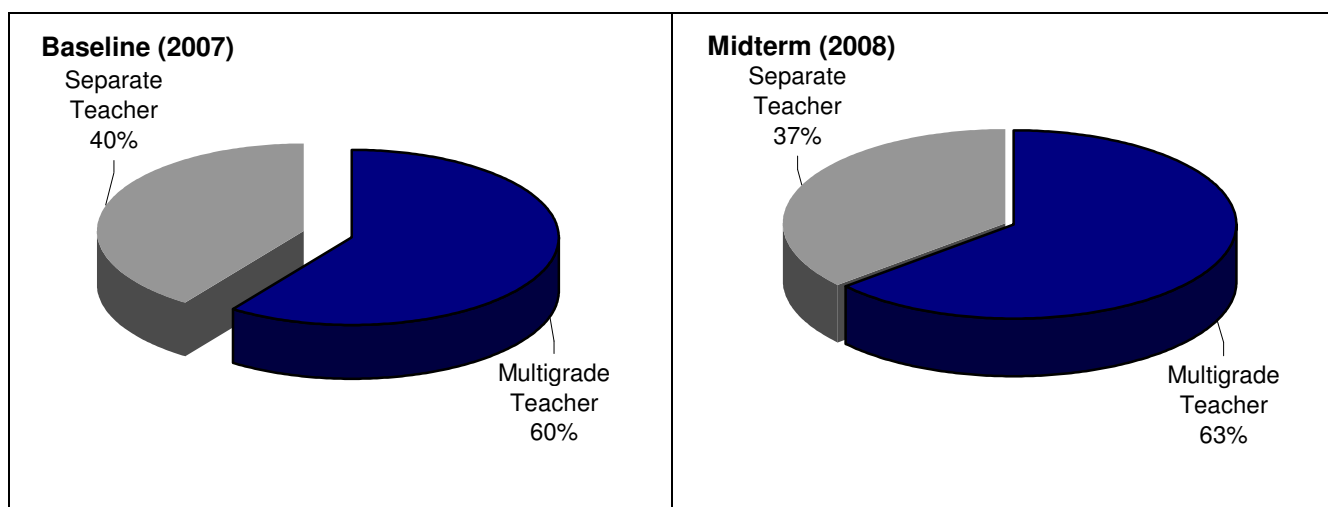
## Class IV Sample

### Distribution of Schools of Class IV Students



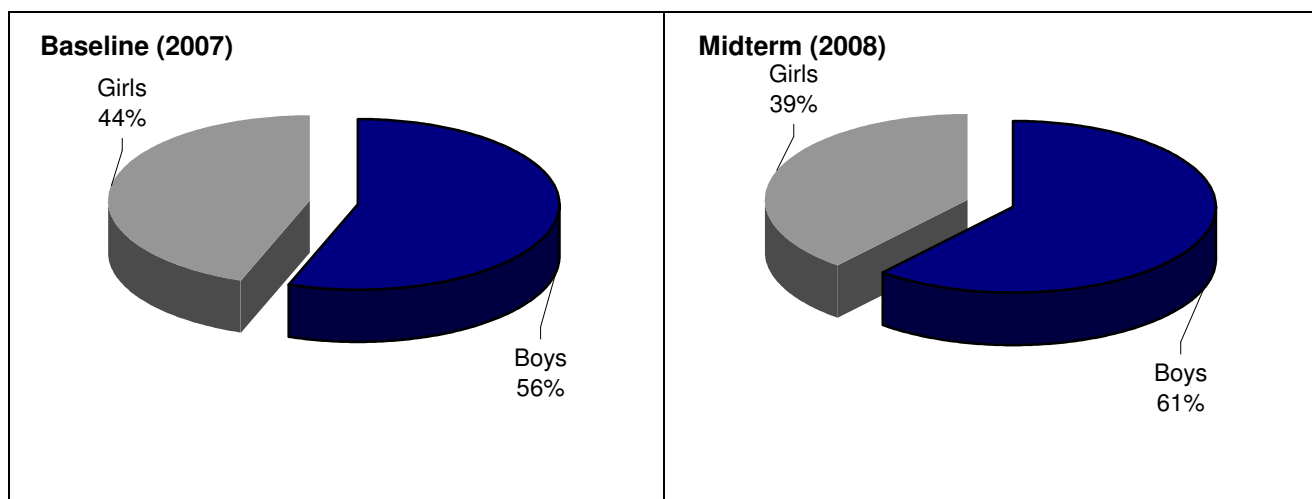
- Out of the sampled schools, 66% were from rural area and 34% schools were from urban area
- School level wise, 71% schools were primary and remaining 29% schools were Upper Primary schools
- Management wise, 75% schools were government schools , 24% were private aided and remaining 1% schools were managed by ADW management

### Distribution of Class IV children on the basis of Teacher Status



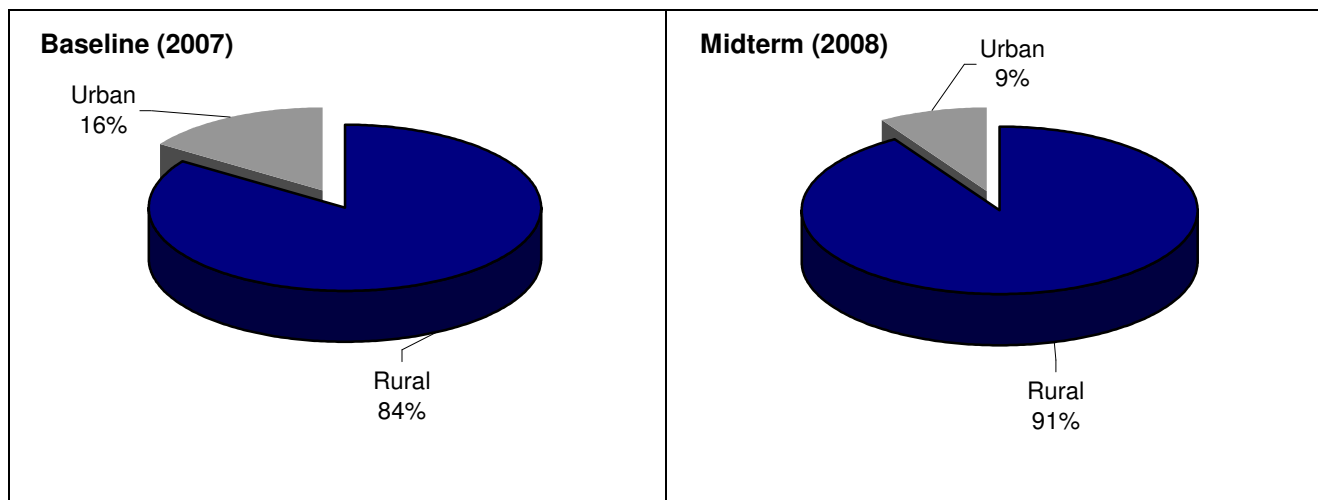
- Regarding teacher status, 60% children were sampled from multigrade schools during 2007 study as compared to 63% children during 2008 study
- During 2007, 40% children were sampled from mono-grade schools but during 2008 it was 37%

### Distribution of Class IV Children by Gender



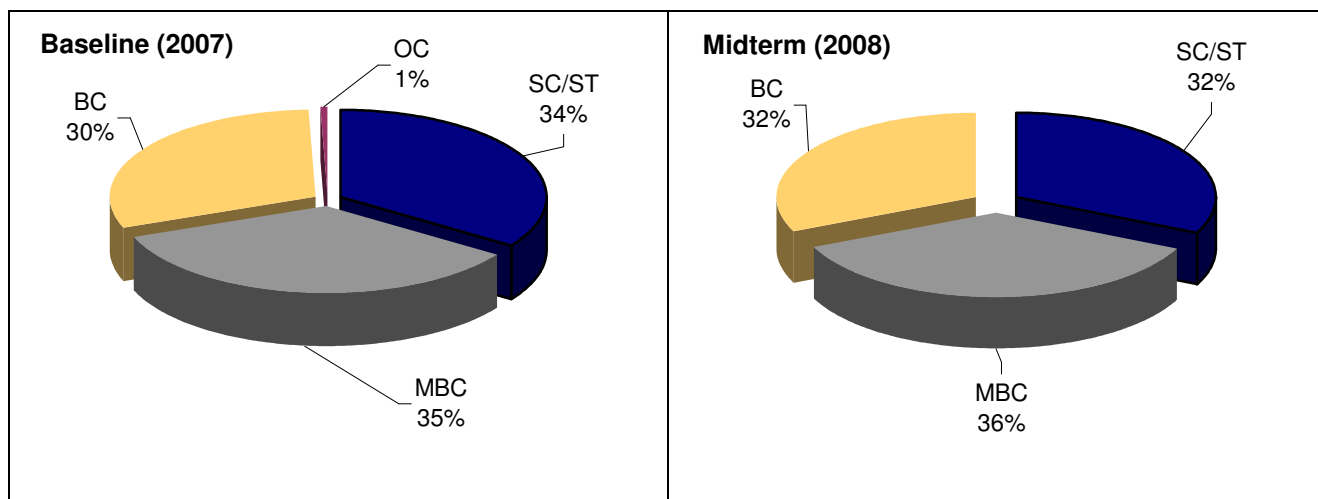
- Out of the sampled children during 2007, 56% were boys and 44% were girls
- In 2008 study, the boys and girls ratios was 61:39

### Distribution of Class IV Children by Location



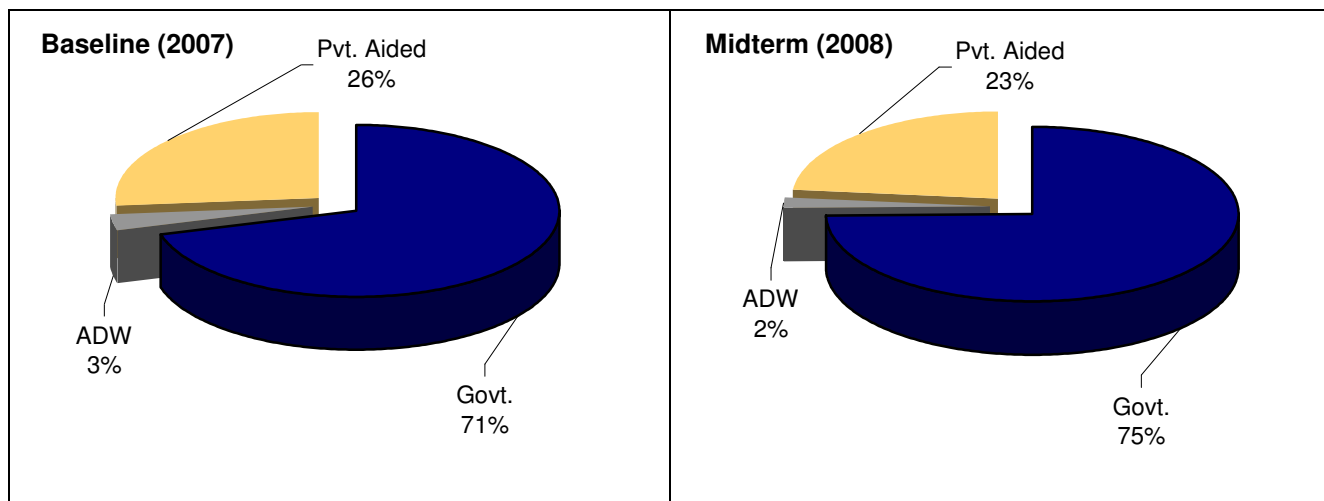
- Location wise, in 2007 study 84% children were from rural and 16% children were from urban area
- However, during 2008 study, 9% children were from urban and 91% children from rural area were included in the sample

### Distribution of Class IV Children by Community



- Both in 2007 and 2008 study, the community wise distribution of children was almost same

### Distribution of Class IV Children by Management



- Management wise, 71% children were from government, 26% children were from private aided and 3% children were from ADW managed schools during 2007 study
- In 2008 study, 75% children were from government, 23% were from private aided and only 2% children were sampled from ADW managed schools

## **CHAPTER THREE - The Learning Classroom 2007**

The Baseline Survey was conducted in July 2007 to measure the classroom processes in approximately 750 randomly chosen government primary schools in Tamil Nadu. Multiple aspects of classroom functioning were recorded including the physical layout of the classroom, the behaviour and engagement of the students, and the teacher's methods of instruction and interactions with the class. In order to fully examine the extent of children's participation in the learning process this study incorporated aspects of the physical, cognitive, social and emotional environments of the classroom. Measures were taken from three perspectives in second and fourth standard classrooms: a classroom observer, the teacher him/herself, and a random sample of students from the class. These observations are compiled in the findings below to present an overall picture of the classrooms before interventions were brought into the system.

### **Physical Environment**

The physical dimensions of the classrooms and the ways the space is used were measured in the Baseline study to determine if classrooms were comfortable places for students to learn. Most of the observers in the study reported that all of the students in the classrooms sit on the floor (73%), and the configuration of the class was most likely to be in rows (78%). Very few classrooms had children's seating on benches or mats (29% and 32% respectively). Most children did not sit in circles; only 21% of classrooms utilized a circular seating arrangement.

Many teachers felt that the space in their classrooms was sufficient to accommodate their class size. Ninety percent felt there was enough room for the children to sit and work comfortably, and 83% felt there was enough room to work moving around. A slightly lower 80% and 79% respectively felt there was enough room to alter seating arrangements according to the activity being done and for learning materials to be displayed. Though the teacher's ratings are slightly higher, independent observers generally agreed with the teacher's ratings of the overall physical environment in the classrooms.

**Table 4: Physical Environment of Classroom Rated by Teachers and Observers**

|   | Percentage of teachers rated adequate | Percentage of observers rated adequate |
|---|---------------------------------------|--|
| Space availability for children         | 90                                    | 86                                     |
| Space availability for materials        | 79                                    | 77                                     |
| Space for altering seating arrangements | 80                                    | 74                                     |
| Ventilation                             | 95                                    | 95                                     |
| Light                                   | 95                                    | 95                                     |
| Cleanliness                             | 99                                    | 93                                     |
| Orderliness                             | 97                                    | 83                                     |

From the perspective of the teachers and observers at the time of the Baseline study, the space of a classroom was deemed sufficient if there was room for all of the children to sit in a standard format of rows. However, considering the space to be sufficient at this time meant that teachers were not visualizing the additional space that would need to be available for the range of activities and materials they would later utilize during the intervention for an active learning classroom.

#### District Comparisons of Physical Environment

In the majority of schools in each district observers rated the **space available for children** in the classroom to be adequate. The average measurement for a classroom is 15 x 20 square feet, with a verandah or a corridor adjacent to it. The percentages of second standard classrooms rated adequate ranged from a low in the district of Theni (67% adequate) to a high in Dharmapuri (96% adequate). In fourth standard classrooms the lowest percentage rated adequate was in Coimbatore (65%) and the highest was Nagapattinam (95%).

Observers noted that there was adequate **space available for materials** in over 70% of second standard classrooms in every district except Erode (68% of 146 schools), Karur (47% of 83 schools), the Nilgiris (68% of 123 schools), Theni (56% of 125 schools) and Villupuram (67% of 126 schools). Similarly in fourth standard classrooms over 70% of the classrooms in the district had sufficient space for materials except in Coimbatore (50%), Erode (63%), Karur (53%), Perambalur (66%), the Nilgiris (56%), and Thiruvavarur (59%). In 23% of the schools, that is, in over one-fifth of the sample schools; the space required for materials was recorded by the observers as inadequate.

The final question of space posed in the questionnaire measured the amount of **space** available to alter seating arrangements in the classroom. Second standard classrooms in Karur (50%), the Nilgiris (57%), Theni (66%), Thiruvavarur (63%), and Villupuram (69%) were noted to be lacking in sufficient space in the classroom. In fourth standard classrooms in Coimbatore (63%), Dindigul (56%), Erode (64%), Karur (53%), Namakkal (62%), Ramanathapuram (67%), the Nilgiris (61%), Theni (67%), Thiruvavarur (52%), and Villupuram (63%) space was insufficient in over 30% of classrooms. Overall, having sufficient space available for children, materials and altered classroom configurations was not considered to be a problem in most districts. However, there was a slight decrease in the amount of sufficient space available in some districts as children aged. Observers noted that there was more space available in second standard classrooms than in fourth. This could be a result of classroom size decreasing in higher grades, or a lack of larger classroom spaces to accommodate growing children. Further studies would be needed to explore this finding further.

Second standard classrooms in Karur (only 69% adequate), Salem (64%) and Thiruvallur (50% orderliness, 60% cleanliness) were not properly maintained, though all districts had at least 70% of classrooms rated adequate for proper ventilation, light and cleanliness. Similarly, the majority of the fourth standard classrooms in each district (over 70%) had proper ventilation, light, and cleanliness. Schools in Karur (53%) and Thiruvavarur (62%) were improperly maintained.

This study explored facilities and cleanliness from the perspective of teachers and observers and did not consider the larger question of what should be the

acceptable standards for government school classrooms. Thus, these subjective measures are the bare essentials of space, cleanliness, light and ventilation. Much can still be improved upon in many of these classroom environments, and it was one of the goals of the present study to challenge former notions of what is acceptable.

## Teaching and Learning Materials

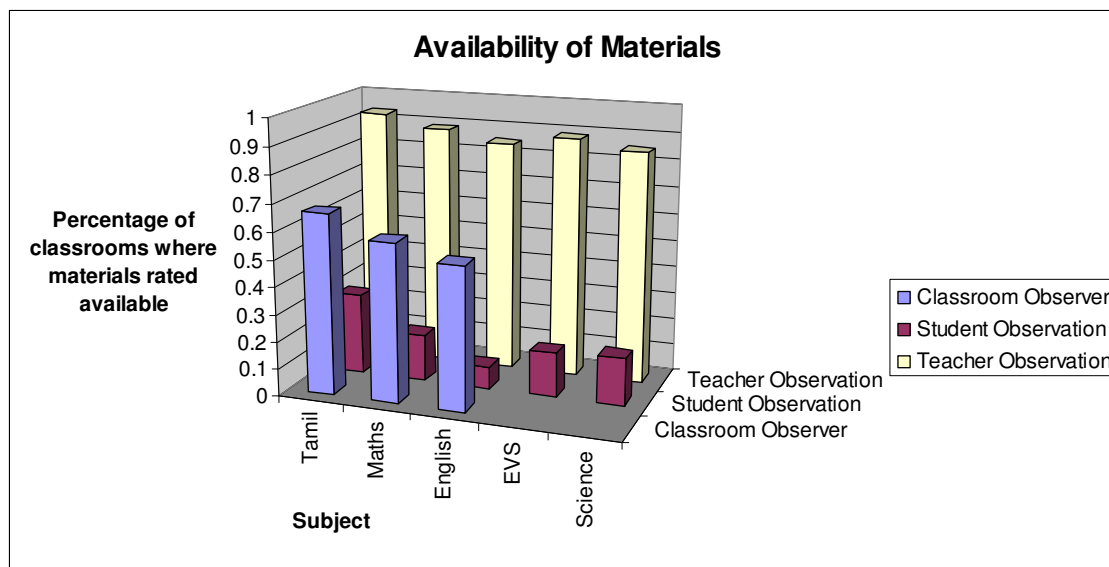
One of the primary objectives of the Baseline Study was to review whether the classroom environments were congenial for the teaching-learning process. One of the key teaching tools in every classroom is the blackboard. In this study, observers, teachers and students reported on the use of the teacher's blackboard as well as the lower level blackboards in the classroom. Previous reports at the national level have found that Primary schools are the most likely to be without blackboards. In 2005-2006, 7.53% of the primary schools in India did not have blackboards (Mehta, 2005). In this study, 96% of classrooms had a functional blackboard for the teacher's use. In other words, only 4% of schools were without a blackboard which is significantly lower than the national average. This is very comparable to the percentages reported by Mehta (2005) of the number of schools in Tamil Nadu without a blackboard in 2005-2006 (2.80 percent; 949 schools).

Though present in most classrooms, only 55% of students reported that they can see the teacher's blackboard clearly. This is unfortunate because 70% of these same students reported that the teacher spends time writing on the blackboard in most classes. The teachers rated the blackboard as one of the most important materials in their classrooms; 82% find it to be very important in their daily work. Observers saw teachers using the blackboard for over half of the forty-five minute observation period in 21% of classrooms, and an additional 61% of observers rated the teacher's use of the blackboard to be "medium" (20 minutes or less of the observation period). Thus, it can be assumed that information is missed when students do not have a clear view of what the teacher is writing during his or her lessons. The students in some classrooms (45%) reported that they were occasionally given the opportunity to approach the teacher's blackboard and write, though observers only felt this opportunity was given "often" in 14% of classrooms.



Lower level blackboards were available for all children to use in 49% of classrooms. This was done in preparation of the ABL being introduced as an up-scaled programme around that time in the State. Similarly, across the nation 46.72% of schools have lower level blackboards, and rural schools are more likely than urban schools to have them in the classrooms (Mehta, 2005). Very few students felt they were given adequate opportunities to write on the lower level blackboards (27%).

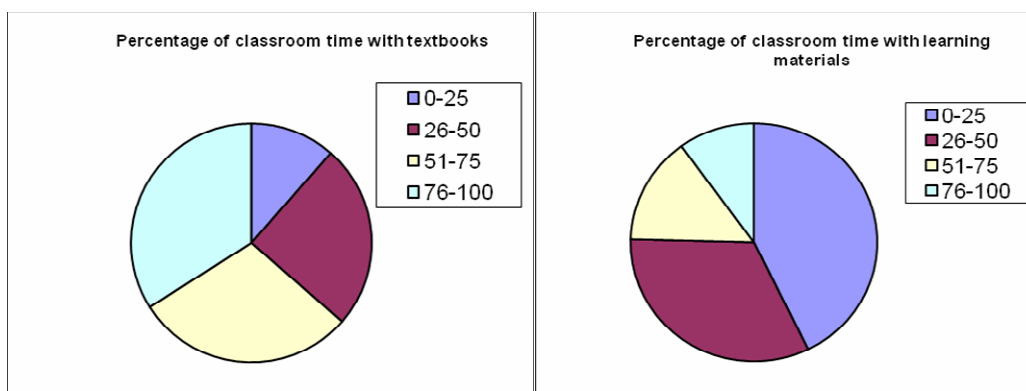
Objective measures of the availability of learning materials in the classroom by observers led to some interesting findings of what is available to students on a daily basis. Though 98% of classrooms had textbooks available for at least some of the children, only 40% of classrooms had some materials available for creative work, such as colored pencils, crayons and loose paper. Teachers supported this finding in their reports. Over 30% of teachers are in an immediate need of crayons, colored pencils, felt pens, and reference materials. Similarly, observers noted that card and paper materials were adequate in only 53% of classrooms. In 83% of the classrooms textbooks were used quite often, and notebooks were often used in 67%. The greater availability of textbooks reflects the frequency with which they are used in relation to creative materials. However, in 36% of classrooms teachers reported that they need books for children to read that are not textbooks. Observers agreed that only 39% of classrooms had sufficient books other than textbooks. When learning materials were reviewed by subject, both observers and students agreed that mathematics and English materials were not always available in the classrooms. Some classrooms were also lacking basic materials; notebooks were not available in 22% of classrooms, and pencils were lacking in 16%.



Beyond the basic materials, learning materials for each subject were observed. Most teachers thought the materials available for each subject were adequate. Interestingly, students felt the opposite. Outside observers rated the materials as adequate in Tamil, Maths and English in just over 50% of classrooms.

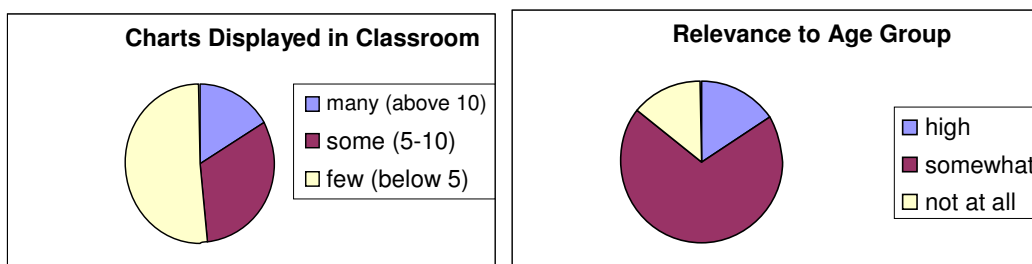
The use of these learning materials for classroom instruction was infrequent in comparison to the use of textbooks and other traditional forms of instruction. Textbooks were used for over 50% of the classroom time in 55% of classrooms. Learning materials and games were rarely used to this degree. Only 19% of classrooms used learning materials for more than 50% of classroom time. Only 8% used indoor games, and 6% of classrooms used outdoor games for more than 50% of learning time. However, most classrooms did offer some exposure to these varied learning methods. In 34% of classrooms learning materials were used for 0-25% of classroom time. Similarly, children received exposure to indoor games and outdoor games for less than a quarter of classroom time in 34% and 26% of classrooms respectively. These findings suggest that textbooks are largely the main source of learning, but teachers do expose children infrequently to other methods of instruction.

### Classroom Time with Textbooks and Learning Materials



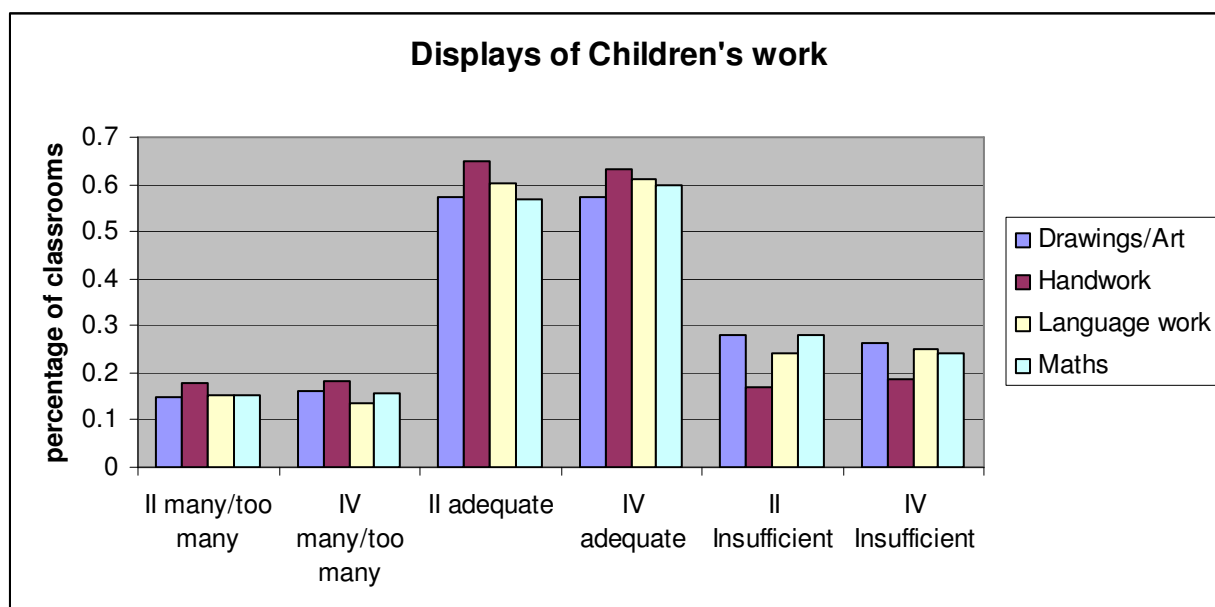
Perhaps an increase in the availability of materials would lead to a similar increase in the percentage of time they are used for instruction. These findings suggest that an intervention that focused on increasing the availability and use of learning materials in the classrooms would be productive. Both teachers and students agree that there are positive benefits to learning with the support of additional materials. However, it was also noted by observers that the materials presently in the classrooms are wholly inadequate to meet the learning needs of the students. Only 6% of observers found the materials in the classroom to be highly age appropriate, or above the pre-primary level. Notably 23% of observers found the materials to be not at all challenging to the students in the classroom. Children also feel the materials are too easy; 57% of children felt they could learn easily without much effort using the materials available at the time.

An additional aspect of the teaching and learning environment is the presence of charts and displays of children's work to make up the landscape of the classroom. Only 17% of classrooms had a significant number of charts displayed, and only 16% of classrooms had charts that were rated highly relevant to the age of the children.



Within the group of classrooms that had a few charts on display the charts were seldom changed; in 34% of all classrooms the same charts were up for the entire school year.

Similarly, displays of children's work were not frequent or comprehensive though 89% of teachers said that displays of children's work were very motivating for the children. When the children were interviewed, 53% reported that their work is never put up for display. Classroom observers noted that while 61% of classes had adequate language work on display and 58% had sufficient maths, there was slightly less creative work displayed. Art, drawings and other creative work was sufficient in only 57% of classrooms, though 64% had handwork on display.



Only 29% of students reported that their drawing had been put up for display recently. Strikingly, in 26% of classrooms it is a year *or more* before children's work displays are changed. Though observers noted displays in the classrooms, very few children reported their own maths work (4%), writing (14%), or handwork (5%) being displayed. Supporting this, observers did find that classroom displays were more likely to include the work of only a few of the students in the class. In 51% "a few" student's work was on display, and in only 16% of classrooms were "most" of the student's work on display. This suggests that even with a high frequency of displays

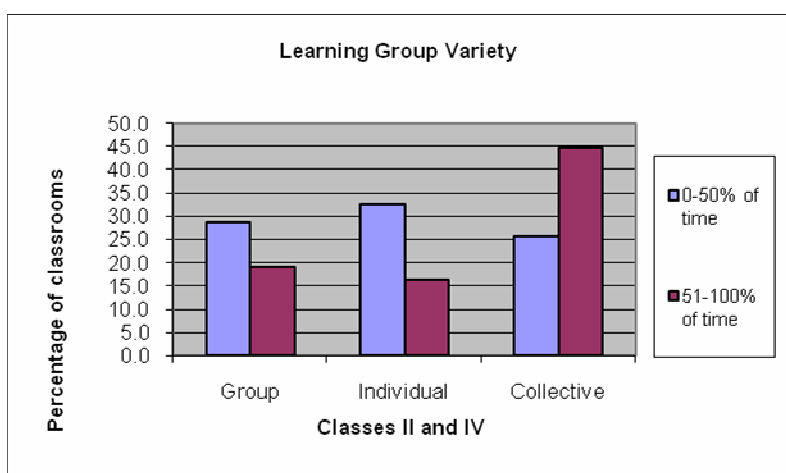
of work in the classroom the majority of students are not receiving the motivational benefits of seeing their work adorn the classroom walls.

## Class Management

The structure of the classroom and the flow of activities throughout the day are very important to the success of students. The findings of the Baseline Study explore how teachers in Tamil Nadu structure classroom activities and instruct children in what to do throughout the day.

Observers noted that in only 24% of classrooms do the textbooks instruct the children in what to do after they have completed an activity. More commonly it is the teacher who instructs children at each step. In only 11% of classrooms do children choose their activity on their own, and in 17% do most children decide independently what to do next. Corroborating these findings, 71% of children interviewed reported that the teacher tells the class what to do at all times. Teachers agreed; 76% reported that they instruct the children in what to do next at every step of their work.

Teachers favour structuring the class into one large learning group; 45% of observers saw teaching conducted in one collective group for over 50% of classroom time. This is in comparison to only 19% of observers recording group learning for over 50% of classroom time. Individual learning was the lowest, occurring over 50% of the classroom time in only 16% of classrooms.

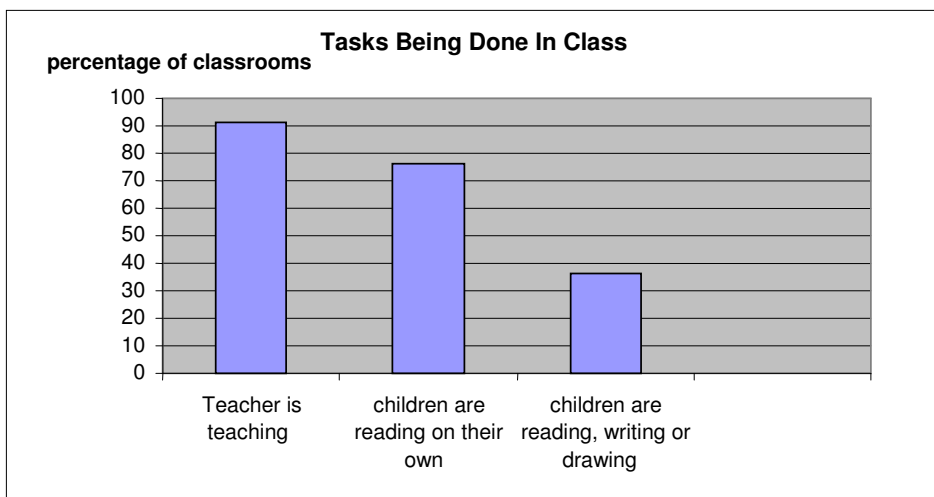


These findings are somewhat surprising since only 1% of teachers felt that grouping children did not improve children's ability to learn, and 73% of teachers reported grouping children on a daily basis. This suggests that though teachers see the positive benefits of smaller group learning, the way they structure their classroom and the children's learning time is not conducive to individual and group learning centers.

Multi-grade groups were observed in 31% of classrooms. When present, observers made note of the materials available and activities being conducted within these groups. Not surprisingly, textbooks were used for over 50% of the time in multi-grade groups in 54% of classrooms. Learning material cards were being used over 50% of the time in only 19% of classrooms and self learning materials in only 6%.

### **Child Participation**

The structure of the classroom and variety of activities can influence the potential for learning and interaction. Similarly, the lessons teachers plan and the way they execute their lessons helps determine the effectiveness of the teaching process. Teachers were judged by observers to be relatively prepared for class. Only 8% were judged to be unprepared for a lesson, and only 6% had failed to appropriately plan for each child in the class. However, the teachers' primary method of instruction was direct teaching, which was observed in 91% of classrooms. In 36% of classrooms students were reading, writing or drawing during the lesson, and in 76% of classes children were reading on their own. Multiple activities were recorded in some classrooms during the same observation period, though it is still significant that children spent the majority of the observation time either being taught by the teacher, or reading on their own.



Additionally, 36% of teachers failed to bring any teaching materials to class. This indicates that though teachers have prepared their lectures, the majority failed to prepare lessons that involved interactive learning or incorporated additional materials for examples or discussion. When teachers did bring teaching materials to support their lessons, children in 61% of the classrooms found the materials interesting. Teachers report they are teaching primarily through activities in 83% of classrooms. They also claim to teach using rote memorization in 83% of classrooms, though 81% said they try to teach by rote with understanding. Observations of the amount of time students spend during class actively engaged with materials and participating in activities that further their understanding contradict the majority of teachers' impressions that they are teaching through activities.

Observers rated teachers' effectiveness in presenting their lessons to students. Though teacher's clarity of communication was rated as "high" in 97% of classrooms, understanding among the children was only rated "high" in 32% of classrooms. Though teachers did an adequate job of introducing their lessons in 62% of classrooms, they gave explanations with examples in only 30%, and used teaching aids in 58%. This suggests that though the teacher is speaking clearly, the reinforcements needed to help children learn and engage with the material are lacking.

The findings of this study suggest that the instruction in most classrooms does not accomplish the goal of learning through activity but revolves around listening and

watching the teacher for the majority of classroom time. The teachers' impressions matched observational findings in one regard, only 34% of teachers said they teach mostly through activity alone. In order to reach the goals of teaching and learning through activity, experience, and understanding the amount of class time devoted to these activities needs to increase significantly in most classrooms.

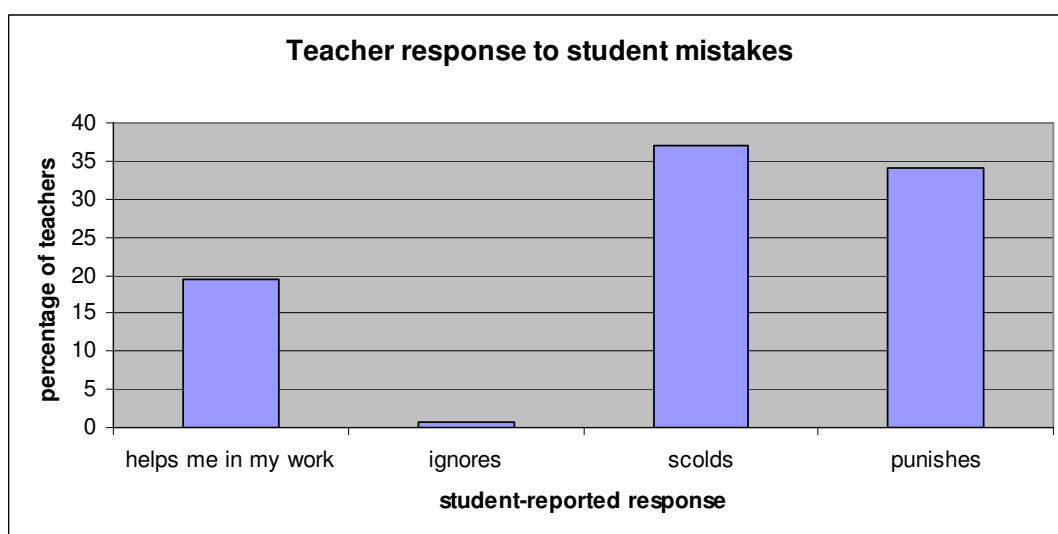
One of the aims of this study is to examine the children's levels of interest and participation in the classroom as it relates to understanding and learning. Children were concentrating at a high level in only 30% of classrooms. In 85% of the classrooms the majority of the children were not paying attention to their work, and in only 20% of classrooms did observers strongly feel that students were primarily attentive to the teacher. Teachers' efforts to actively involve children in the lessons were minimal. Though 75% of teachers asked relevant questions of the class, when questions were asked only 17% of teachers strongly encouraged children to volunteer answers. Children were encouraged to ask questions by 48% of teachers, but if the teacher asked the question she was more likely to address it to seemingly bright students in 60% of classrooms. Teachers did not appear to address boys or girls as a group more frequently, nor did they favour students from affluent backgrounds or forward communities. However, it is noteworthy that in 61% of classrooms teachers rarely or never addressed questions to disabled students. Children in certain groups were also less likely to ask questions of the teacher. It is understandable that in 80% of classrooms the children who appeared distracted were rarely or never observed asking the teacher a question. However it is less acceptable that students who appeared to be poor in 62% of classrooms were not observed posing questions. Teachers also reported that in only 21% of classrooms children from poor families were often the ones who asked questions. Similarly, only 15% of the teachers felt that students from lower castes often ask questions in their classes. Children who were considered less bright in 78% of classrooms and those who were disabled in 78% of classrooms did not ask questions of the teacher during the observation period. Looking at both especially quick as well as slower learners, little of the classroom instruction offers modification for these groups of students. Only 12% of teachers made an extra effort in their lessons to appeal to bright students, and only 14% modified their teaching for slower learners. Taken together, teachers in the study offered little support for students with different learning styles,



and do not actively engage students of all ability levels during their lessons. When asked why some children do not participate in their classes over half of the teachers felt that it was because of the student's family background. Only 14% felt it was because of the students' disinterest in their studies, and 16% felt it was because of a lack of concentration. Overall, teachers did not feel that a lack of learning materials or a lack of teacher training largely contributed to their students' lack of participation during classroom activities.

### The Teacher-Child Relationship

The importance of the relationship between teachers and their students is well documented. The teacher sets the tone of the classroom, and creates or diminishes an environment that encourages open learning and development. Teachers were most likely to see their role in the classroom as a friend (84%), parent (69%), or observer (57%). Very few teachers saw themselves as facilitators (45%) or leaders (46%) in their classrooms. Though the teachers aim to create a friendly and open environment, observers noted that in almost half of the classrooms (43%) children were rarely or never observed asking the teacher a question. Teachers were also observed silencing the class "frequently" in 66% of classrooms. Though there were low recorded instances of teachers behaving negatively by expressing anger, irritation, sarcasm, or punishing and threatening, children reported that teachers were more likely to scold (37%) or punish (34%) when students made a mistake.



## Assessment

According to the observers, few children receive any form of feedback from their teachers. There was no record of assessments done of children in 52% of classrooms. If children do receive feedback it rarely extends beyond marks. In a small number of classrooms teachers offer verbal support for student's efforts in the form of comments or discussion, but this was only observed in 27% and 19% of classrooms respectively. A majority of teachers agree; 95% of teachers reported that they give students feedback through marks. However, 94% reported that they also give feedback through discussions. Only 31% give comments and 22% give reports.

Teachers reported recording the children's work in a variety of ways; however they also reported that these records were not reliably maintained. Observers noted that there are records of individual children's work in the form of charts in only 20% of classrooms, and observation registers for the whole class with individual records in only 19% of classrooms. Among teachers in the study, 31% do not maintain charts, 44% do not maintain the observation book for the class, and 50% do not maintain individual records of children's work. When asked about portfolios for children's work, 69% of teachers reported they either did not maintain or did not have portfolios in their classrooms.

With so little reliable feedback for students on a regular basis, it is difficult for them to gauge their own progress. Positive feedback is encouraging to students in a way that marks given on a sporadic basis are not. Also, it is difficult for teachers to fill in gaps in a student's knowledge without a reliable record of the student's work such as a portfolio. When children are absent only 10% of them find it easy to pick up where they left off. This is likely due in part because teachers do not have adequate records of what work has been completed. The majority of children who miss school find it difficult to cope, or simply copy the work they missed.

## Planning and Monitoring

Most teachers (94%) report that they plan for their classes, and 75% write out a lesson plan. Though 81% of teachers reported that it is often possible to follow their lesson plans, teachers were observed to be following a plan in only a little over half (61%) of classrooms. Though observers noted that there is a weekly schedule put up for the benefit of the students in most classrooms (73%), long term planning is less consistent. There was a plan in the classroom for the term in only 41% of classrooms, and only 37% had a plan for the month. Long term planning is necessary to meet all of the requirements of the curriculum for the school term. Similarly, a clear plan benefits students because it gives them an idea of where the class is going.

Teachers face many challenges in planning and executing classroom activities. Teachers reported that access to reading material on various topics would improve their classroom teaching. The majority of teachers (**98%**) would like material on different teaching methods, and **94%** would like information on learning materials. Improved access to information would undoubtedly help them address some of the deficiencies noted in this study in regard to classroom methodology.

## Child Interview Results

Children from second and fourth standard classrooms were interviewed separately on the topics investigated by the Baseline study. The demographics of this sample of children are as follows.

**Table 5: Sample of Children Interviewed**

|             | Boys | Girls |
|-------------|------|-------|
| II Standard | 1645 | 1693  |
| IV Standard | 1695 | 1730  |

On the whole, the children agreed with the outside observers and their teachers regarding the physical environment of the classroom: 63% of the children interviewed said they sit on the floor rather than on a bench or mat, 86% said they are seated in rows, and 91% of the students felt there was enough space to move around. Over half of the students (53%) felt that their teachers only “sometimes” brought materials to class to help the children learn. A majority of children (73%) said that they either “sometimes” or “rarely” get the opportunity to write on the lower level blackboards. However, a lack of space was not the reason for most students; 72% felt there was plenty of space for them to use the lower level blackboards. Though space was not a concern, the structure of the classroom and teaching methodology seemed to be a larger concern of these children.

Continuing to assess the classroom environment, 53% of children reported that their work is never put up for display in the classroom. Though most children reported having textbooks (77%), fewer had their own notebooks (44%) or stationery (37%). In comparison to the teachers and observers, the children felt there was an obvious lack of materials for them to learn by themselves in the classrooms. Tamil, English, Mathematics, Environmental Science and Science materials were all judged to be lacking.

**Table 6: Percentage of students who answered there are “many” materials from which they can learn by themselves after the teacher has shown them initially.**

|                        | % II Standard | % IV Standard |
|------------------------|---------------|---------------|
| Tamil                  | 28            | 32            |
| English                | 9             | 7             |
| Maths                  | 17            | 17            |
| Environmental Sciences | 15            | 17            |
| Sciences               | 17            | 17            |

Students felt the majority of their time in the classroom was spent reading and writing, and listening to the teacher. Of the students sampled, 76% do not draw and

78% do not do handwork in class. When asked what they have the opportunity to do in school children said they *can* draw (80%), paint and do craft work (64%), play indoor games (52%), sing (77%), and talk to their friends (81%). However, the lack of children's reports of actually doing these activities, and the lack of evidence of these activities during classroom observations is notable. The majority of students (82%) found Tamil to be the most interesting subject.

Only 9% of children reported that their teacher does not scold them when they make a mistake, and 34% said the teacher will punish them for errors. Overall, 60% of students described their teacher as "kind". Children felt their work was only kept in their notebooks (67%), rather than in a file, chart, kept at home or erased altogether. Though children know the teachers look at their work, 63% said the teacher ticks their assignments, they don't feel that teachers identify their mistakes (20%), show them the correct answer (10%), or explain the answer to them (7%).

The study, though limited perhaps in some ways, raises some issues and concerns for schools, for training institutions and for policy decisions, which need to be discussed. A critical, rather disturbing issue is that teachers expect so little for themselves as professionals and even less for the children under them. Whatever little classroom space they have, the meagre amount of materials or non-existence of stationery items in a 'normal' government school room, are accepted as sufficient. The professional environment for the teacher, the learning environment for the child has to be enhanced multi-fold but if the immediate stakeholders themselves do not know what and how much they could request for, that are the minimum requirements to fulfil the demands made on them by society, it becomes even more difficult to improve the classroom conditions. Unless one raises the levels of expectations and simultaneously the self-esteem of the professional teacher the situation may continue to slide, however many improvements are made otherwise. A process to enable the collective imagination to take a leap could be set in motion, with the ABL making a beginning in that direction.

## **The Learning Classroom 2008**

After Activity Based Learning materials and trainings had been implemented for nine months data was collected from approximately 200 schools from within the original sample of about 750 government run schools in Tamil Nadu. Following are the preliminary findings from the reports of classroom observers.

### **Physical Environment**

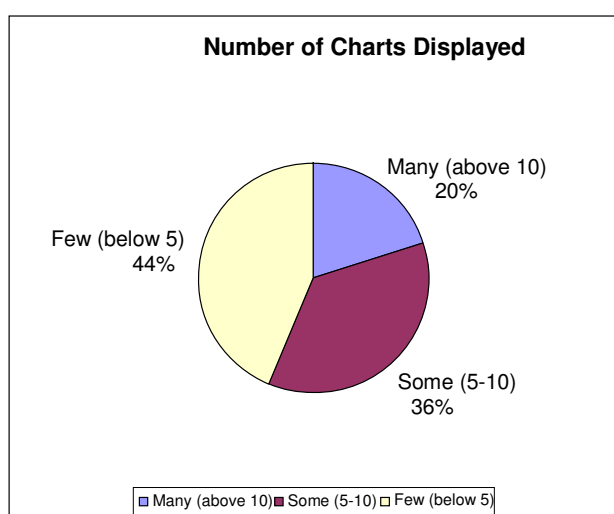
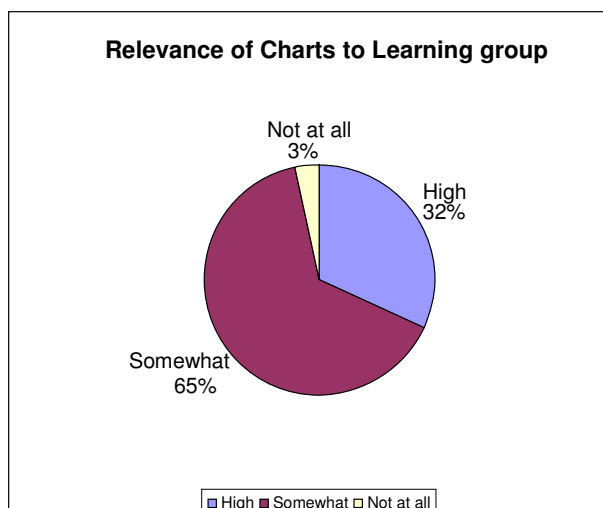
Though the physical classrooms did not change, observers noted significant differences in the ways teachers utilized their classroom space. When data was collected in June of 2007, 78% of the second and fourth standard classrooms organized the children by seating them in traditional rows. When data was collected again in May of 2008 only 5.47% were observed to have all of the children seated in rows. More noteworthy was the fact that rows had been replaced by a circular configuration in most classrooms. Only 21% of classrooms had children seated in a circle in 2007, but observers recorded circular seating arrangements in 81% of classrooms in 2008. Children were also much more likely to be seated on mats (32% in 2007, 83% in 2008), and less likely to be seated on benches (2%) or the floor (9%) when data was collected in 2008.

### **Teaching and Learning Materials**

The lower level blackboards that were added to classrooms across the state as part of the ABL intervention were being utilized by students with much more frequency when data was collected in 2008. The Baseline study in 2007 found that teachers were more likely to be using the blackboards rather than allowing the students opportunities to use them. Teacher use was “high” in 21% of classrooms and “medium” in 61%. After teachers became more familiar with activity based

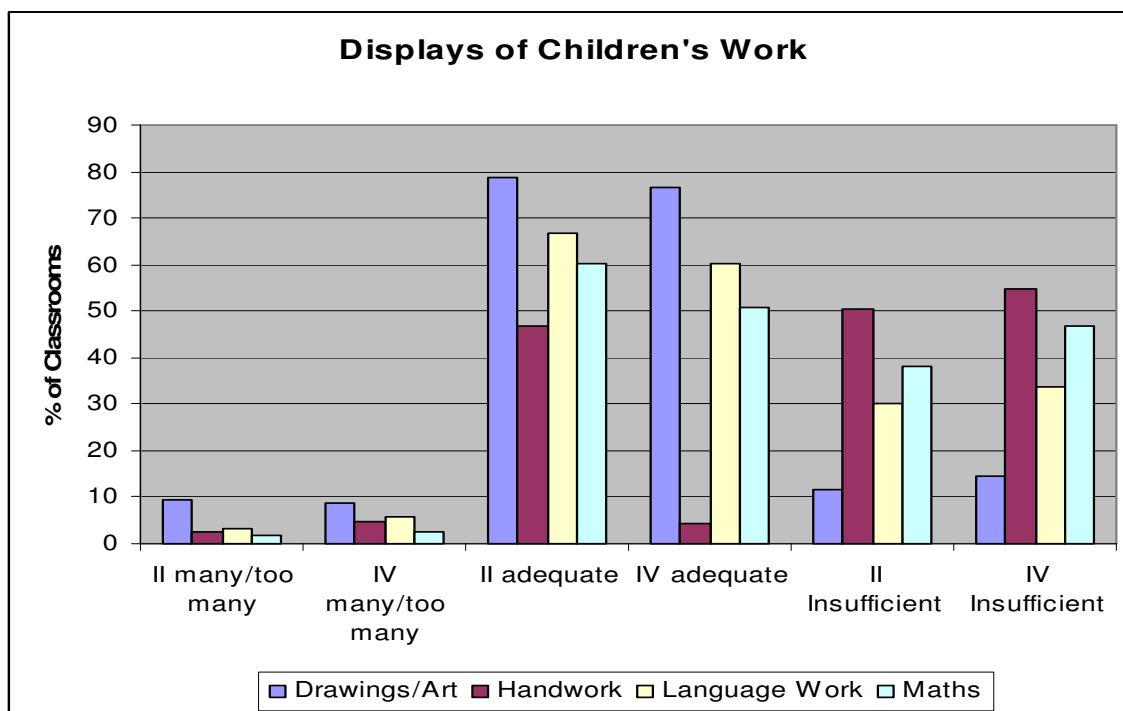
learning practices “high” teacher use decreased to 6% and “medium” to 39%, while student use increased to a high usage in 55% of classrooms compared to 14% during baseline observations. In only 5% of classrooms did observers note that children never used the lower level blackboards, compared to the 28% of classrooms where this was noted in 2007.

The frequency of changing classroom charts had also increased slightly by the second data collection period. The percentage of classrooms in which charts were changed monthly increased by 10% to a total of 36%. The percentage of classrooms in which charts were changed yearly decreased by almost 10% to a total of 25%. The percentage of classrooms in which charts were changed weekly and by term remained unchanged. More importantly, the relevance of the charts to the learning age of the children increased. Only 16% of the classrooms in 2007 had “highly” relevant charts on display. In 2008 this percentage increased to 32% of classrooms and an additional 65% had somewhat relevant charts. This finding illustrates the teachers’ increased knowledge of what is age appropriate and relevant material for the students in their classrooms. Also, perhaps the materials distributed by the department were more appropriate to the academic needs of these students.



The relevance and creativity displayed by the children's own work in the classroom had also increased significantly over the course of the school year. The number of classrooms with an adequate amount of student drawings and art displayed in the classroom increased from 57% in 2007 to 78% in 2008. Additionally, variety amongst the children's work was observed in 74% of classrooms showing an increase in children's creativity and a movement away from everyone doing the drawing in the same way. There was not a significant increase in the amount of language, maths and handwork on display in the classroom, highlighting an area that can continue to be improved upon by the teachers and the training personnel.

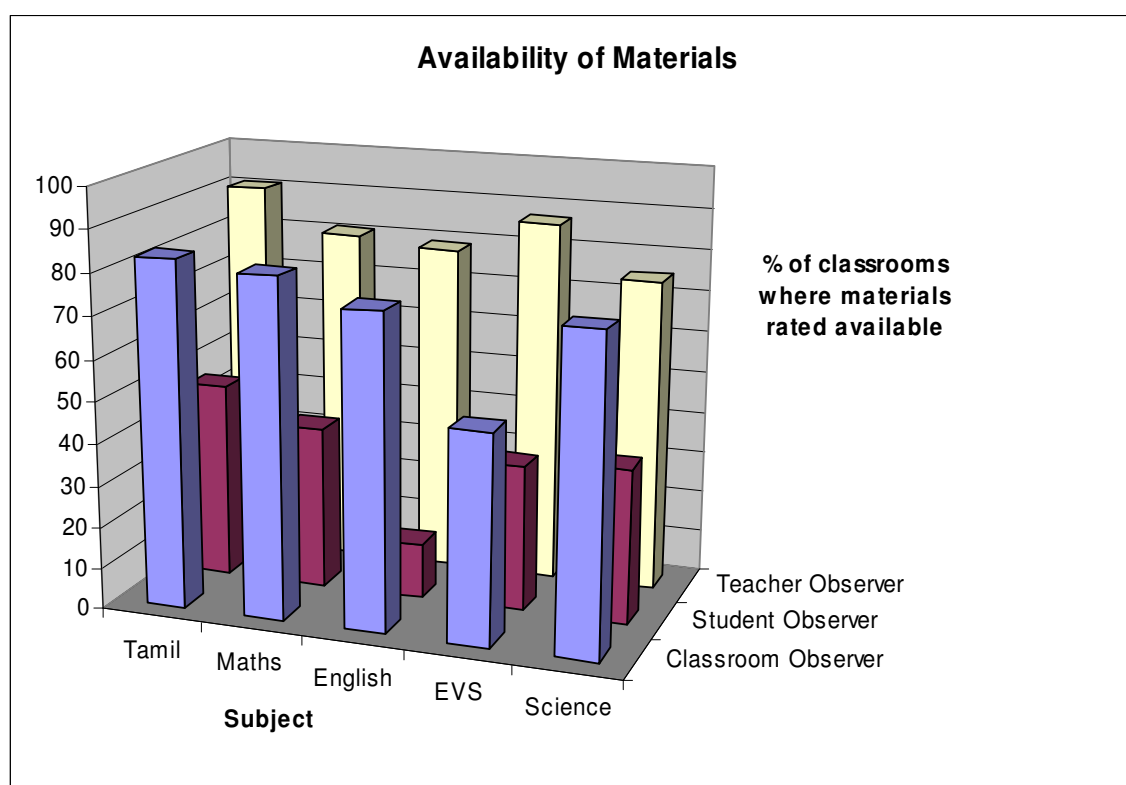




Observing their own work around the classroom is highly motivating for children. Teachers using the activity based learning concepts realized the importance of this, and in 2008 the number of classrooms in which most of the children had some work on display increased to 67% from only 16% in 2007. This shows a movement toward motivating every child in the classroom rather than a few, or only the brightest of the students. Also, the frequency of the teachers changing the displays of children's work increased. More teachers changed the displays monthly (61% in 2008, 28% in 2007) and only 4% waited for a year to change the displays (decreasing from 13% in 2007). Additionally, in 2008 teachers had learned to keep the displays at a convenient height for children to look at them. Appropriately placed displays were found in 95% of the classrooms, compared to only 76% in the baseline study.

An important aspect of the activity based learning modifications in the classrooms was the introduction of appropriate learning materials. The importance of having sequentially planned materials available for children to use cannot be

overstated. During the baseline study materials were inadequate in every subject. Firstly, the materials were not available, and secondly they were not adequate. It may mean that there were less number of materials than required for the number of students; or they did not encompass the syllabus; or the materials were not accessible to the students. The figure below illustrates how much improvement was made over the course of the year in the provision of materials. Tamil materials were available in 83% of classrooms, compared to only 66% in 2007. Maths materials were available in 81% of classrooms, up from only 58% in 2007. The availability of English materials increased from 53% of classrooms to 75% in 2008. These findings show a clear effort to provide classrooms with more materials.



Observers also found these materials to be adequate in many more classrooms. Thus, they were not only available but appropriate to the age and tasks of the children and in quantities that were useful for teaching and learning to occur. Tamil

(77%), English (65%), Maths (71%), Environmental Science (72%), and cardboards (88%) were adequate in over 60% of classrooms in 2008. The adequacy of three-dimensional materials (adequate in 27% of classrooms), books (58%), and reference materials (44%) also showed improvement from the baseline observations.

In addition to materials being more available and adequate, they were also found to be more age-appropriate and challenging to the students. Only 7% of classrooms in the baseline study had highly age-appropriate materials available. Within a year of activity based learning the department was able to provide appropriate materials for the ages and learning levels of their students in 75% of classrooms. Materials during the baseline study were found to be challenging in only 3% of classrooms. Observers found the materials to be challenging in 80% of classrooms in 2008.

Low level blackboards were available in a greater number of classrooms. Only 49% of classrooms had low level blackboards available for every child in 2007. Over the course of the year lower level blackboards were added and were thus available for every child in 88% of classrooms in 2008. Other basic learning supplies were also found in greater numbers. Textbooks were found to be available for most children in 80% of the classrooms, notebooks in 78%, pencils in 86%, coloured pencils in 42%, and portfolios in 51%. Making these materials available is one of the most important additions to the schools in Tamil Nadu, and a significant increase in these basic teaching and learning materials was accomplished over the year.

As educators well know, materials must not only be available but utilized by the children to be effective. Observers in 2008 noted a marked increase in the children's usage of notebooks (23% in 2007 and 61% in 2008), and low level blackboards (18% in 2007, 83% in 2008). Interestingly, observers noted a

corresponding decrease in the usage of textbooks. High usage was observed in 48% of classrooms in 2007 but only 16% of classrooms in 2008. This shows a clear shift in the way children are learning; fewer of the children are spending a significant amount of time learning only by reading their textbooks. The self learning cards, and three-dimensional materials provided by activity based learning approaches were also being used to a “high” degree by a students during the 2008 observation. Self learning cards were being used during the observation in 75% of classrooms, and three-dimensional materials were being utilized by the children in 15%. An additional 30% of classrooms were using the three-dimensional materials less frequently, but for at least some period of time during the observation. This finding suggests that though teachers were very comfortable with the use of the self learning cards in many classrooms, it may take more time or additional training to incorporate three-dimensional materials to the same degree.

## Class Management

There was variety across the classrooms in the lessons being taught during the observation period, however a majority of the students (greater than 75%) were being taught Tamil in more than 50% of the classrooms. This is consistent with the findings of the baseline study and adds reliability to the two sets of data.

In 45% of the classrooms in the baseline study over 50% of the students were being taught as one collective group during the observation period. In 2008 observers recorded collective learning by the majority of students in only 18% of the classrooms. This greater use of alternative teaching methodologies was further supported by observations of the use of multigrade groups in the classrooms. Multigrade grouping was available in a notably higher percentage of classrooms in

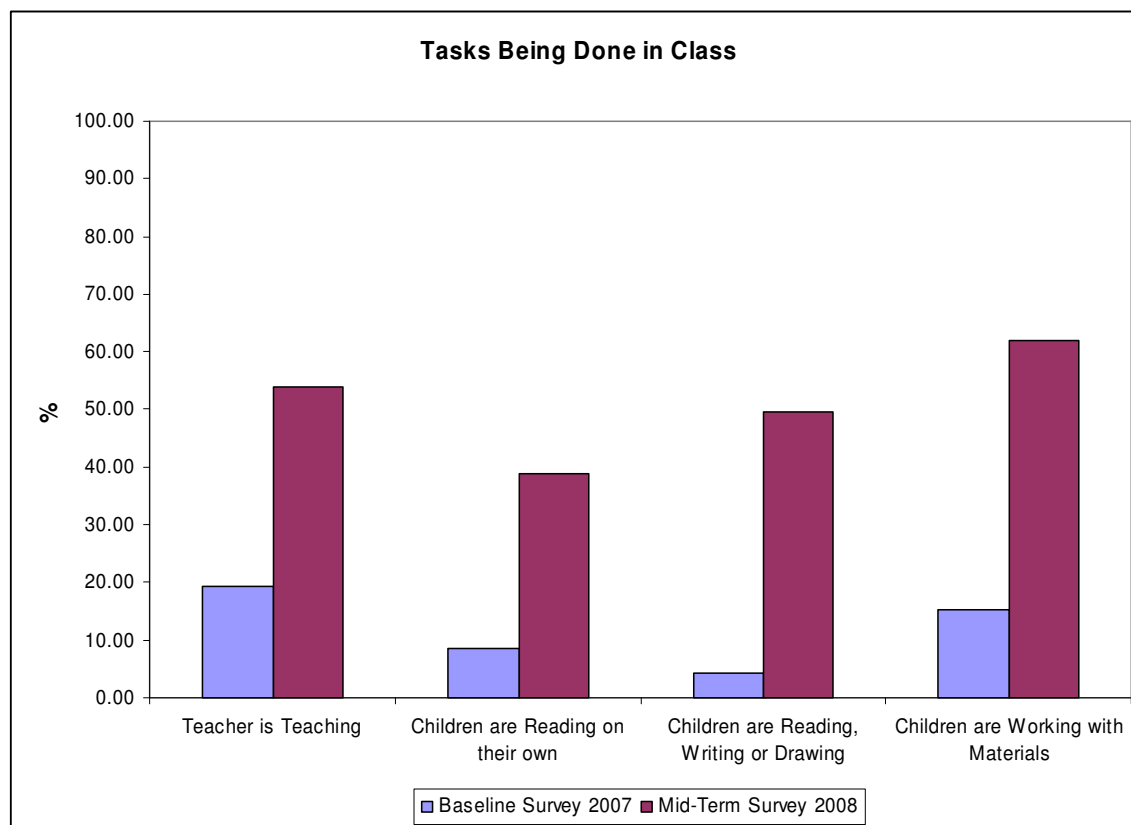
2008. In the baseline study multigrade groups were available in only 31% of classrooms. By the second data collection they were available in 91% of classrooms. Multigrade groups are a highly useful and important aspect of activity based learning, and their availability to such a large percentage of students across the state is a particularly noteworthy accomplishment. Additionally, the variety of creative activities used within the groups increased over the course of the school year. Handwork was observed in only 24% of classrooms during the baseline study. The percentage of classrooms in which students were doing handwork in multigrade groups increased to 54% in 2008. Also of importance, songs were sung in 85% of classrooms (compared to 74% in 2007), drama conducted in 48% (compared to 20% in 2007), indoor games played in 70% (compared to 51% in 2007), and outdoor games available in 73% (compared to 42% in 2007).

## Child Participation

Teachers were found to be prepared for class in 84% of classrooms in 2008 and were adequately prepared for each child in 91%. The teachers were also more likely to record the children's work; recording was observed in 91% of the classrooms. The updated records were easily accessible to the teachers in 91% of the classrooms as well. Overall, children's understanding of the lessons increased. Children exhibited a high level of understanding in only 32% of classrooms during the baseline study. High understanding was observed in 89% of classrooms in 2008. This is most likely partly due to teachers presenting their lessons in a different way. In the baseline study only 62% of teachers introduced the lesson well. In 2008 97% of teachers provided an informative introduction to the lesson. When the study began, only 30% of teachers provided examples to support their explanations of

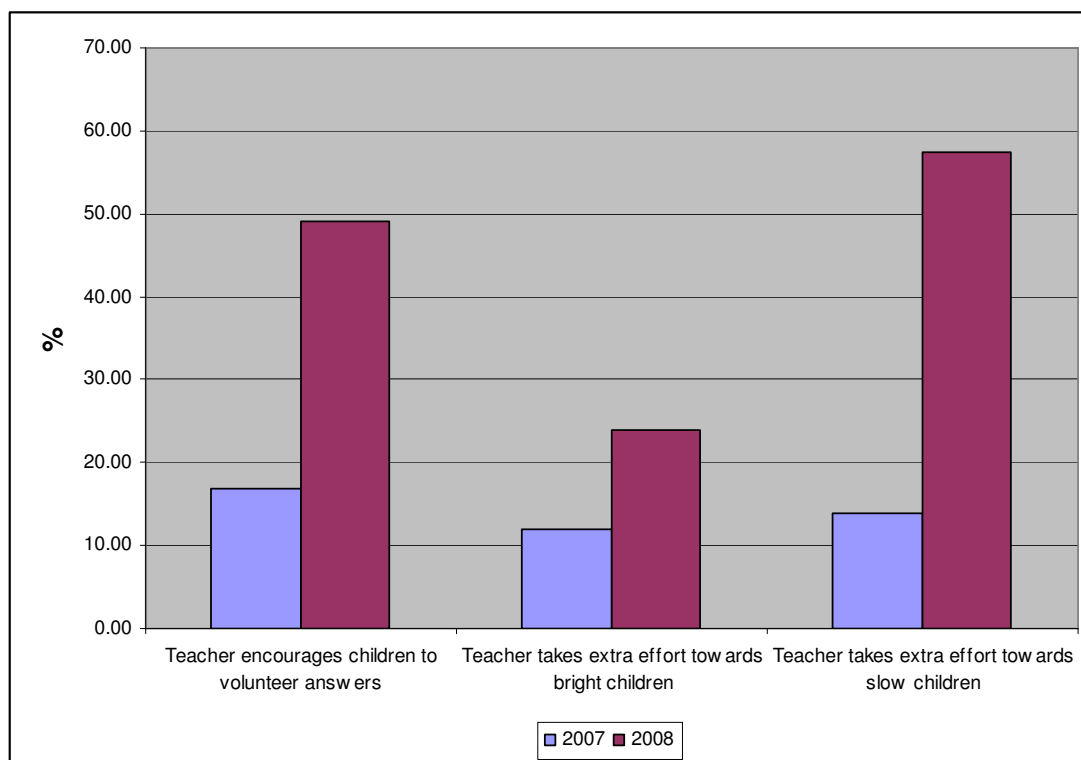
learning concepts. In 2008 50% of the teachers provided explanations with clear examples. Teachers were also more likely to bring teaching materials for their lessons. In 2008 53% of teachers brought teaching materials, compared to only 32% in the baseline study. Also attributable to the higher level of understanding could be that a larger percentage of the students were noted by the observers to be paying attention to the teacher. In 2008 in 45% of classrooms observers strongly felt that most of the students were paying attention. This is in comparison to only 20% in 2007.

Children were actively participating in the learning process in a greater number of classrooms in 2008. Of the classrooms observed, teachers were teaching in 54%, children were reading on their own in 39%, children were reading, writing and drawing in 50%, and children were working with materials in 62%. This is a meaningful increase in the level of activity observed in the classrooms.



## The Teacher-Child Relationship

After activity based learning principles were introduced in the classrooms, the interactions between teachers and their students were more positive, and increased students' active participation in class. Observers noted teachers asking relevant questions of the students in more classrooms in 2008. In 54% of classrooms the teachers asked relevant questions, and in 48% they encouraged children to ask questions themselves. Compared to the figures from 2007, 21% and 13% respectively, this is a considerable improvement in teacher-student interaction. Children were also more likely to be observed asking questions to the teacher. Observers noted in only 5% of classrooms that children never asked the teacher questions. Teachers were much more encouraging of student's answers to questions as well. Teachers in 49% of classrooms were observed encouraging children to volunteer answers to questions. Teachers were also encouraging particularly bright students in 24% of classrooms, and encouraging of slower learners in 57% of classrooms. This is a significant improvement from the baseline data.



The learning atmosphere in general was found to be much friendlier by outside observers; only 26% of classrooms were deemed friendly in the baseline study, but in 2008 observers found the atmosphere to be friendly in 71% of classrooms.

Teachers in 2008 were acting more as facilitators in the classroom; children were much more likely to have direction in their activities and direct their own learning during the observation period. In 93% of classrooms the learning cards and textbook instructed the children in what to do next. In 91% of classrooms the children were able to choose the activities on their own and in 95% they were able to decide independently what to do next in the sequence of activities. Overall, in 93% of classrooms children had an understanding of what they were supposed to do during the lessons. This shift toward independent student learning is an essential feature of the activity based learning approach.



Children in the classroom were observed working together in groups. These groups were less likely to be determined according to standard; only 15% of classrooms utilized standard as the primary grouping method compared to 51% in the baseline study. In 2008 children were more likely to be grouped according to student's learning ability (89%) and pedagogical principle (59%). Teachers were more likely to be observed working with the groups (81% in 2008 compared to 26% in 2007), and moved around to guide the students in 85% of classrooms. The observers noted in 92% of classrooms that the teachers were putting effort into supporting children's learning. Teachers were engaged in class-allied work in 94% of the classrooms.

The quality of activities the students were engaged in also increased as activity based learning concepts were utilized. In only 6% of classrooms did observers find that none of the students were working with materials and reading and writing during the observation. Children were working with interest in 82% and enthusiasm in 68% of classrooms. Also the percentage of students focused on their work for at least some of the observation period was 99%. Creativity also increased; in 54% of classrooms the children approached their tasks creatively. In 89% of classrooms the children worked with apparent ease. However, they were also more likely to be challenged by their tasks; in 62% of classrooms the children found their work challenging. In 95% of classrooms the students were working at their own pace, and in 94% they were voluntarily asking the teacher for help. This combination of challenge and the educational support from the teacher to rise to the challenge is essential to learning in the classroom. Thus, children in only 21% of the classrooms were found to be unable to complete the work that was given. In 94% of classrooms

the teachers were actively helping students who were having trouble with the assigned tasks.

There was a decrease in negative interactions between students and teachers, and an increase in positive teacher behaviors between 2007 and 2008. Teachers were less likely to be seen as strict (3%), serious (less than 1%), frightening (less than 1%), or dominating (less than 1%), and more likely to be perceived as kind (85%), and friendly (80%). There was also a decrease in the number of classrooms in which a stick is kept for discipline (17% in 2007 and only 5% in 2008). Teachers were also more likely to be supportive when students made mistakes. Their tendency to be supportive was observed in classrooms when only 5% responded by punishing, 4% ignored the child, and 17% scolded. In 86% of classrooms they were more likely to repeat the correct answer, and explained the correct answer in 90%.

## Assessment

Teachers in 2008 had improved their methods of assessment and feedback in order to better support students' learning. Teachers were much more likely to record their assessments of children in the class. In 2007 there was a record in only 48% of classrooms, and in 2008 assessment was recorded in 95% of classrooms. Children were also more likely to receive feedback in the form of reports (37% in 2008, 19% in 2007), and discussions (32% in 2008, 19% in 2007). Moreover, the assessments given to students were more likely to feed back into the children's work plan for the term. This occurred in 79% of classrooms compared to only 59% during the baseline study.

## Planning and Monitoring

It was slightly more likely that teachers were following a plan on the day of observation. In the baseline study 61% of teachers were following a plan on the day of the observation. In 2008 this had increased to 76% of teachers following a plan. However there were no significant increases in the percentage of classrooms in which a plan was put up in the classroom for the term, month or year. This highlights an area of improvement for the future.

There were however significant improvements in the records of individual children's work. More classrooms had individual student records on display in the form of a chart. This was observed in only 20% of classrooms in 2007 but had increased to 64% of classrooms in 2008. Similarly, the instances of teachers keeping an observation register for the class increased to 69% of classrooms in 2008 from only 19% in 2007. Individual records for each child were also more prevalent; they were found in 81% of classrooms (compared to 19% in 2007). Importantly all records were much more likely to be up to date. In the baseline study records were current in only 21% of classrooms. In 2008 teachers kept up to date records in 75% of the classrooms observed.

## Teachers' Perspective

A total of 360 teachers (106 male, 254 female) were surveyed in 2008 during the second data collection. Of these, 12% had not attended any training programmes in the last year. Of the remaining teachers surveyed, almost one third (24%) had attended between one and five trainings over the course of the year, one third had attended five to ten trainings, and the remaining third (31%) had attended more than ten trainings. Following are the preliminary findings from the reports of teachers.

## Teaching-Learning Material

When asked about the importance of learning materials in their classrooms, 65% of teachers felt the blackboard was very important. Only 8% felt the blackboard in their classroom was very minimally important. When asked about charts, 41% felt they were very important, and 8% felt they were minimally important in their classrooms. Teachers were also asked about the learning cards, three-dimensional materials, and teacher-made materials that were introduced as part of activity based learning. Among the teachers, 88% found the cards to be highly important in their classrooms, and 57% thought the teacher-made materials were important, however fewer found the three-dimensional materials important (17%). Teachers also reported that they had changed the displays of children's work frequently throughout the year; 75% had changed displays weekly, and 23% had changed them monthly. Only 3% reported changing the displays only at the end of each term, and none of the teachers waited until the end of the year to change the displays. Recognizing their importance may have contributed to this improvement, because 92% of teachers reported that they felt the displays of children's own work encouraged the students in their classroom. Importantly, 80% of teachers reported that they make an effort to include all of the children's work in displays, rather than only a few chosen examples.

Teachers still felt there was a need for additional materials in their classrooms to increase the effectiveness of their teaching. Of those sampled, 77% felt that additional textbooks are needed, 70% needed supplementary books, 96% needed workbooks, 93% needed notebooks, 92% needed crayons, coloured pencils and felt

pens for the children. The teachers also expressed a need for supplementary reading materials separate from textbooks (69%), and reference books (87%).

## Class Management

Part of the focus of ABL is for students to work together in groups; 66% of teachers strongly agreed that children learn better in groups. As a result of using the activity based learning approach, only 10% of the teachers felt they need to instruct children in what to do next at every step of their work. Teachers had also adopted certain strategies in writing their lesson plans for class. When writing lessons, 91% included an introduction and conclusion to each lesson in their plans, and 68% laid out the teaching steps they intended to follow. Additionally, 93% of the teachers included activities for the children in their plans, and 68% took the initiative to create teaching materials to accompany their lessons. The frequency of lesson planning had also increased; 87% of teachers reported their lesson plans are written each week. Only 37% of the teachers felt they rarely followed their lesson plans when teaching.

## Teacher-child Relationship

Teachers overall felt that children were comfortable asking doubts in class. Of those surveyed, 22% felt that children often asked questions, and an additional 59% felt children sometimes asked questions during a lesson.

Teachers during the 2008 survey were most likely to see themselves as a friend (86%) and parent (68%) to their students, rather than as a leader (25%) or facilitator (38%) of the classroom. Teachers were not overly reliant on negative means of disciplining their students. Few teachers used raising their voices (4%),

hitting lightly (15%), isolating children (5%), and scolding (2%) as their primary discipline technique. They felt they were more likely to ask the monitor to mind the class (27%), ask the students to sit quietly (46%), or sit and memorise (57%), or give an imposition (59%). As a consequence, 81% of teachers felt that children rarely fear talking to them in class.

## Assessment

As part of activity based learning, 98% of teachers provided an assessment of students work after completion of a lesson or activity. A significant percentage of the teachers (74%) felt that their students were not afraid of tests and assessments. Ninety four percent of teachers reported that there is a record of assessments done of children in their class, and 94% also reported that feedback is given to the children. Many of the teachers (66%) used the assessment to inform the children's work plan for the term. The majority of the teachers reported that their observation books for the whole class (83%), individual records for each child (94%), and portfolios (71%) were kept up to date over the course of the school year.

Providing an assessment of their own work, teachers responded to the question of what they would like additional training in to improve themselves as teachers. Greater than one-third of the teachers requested further training in making materials (36%), changing their attitude (42%), understanding children (35%), and teaching methodology (35%). Overall, more than half of the teachers reported that they are very happy in their job (62%).

## CHAPTER FOUR – Learning Achievement 2007 and 2008

### 4.1 Class II Children

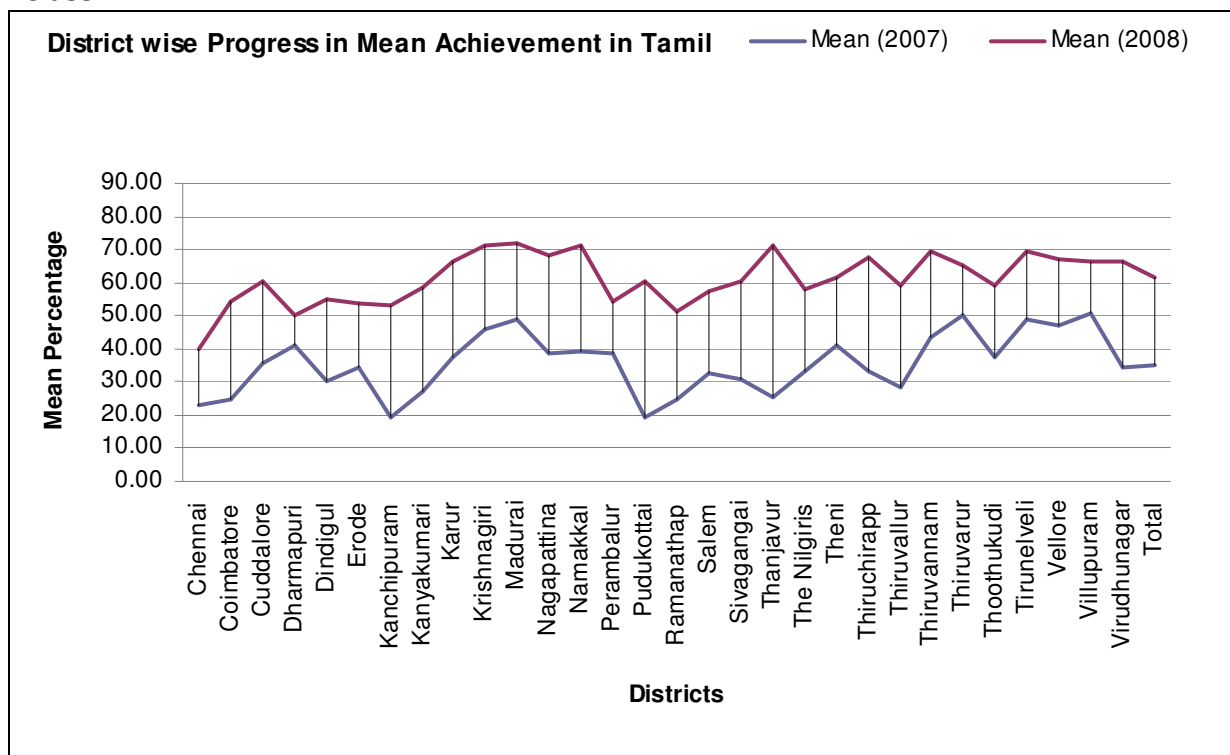
#### Learning Achievement in Tamil

**Table 7: Class II Achievement in Tamil by District**

| Districts        | N           | Mean<br>(2007) | SD           | SEM         | N          | Mean<br>(2008) | SD           | SEM         | t-ratio  |
|------------------|-------------|----------------|--------------|-------------|------------|----------------|--------------|-------------|--|
| CHENNAI          | 37          | 22.81          | 17.52        | 2.88        | 7          | 39.86          | 18.11        | 6.85        | 2.29            |
| COIMBATORE       | 198         | 49.18          | 18.74        | 1.33        | 70         | 71.96          | 15.34        | 1.83        | 10.05           |
| CUDDALORE        | 156         | 24.60          | 20.41        | 1.63        | 33         | 51.39          | 19.98        | 3.48        | 6.97            |
| DHARMAPURI       | 116         | 41.19          | 20.25        | 1.88        | 31         | 50.19          | 12.74        | 2.29        | 3.04            |
| DINDIGUL         | 127         | 38.52          | 19.46        | 1.73        | 28         | 68.50          | 22.27        | 4.21        | 6.59            |
| ERODE            | 113         | 37.33          | 18.70        | 1.76        | 34         | 66.53          | 18.05        | 3.10        | 8.20            |
| KANCHIPURAM      | 115         | 24.83          | 16.79        | 1.57        | 38         | 54.63          | 20.40        | 3.31        | 8.14            |
| KANYAKUMARI      | 86          | 50.84          | 18.51        | 2.00        | 10         | 66.20          | 21.88        | 6.92        | 2.13            |
| KARUR            | 61          | 39.05          | 19.80        | 2.53        | 19         | 71.42          | 8.36         | 1.92        | 10.18           |
| KRISHNAGIRI      | 143         | 34.18          | 20.01        | 1.67        | 41         | 66.34          | 17.73        | 2.77        | 9.94           |
| MADURAI          | 179         | 33.05          | 20.24        | 1.51        | 33         | 67.48          | 12.59        | 2.19        | 12.93         |
| NAGAPATTINAM     | 121         | 32.41          | 22.49        | 2.04        | 41         | 57.27          | 23.06        | 3.60        | 6.00          |
| NAMAKKAL         | 70          | 27.03          | 19.62        | 2.34        | 29         | 58.69          | 17.45        | 3.24        | 7.91          |
| PERAMBALUR       | 97          | 19.53          | 14.55        | 1.48        | 28         | 60.21          | 15.22        | 2.88        | 12.59         |
| PUDUKOTTAI       | 149         | 32.99          | 18.23        | 1.49        | 42         | 58.29          | 15.36        | 2.37        | 9.03          |
| RAMANATHAPURAM   | 74          | 37.57          | 20.60        | 2.39        | 25         | 59.36          | 14.52        | 2.90        | 5.79          |
| SALEM            | 156         | 19.18          | 15.82        | 1.27        | 41         | 52.98          | 14.65        | 2.29        | 12.92         |
| SIVAGANGAI       | 96          | 40.94          | 19.58        | 2.00        | 27         | 61.70          | 15.09        | 2.90        | 5.89          |
| THANJAVUR        | 154         | 25.13          | 19.64        | 1.58        | 53         | 71.02          | 22.80        | 3.13        | 13.08         |
| THE NILGIRIS     | 34          | 45.88          | 22.20        | 3.81        | 7          | 71.14          | 4.60         | 1.74        | 6.04          |
| THENI            | 57          | 43.33          | 19.88        | 2.63        | 15         | 69.47          | 6.12         | 1.58        | 8.51          |
| THIRUCHIRAPPALLI | 146         | 38.71          | 20.81        | 1.72        | 37         | 54.65          | 18.10        | 2.98        | 4.63          |
| THIRUVALLUR      | 119         | 28.64          | 17.84        | 1.64        | 22         | 59.14          | 15.90        | 3.39        | 8.10          |
| THIRUVANNAMALAI  | 162         | 30.20          | 19.29        | 1.52        | 41         | 54.68          | 17.58        | 2.75        | 7.81          |
| THIRUVARUR       | 92          | 30.98          | 24.23        | 2.53        | 25         | 60.60          | 15.55        | 3.11        | 7.39          |
| THOOTHUKUDI      | 83          | 49.04          | 18.61        | 2.04        | 23         | 69.74          | 21.51        | 4.49        | 4.20          |
| TIRUNELVELI      | 159         | 47.38          | 19.40        | 1.54        | 61         | 67.02          | 12.14        | 1.55        | 8.98          |
| VELLORE          | 253         | 35.56          | 19.81        | 1.25        | 50         | 60.18          | 14.18        | 2.01        | 10.43         |
| VILLUPURAM       | 194         | 34.64          | 17.43        | 1.25        | 49         | 54.04          | 19.85        | 2.84        | 6.26          |
| VIRUDHUNAGAR     | 94          | 50.02          | 17.12        | 1.77        | 36         | 65.42          | 6.60         | 1.10        | 7.40          |
| <b>Total</b>     | <b>3641</b> | <b>35.09</b>   | <b>21.05</b> | <b>0.35</b> | <b>996</b> | <b>61.63</b>   | <b>18.05</b> | <b>0.57</b> | <b>39.61 </b> |

 significantly improved

## Class II



Overall, mean achievement of Class II children was found to be 61.63% during 2008 as compared to baseline 35.09%. Maximum improvement was observed in Thanjavur and Pudukottai and minimum improvement was found in Dharmapuri and Thiruvarur. However, despite a sizeable improvement, performance in Chennai district is lowest in Tamil during 2008 study. The reason for the poor performance of students from Chennai may be due to various factors, the most significant being that the majority of the children are from some of the most deprived sections of the state's population.

**Table 8: Class II Achievement in Tamil by Gender**

| Subject | Testing term | Boys    |       |       |      | Girls   |       |       |      | t-ratio |
|---------|--------------|---------|-------|-------|------|---------|-------|-------|------|---------|
|         |              | N       | Mean  | SD    | SEM  | N       | Mean  | SD    | SEM  |         |
| Tamil   | Baseline     | 2044    | 34.44 | 20.65 | 0.46 | 1597    | 35.92 | 21.54 | 0.54 | 2.11**  |
|         | Year-end     | 592     | 59.83 | 18.70 | 0.77 | 404     | 64.27 | 16.73 | 0.83 | 3.84**  |
|         | t-ratio      | 28.40** |       |       |      | 28.59** |       |       |      |         |

The above table value indicates that girls scored significantly better than boys in Tamil during both baseline and year-end surveys. Within the gender, achievement of



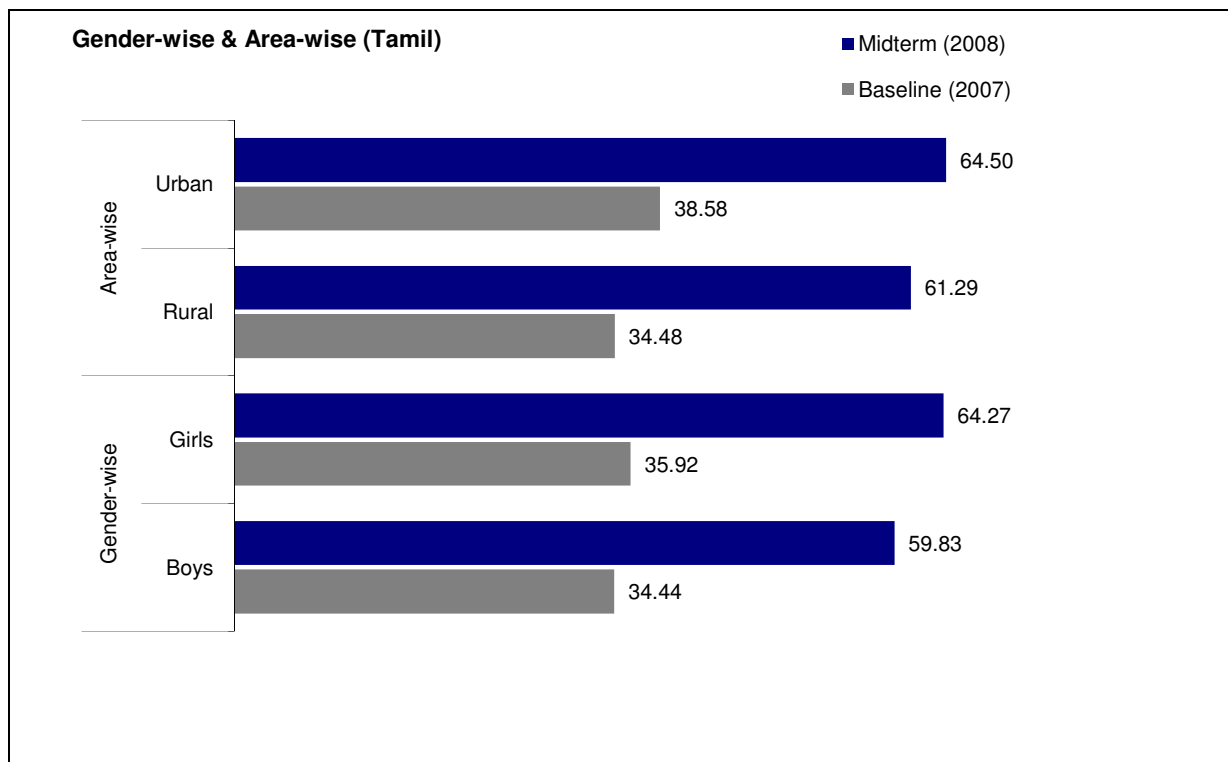
boys and girls significantly improved during mid term (2008) as compared to the baseline in Tamil.

**Table 9: Class II Achievement in Tamil by Location**

| Subject | Testing term | Rural   |       |       |      | Urban   |       |       |      | t-ratio |
|---------|--------------|---------|-------|-------|------|---------|-------|-------|------|---------|
|         |              | N       | Mean  | SD    | SEM  | N       | Mean  | SD    | SEM  |         |
| Tamil   | Baseline     | 3099    | 34.48 | 21.09 | 0.38 | 542     | 38.58 | 20.50 | 0.88 | 4.28**  |
|         | Year-end     | 890     | 61.29 | 17.87 | 0.60 | 106     | 64.5  | 19.39 | 1.88 | 1.62    |
|         | t-ratio      | 37.83** |       |       |      | 12.47** |       |       |      |         |

The above table value demonstrates that, urban children scored significantly better than their rural counterparts in Tamil during both baseline and year-end surveys. Within the location or area, achievement of rural and urban significantly improved during year-end survey (2008) as compared to baseline (2007) in Tamil.

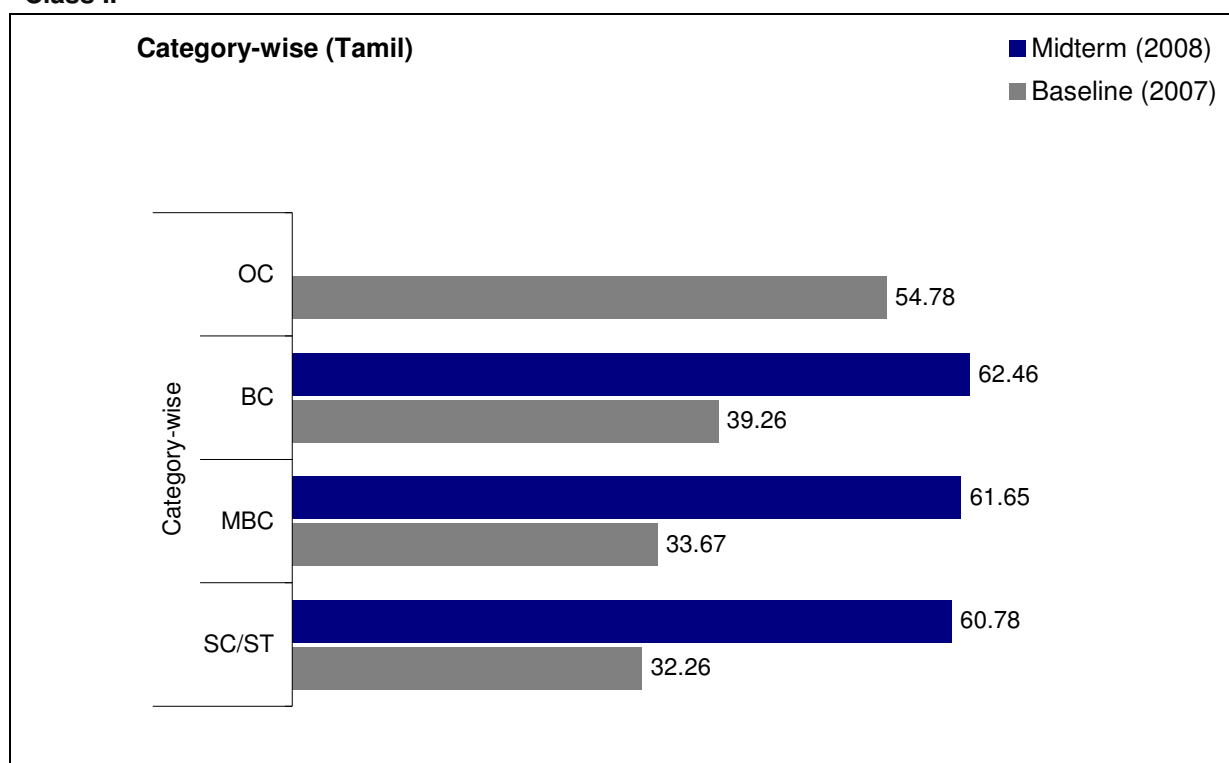
#### Class II



**Table 10: Class II Achievement in Tamil by Community**

| Subject | Testing term   | Baseline (2007) |       |       |      | Year-end (2008) |       |       |      | t-ratio |
|---------|----------------|-----------------|-------|-------|------|-----------------|-------|-------|------|---------|
|         |                | N               | Mean  | SD    | SEM  | N               | Mean  | SD    | SEM  |         |
| Tamil   | SC/ST          | 1274            | 32.26 | 20.91 | 0.59 | 333             | 60.78 | 18.73 | 1.03 | 24.13** |
|         | MBC            | 1182            | 33.67 | 20.14 | 0.59 | 330             | 61.65 | 17.38 | 0.96 | 24.93** |
|         | BC             | 1162            | 39.26 | 21.30 | 0.62 | 333             | 62.46 | 18.02 | 0.99 | 19.86** |
|         | OC             | 23              | 54.78 | 20.76 | 4.33 | 0               |       |       |      |         |
|         | <b>F-value</b> | <b>32.18**</b>  |       |       |      | <b>0.48</b>     |       |       |      |         |

The table value reveals that, BC children scored significantly better than their counterparts in Tamil during both baseline and year-end surveys. Within each community, achievement of children significantly improved during year-end (2008) as compared to baseline (2007) in Tamil. Moreover, the gap in achievement during the end of the year survey was narrowed down as compared to baseline.

**Class II**

**Table 11: Class II Achievement in Tamil by Different Types of Schools**

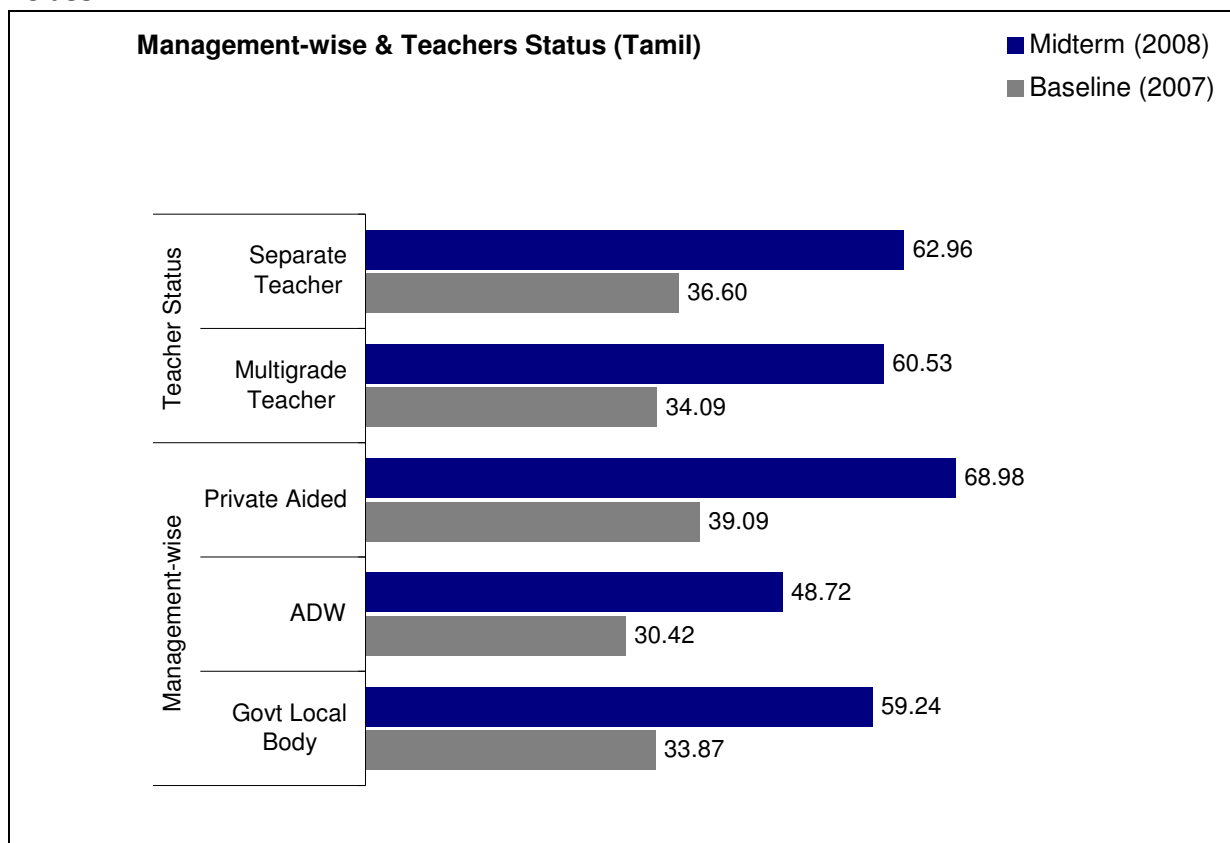
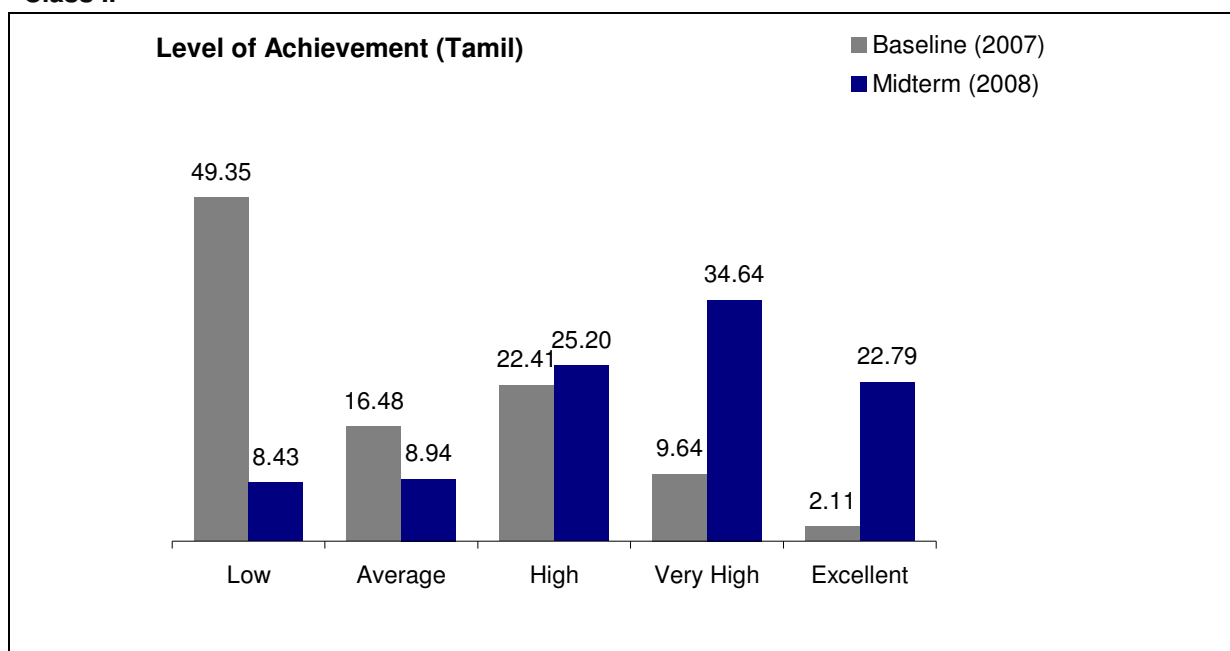
| Subject | Testing term    | Baseline (2007) |       |       |      | Year-end (2008) |       |       |      | t-ratio |
|---------|-----------------|-----------------|-------|-------|------|-----------------|-------|-------|------|---------|
|         |                 | N               | Mean  | SD    | SEM  | N               | Mean  | SD    | SEM  |         |
| Tamil   | Govt Local Body | 2568            | 33.87 | 20.85 | 0.41 | 714             | 59.24 | 17.89 | 0.67 | 32.28** |
|         | ADW             | 132             | 30.42 | 20.62 | 1.80 | 18              | 48.72 | 28.28 | 6.67 | 2.65**  |
|         | Private Aided   | 941             | 39.09 | 21.13 | 0.69 | 264             | 68.98 | 15.22 | 0.94 | 25.70** |
|         | <b>F-value</b>  | <b>24.91**</b>  |       |       |      | <b>16.06**</b>  |       |       |      |         |

The above table value demonstrates that, children from private-aided school performed significantly better during baseline (2007) and year-end (2008) surveys. Further, achievement of children significantly improved during mid term (2008) as compared to baseline (2007).

**Table 12: Class II Achievement in Tamil by Teacher-status**

| Subject | Testing term   | Multi grade Teacher |       |       |      | Separate Teacher |       |       |      | t-ratio |
|---------|----------------|---------------------|-------|-------|------|------------------|-------|-------|------|---------|
|         |                | N                   | Mean  | SD    | SEM  | N                | Mean  | SD    | SEM  |         |
| Tamil   | Baseline       | 2114                | 34.09 | 21.07 | 0.46 | 1521             | 36.60 | 20.91 | 0.54 | 3.56**  |
|         | Year-end       | 545                 | 60.53 | 17.63 | 0.76 | 451              | 62.96 | 18.48 | 0.87 | 2.10**  |
|         | <b>t-ratio</b> | <b>29.94**</b>      |       |       |      | <b>25.78**</b>   |       |       |      |         |

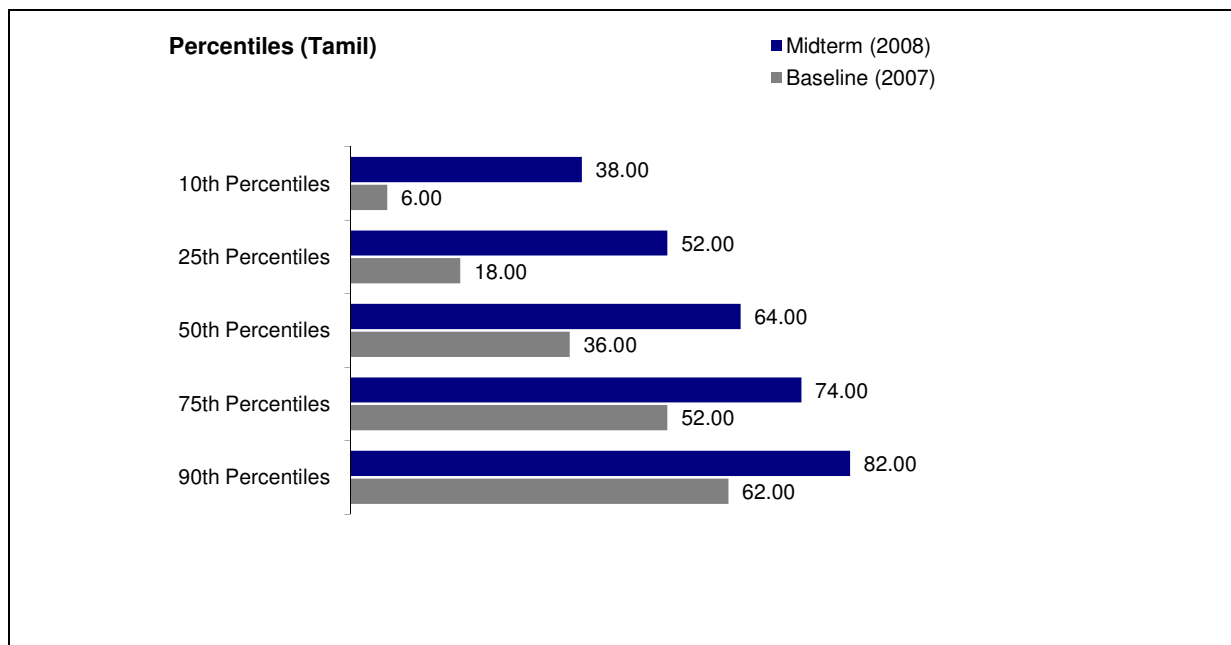
The table value indicates that children performed significantly better when they were taught in a situation when there was one teacher per class, rather than a teacher handling more than one class at a time. This indicates that though the ABL methodology is in place, teachers need more training within the first year for managing the learning of all the children in their care. However, it is evident from the table that performance of children improved significantly under both (multigrade and separate teacher) conditions during the end of the academic year results as compared to the baseline.

**Class II****Class II**

The performance of children was categorized under five distinct groups i.e., Low (children who scored less than 35%), Average (scored between 35 and 45%), High (45% and 60%), Very high (60% to 75%) and Excellent (75% and above). The graph

demonstrates that during baseline nearly half of the children performed at the Low level and during year-end, low achievers reduced to 8%.

### Class II



Percentiles are most frequent used statistics for standardized tests. Percentile scores revealed that during the year-end (mid term) survey at every percentile rank the score was improved. During the baseline study, bottom 10% children scored less than 6% marks and during the end term survey the score improved to 38%. At the same time during the baseline ten percent children's scored span was over 62 to 100% but during the year-end survey that wide span narrowed down to 82 to 100%.

## Class II Learning Achievement in Mathematics

**Table 13: Class II Achievement in Mathematics by District**

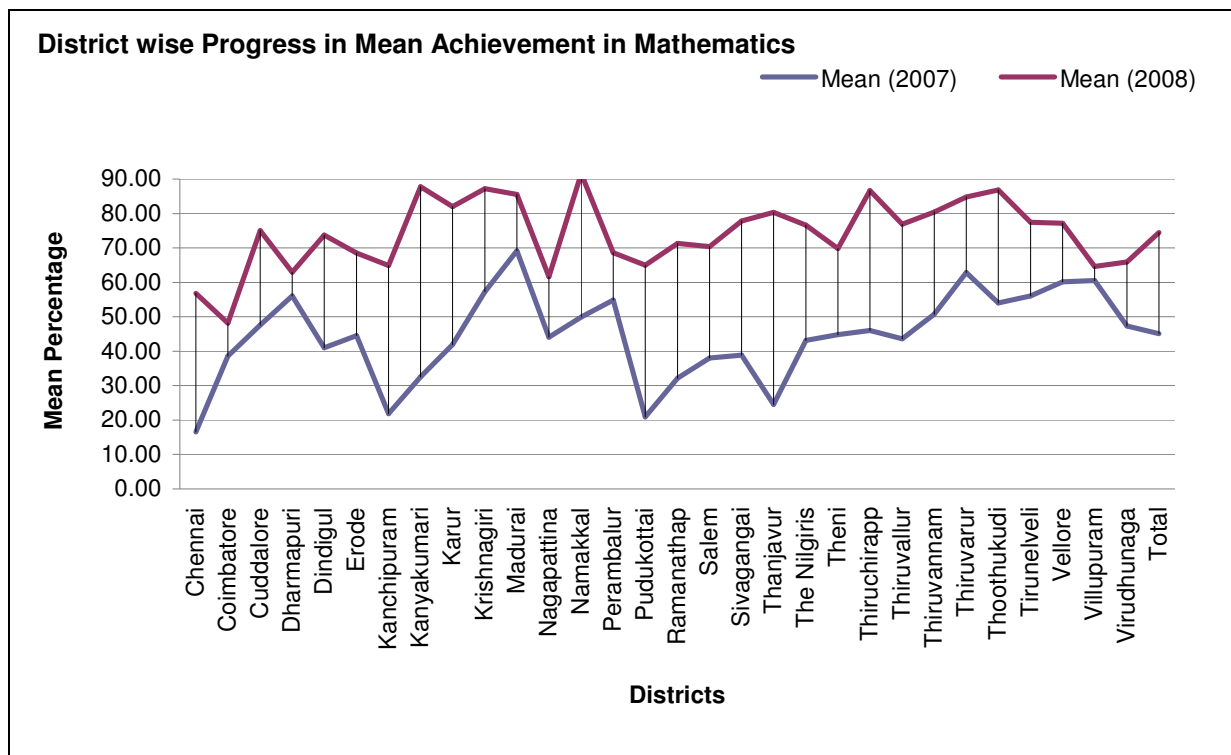
| Districts        | N           | Mean (2007)  | SD           | SEM         | N          | Mean (2008)  | SD           | SEM         | t-ratio      |
|------------------|-------------|--------------|--------------|-------------|------------|--------------|--------------|-------------|--------------|
| CHENNAI          | 30          | 16.53        | 24.21        | 4.42        | 5          | 56.80        | 34.27        | 15.33       | 2.52         |
| COIMBATORE       | 176         | 69.15        | 23.44        | 1.77        | 71         | 85.52        | 14.47        | 1.72        | 6.65         |
| CUDDALORE        | 137         | 32.19        | 30.16        | 2.58        | 36         | 71.28        | 24.83        | 4.14        | 8.02         |
| DHARMAPURI       | 101         | 56.06        | 30.52        | 3.04        | 29         | 62.93        | 32.63        | 6.06        | 1.01         |
| DINDIGUL         | 119         | 44.03        | 28.43        | 2.61        | 25         | 61.64        | 30.52        | 6.10        | 2.65         |
| ERODE            | 90          | 41.89        | 25.50        | 2.69        | 28         | 82.04        | 15.03        | 2.84        | 10.27        |
| KANCHIPURAM      | 105         | 38.59        | 30.13        | 2.94        | 34         | 48.12        | 30.80        | 5.28        | 1.58         |
| KANYAKUMARI      | 76          | 60.50        | 22.18        | 2.54        | 10         | 64.60        | 22.53        | 7.12        | 0.54         |
| KARUR            | 53          | 49.89        | 33.96        | 4.66        | 16         | 91.63        | 11.46        | 2.86        | 7.62         |
| KRISHNAGIRI      | 129         | 47.29        | 31.15        | 2.74        | 41         | 65.95        | 27.97        | 4.37        | 3.62         |
| MADURAI          | 139         | 46.00        | 32.03        | 2.72        | 32         | 86.66        | 12.86        | 2.27        | 11.48        |
| NAGAPATTINAM     | 114         | 38.05        | 34.65        | 3.25        | 35         | 70.34        | 23.48        | 3.97        | 6.30         |
| NAMAKKAL         | 56          | 32.50        | 32.15        | 4.30        | 23         | 87.74        | 13.65        | 2.85        | 1.72         |
| PERAMBALUR       | 85          | 20.94        | 24.68        | 2.68        | 27         | 64.96        | 30.88        | 5.94        | 6.75         |
| PUDUKOTTAI       | 119         | 43.16        | 31.28        | 2.87        | 43         | 76.60        | 17.08        | 2.60        | 8.63         |
| RAMANATHAPURAM   | 70          | 54.03        | 33.33        | 3.98        | 25         | 86.88        | 18.42        | 3.68        | 6.05         |
| SALEM            | 140         | 21.83        | 22.81        | 1.93        | 35         | 64.89        | 21.76        | 3.68        | 10.37        |
| SIVAGANGAI       | 86          | 44.84        | 30.73        | 3.31        | 26         | 69.81        | 23.07        | 4.52        | 4.45         |
| THANJAVUR        | 142         | 24.52        | 24.84        | 2.08        | 48         | 80.38        | 18.83        | 2.72        | 16.30        |
| THE NILGIRIS     | 36          | 57.28        | 34.45        | 5.74        | 5          | 87.20        | 12.54        | 5.61        | 3.73         |
| THENI            | 53          | 50.79        | 26.50        | 3.64        | 15         | 80.40        | 9.92         | 2.56        | 6.65         |
| THIRUCHIRAPPALLI | 139         | 54.89        | 31.16        | 2.64        | 34         | 68.65        | 28.56        | 4.90        | 2.47         |
| THIRUVALLUR      | 103         | 43.59        | 24.94        | 2.46        | 20         | 76.90        | 23.88        | 5.34        | 5.67         |
| THIRUVANNAMALAI  | 162         | 40.96        | 30.95        | 2.43        | 38         | 73.68        | 20.83        | 3.38        | 7.86         |
| THIRUVARUR       | 94          | 38.83        | 35.30        | 3.64        | 23         | 77.78        | 23.21        | 4.84        | 6.43         |
| THOOTHUKUDI      | 72          | 56.06        | 32.04        | 3.78        | 20         | 77.45        | 26.00        | 5.81        | 3.09         |
| TIRUNELVELI      | 148         | 60.15        | 26.87        | 2.21        | 60         | 77.17        | 18.10        | 2.34        | 5.29         |
| VELLORE          | 253         | 47.63        | 34.32        | 2.16        | 51         | 75.02        | 22.45        | 3.14        | 7.18         |
| VILLUPURAM       | 165         | 44.53        | 28.90        | 2.25        | 47         | 68.53        | 28.74        | 4.19        | 5.04         |
| VIRUDHUNAGAR     | 85          | 62.87        | 24.90        | 2.70        | 36         | 84.75        | 10.40        | 1.73        | 6.82         |
| <b>Total</b>     | <b>3277</b> | <b>45.05</b> | <b>31.82</b> | <b>0.56</b> | <b>938</b> | <b>74.45</b> | <b>23.94</b> | <b>0.78</b> | <b>30.65</b> |

🟢 significantly improved

🟡 no significant improvement found

Overall, mean achievement of children was found to be 74.45% during 2008 as compared to baseline 45.05% which is significant. Out of 30 districts, performance of children in 26 districts has significantly improved. Maximum improvement was

observed in Kanyakumari and Thanjavur and minimum improvement was found in Vilupuram and Dharmapuri. However, despite a sizeable improvement, performance in Chennai district is lowest in Mathematics during the 2008 study.



**Table 14: Class II Achievement in Mathematics by Gender**

| Subject     | Testing term | Boys    |       |       |      | Girls   |       |       |      | t-ratio |
|-------------|--------------|---------|-------|-------|------|---------|-------|-------|------|---------|
|             |              | N       | Mean  | SD    | SEM  | N       | Mean  | SD    | SEM  |         |
| Mathematics | Baseline     | 1511    | 42.82 | 31.77 | 0.82 | 1766    | 46.96 | 31.75 | 0.76 | 3.72**  |
|             | Year-end     | 373     | 73.75 | 24.90 | 1.29 | 565     | 74.92 | 23.30 | 0.98 | 0.73    |
|             | t-ratio      | 20.26** |       |       |      | 22.59** |       |       |      |         |

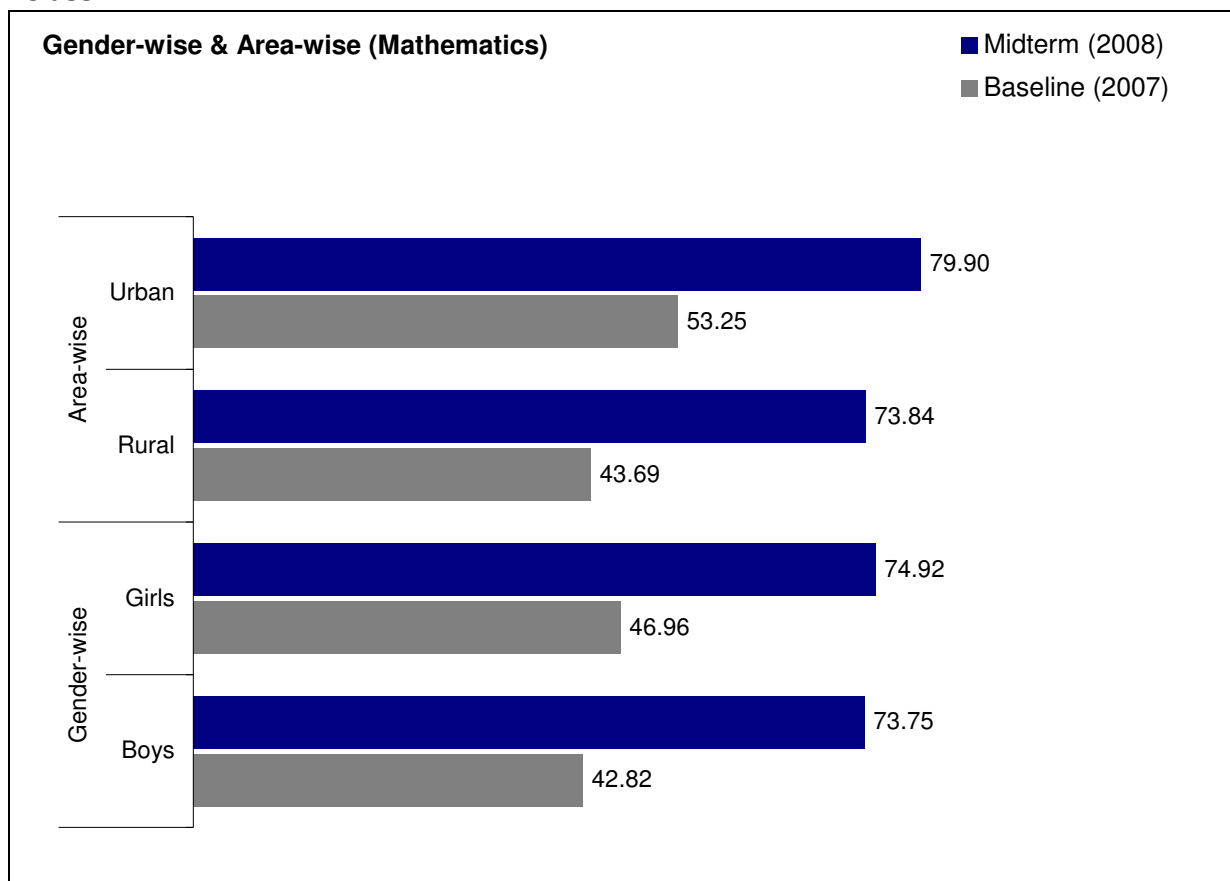
The above table value indicates that, girls scored significantly better than boys in Mathematics during base line. Within the gender, achievement of boys and girls significantly improved during year-end (2008) as compared to baseline study.

**Table 15: Class II Achievement by Location**

| Subject     | Testing term | Rural   |       |       |      | Urban   |       |       |      | t-ratio |
|-------------|--------------|---------|-------|-------|------|---------|-------|-------|------|---------|
|             |              | N       | Mean  | SD    | SEM  | N       | Mean  | SD    | SEM  |         |
| Mathematics | Baseline     | 2810    | 43.69 | 31.91 | 0.60 | 467     | 53.25 | 30.03 | 1.39 | 6.32**  |
|             | Year-end     | 844     | 73.84 | 24.16 | 0.83 | 94      | 79.90 | 21.25 | 2.19 | 2.59**  |
|             | t-ratio      | 29.38** |       |       |      | 10.27** |       |       |      |         |

The above table value demonstrates that, urban children scored significantly better than their rural counterparts in Mathematics during both base line and year-end surveys. Within the location or area, achievement of rural and urban significantly improved during the academic year end assessment (2008) as compared to baseline (2007) in Mathematics achievement.

#### Class II



**Table 16: Class II Achievement in Mathematics by Community**

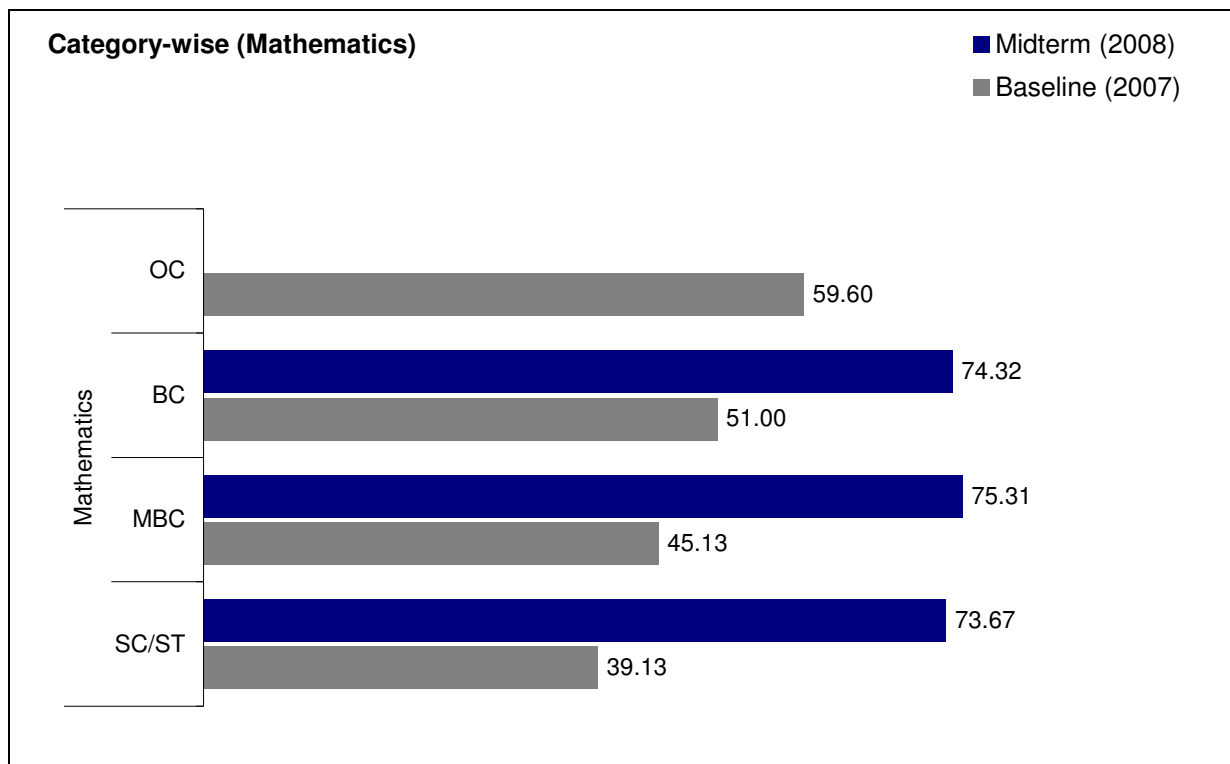
| Subject     | Testing term | Baseline (2007) |       |       |      | Year-end (2008) |       |       |      | t-ratio |
|-------------|--------------|-----------------|-------|-------|------|-----------------|-------|-------|------|---------|
|             |              | N               | Mean  | SD    | SEM  | N               | Mean  | SD    | SEM  |         |
| Mathematics | SC/ST        | 1140            | 39.13 | 31.47 | 0.93 | 307             | 73.67 | 25.77 | 1.47 | 19.84** |
|             | MBC          | 1061            | 45.13 | 31.73 | 0.97 | 323             | 75.31 | 22.61 | 1.26 | 18.97** |
|             | BC           | 1046            | 51.00 | 31.27 | 0.97 | 308             | 74.32 | 23.46 | 1.34 | 14.14** |
|             | OC           | 30              | 59.60 | 24.23 | 4.42 | 0               |       |       |      |         |
|             | F-value      | 28.11**         |       |       |      | 0.25            |       |       |      |         |

The table value reveals that, OC children scored significantly better than their counterparts in Mathematics during the baseline. However, during the year-end study there was no significant difference in achievement among the children of different communities. Within each category, achievement of children was



significantly improved during the year-end (2008) as compared to baseline (2007) in Mathematics. Moreover, the gap in achievement during the year-end survey was narrowed down as compared to the baseline.

#### Class II



**Table 17: Class II Achievement of Mathematics in Different types of Schools**

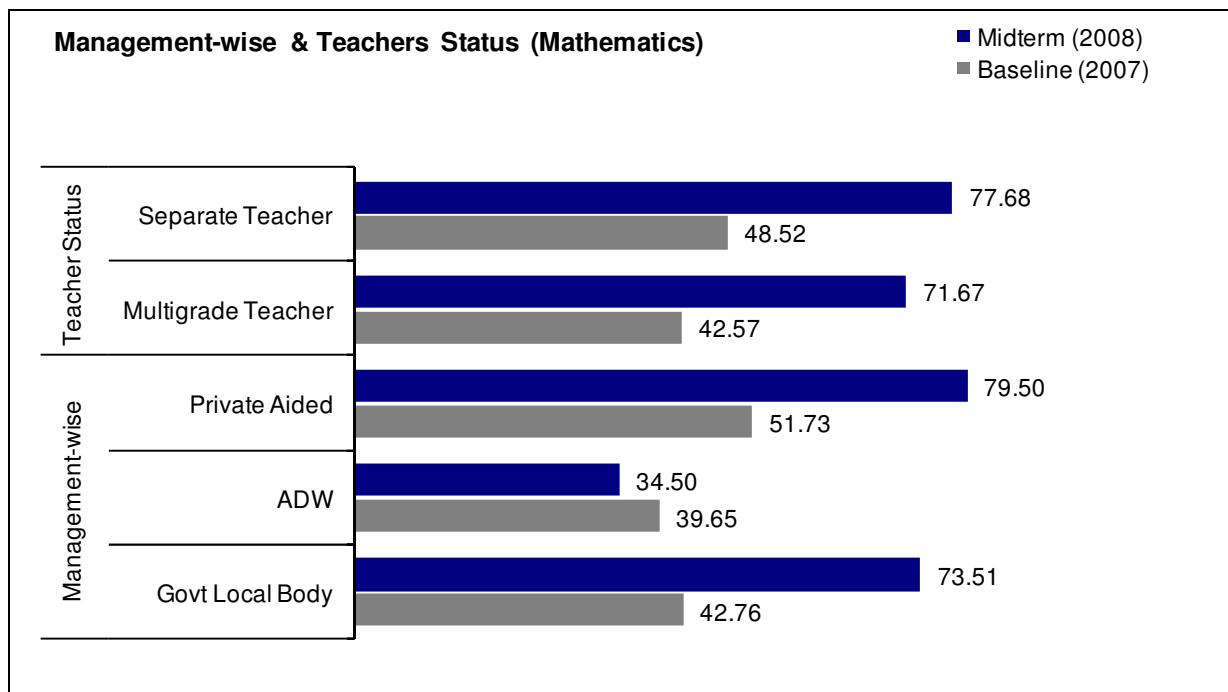
| Subject     | Testing term    | Baseline (2007) |       |       |      | Year-end (2008) |       |       |      | t-ratio |
|-------------|-----------------|-----------------|-------|-------|------|-----------------|-------|-------|------|---------|
|             |                 | N               | Mean  | SD    | SEM  | N               | Mean  | SD    | SEM  |         |
| Mathematics | Govt Local Body | 2300            | 42.76 | 31.60 | 0.66 | 671             | 73.51 | 23.69 | 0.91 | 27.28** |
|             | ADW             | 104             | 39.65 | 29.84 | 2.93 | 16              | 34.50 | 36.63 | 9.16 | 0.54    |
|             | Private Aided   | 873             | 51.73 | 31.68 | 1.07 | 251             | 79.50 | 20.82 | 1.31 | 16.37** |
|             | <b>F-value</b>  | <b>27.11**</b>  |       |       |      | <b>30.13**</b>  |       |       |      |         |

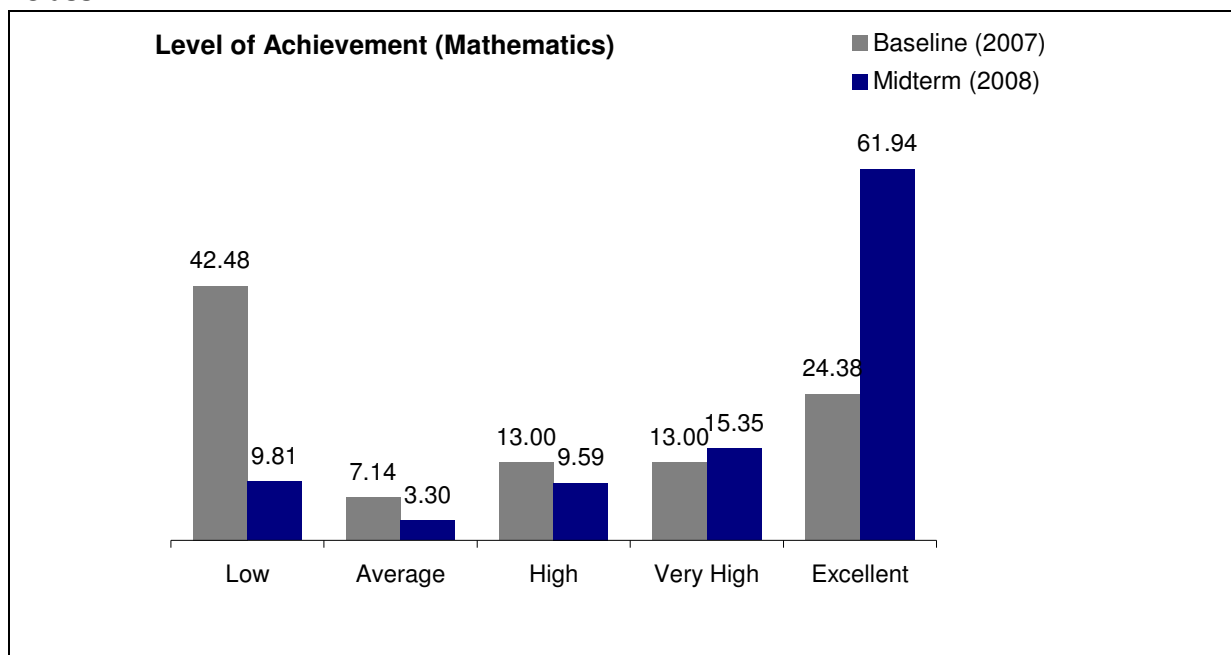
The above table value demonstrates that, children from private-aided school performed significantly better during the baseline (2007) and year-end (2008) assessments. Further, achievement of children from each type of school management significantly improved during year-end (2008) as compared to baseline (2007).

**Table 18: Class II Achievement in Mathematics by Teacher-status**

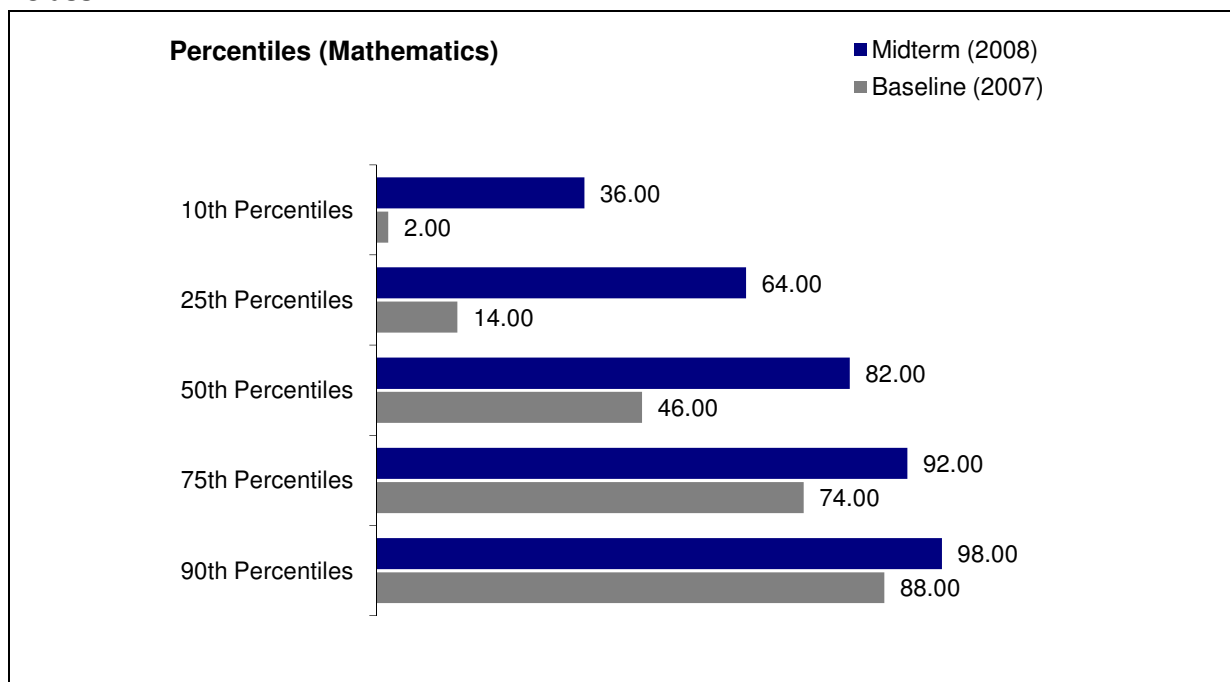
| Subject     | Testing term | Multi grade Teacher |       |       |      | Separate Teacher |       |       |      | t-ratio |
|-------------|--------------|---------------------|-------|-------|------|------------------|-------|-------|------|---------|
|             |              | N                   | Mean  | SD    | SEM  | N                | Mean  | SD    | SEM  |         |
| Mathematics | Baseline     | 1873                | 42.57 | 31.81 | 0.74 | 1399             | 48.52 | 31.49 | 0.84 | 5.32**  |
|             | Year-end     | 504                 | 71.67 | 26.74 | 1.19 | 434              | 77.68 | 19.77 | 0.95 | 3.94**  |
|             | t-ratio      | 20.80**             |       |       |      | 22.99**          |       |       |      |         |

The table value indicates that children performed significantly better when they were taught by a separate teacher. Again, as in Tamil it is evident from the table that performance of children improved significantly under both (multigrade and separate teacher) condition at the year-end tests as compared to the baseline.

**Class II**

**Class II**

The performance of children was categorized under five distinct groups i.e., Low (children who scored less than 35%), Average (scored between 35 and 45%), High (45% and 60%), Very high (60% to 75%) and Excellent (75% and above). The graph demonstrates that during baseline nearly 42% of the children performed at Low level and during the year-end, low achievers reduced to 10%. Whilst, during baseline 24% scored at excellent and during the end of the year tests excellent achievers increased to 62%.

**Class II**

Percentile scores revealed that during the year-end survey at every percentile rank score was improved. During baseline study, bottom 10% children scored less than 2% marks and during mid term survey the score improved to 36%. At the same time during baseline ten percent children's scored span was over 88 to 100% but during the end of the year survey that wide span narrowed down to 98 to 100%

Class II Learning Achievement in English**Table 19: Class II Achievement in English by District**

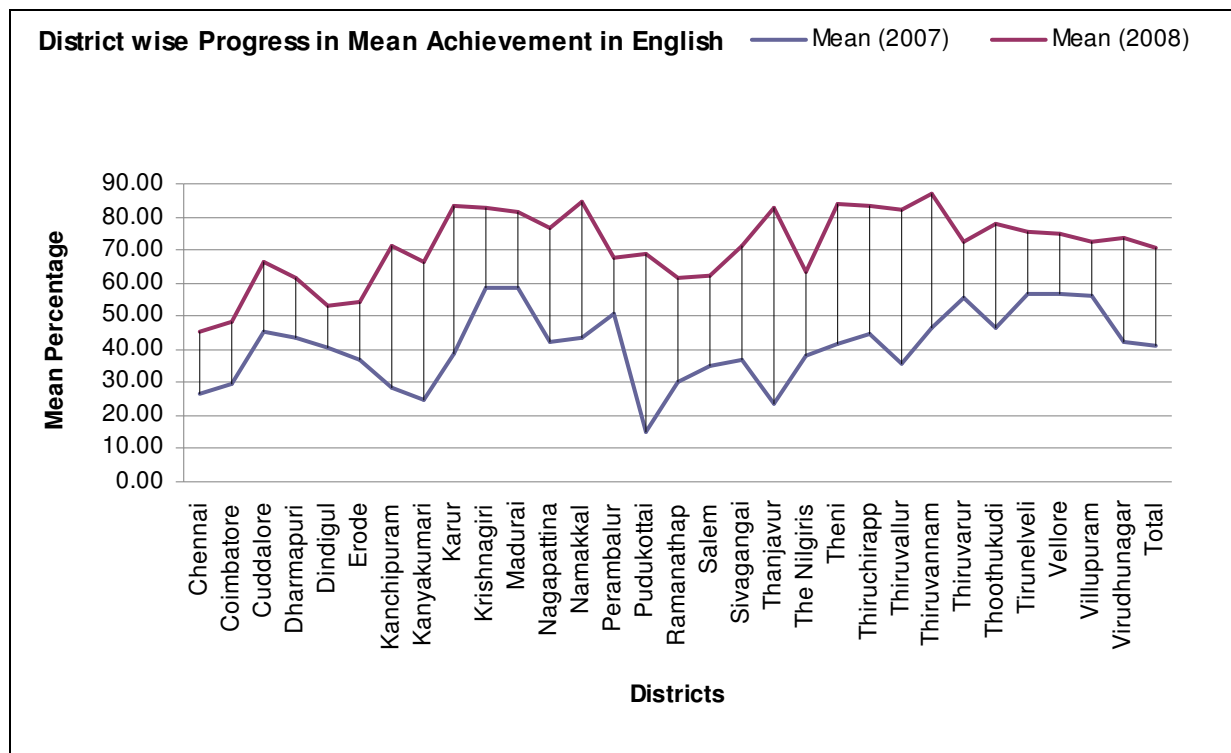
| Districts        | N           | Mean (2007)  | SD           | SEM         | N          | Mean (2008)  | SD           | SEM         | t-ratio        |
|------------------|-------------|--------------|--------------|-------------|------------|--------------|--------------|-------------|----------------|
| CHENNAI          | 34          | 26.29        | 24.19        | 4.15        | 6          | 45.33        | 31.56        | 12.89       | 1.41 ⇄         |
| COIMBATORE       | 186         | 58.48        | 25.90        | 1.90        | 70         | 81.76        | 17.31        | 2.07        | 8.29 🟢         |
| CUDDALORE        | 136         | 30.06        | 27.44        | 2.35        | 34         | 61.41        | 22.52        | 3.86        | 6.93 🟢         |
| DHARMAPURI       | 101         | 43.45        | 24.31        | 2.42        | 29         | 61.79        | 23.18        | 4.30        | 3.72 🟢         |
| DINDIGUL         | 117         | 42.07        | 22.48        | 2.08        | 25         | 76.80        | 25.56        | 5.11        | 6.29 🟢         |
| ERODE            | 103         | 38.87        | 21.72        | 2.14        | 28         | 83.50        | 12.20        | 2.31        | 14.18 🟢        |
| KANCHIPURAM      | 111         | 29.87        | 25.04        | 2.38        | 32         | 48.16        | 23.78        | 4.20        | 3.79 🟢         |
| KANYAKUMARI      | 85          | 55.98        | 25.80        | 2.80        | 9          | 72.22        | 26.39        | 8.80        | 1.76 ⇄         |
| KARUR            | 51          | 43.69        | 28.43        | 3.98        | 15         | 84.80        | 9.97         | 2.57        | 8.67 🟢         |
| KRISHNAGIRI      | 132         | 42.08        | 29.41        | 2.56        | 39         | 73.51        | 24.28        | 3.89        | 6.75 🟢         |
| MADURAI          | 146         | 44.67        | 28.16        | 2.33        | 30         | 83.07        | 10.46        | 1.91        | 12.74 🟢        |
| NAGAPATTINAM     | 112         | 35.30        | 28.88        | 2.73        | 38         | 62.21        | 21.77        | 3.53        | 6.03 🟢         |
| NAMAKKAL         | 57          | 24.88        | 19.06        | 2.52        | 24         | 66.29        | 16.34        | 3.33        | 9.90 🟢         |
| PERAMBALUR       | 88          | 15.39        | 18.71        | 1.99        | 25         | 68.72        | 14.02        | 2.80        | 15.50 🟢        |
| PUDUKOTTAI       | 127         | 37.78        | 27.79        | 2.47        | 46         | 63.54        | 27.48        | 4.05        | 5.43 🟢         |
| RAMANATHAPURAM   | 70          | 46.34        | 31.52        | 3.77        | 26         | 77.96        | 25.50        | 5.00        | 5.05 🟢         |
| SALEM            | 148         | 28.23        | 24.18        | 1.99        | 38         | 71.42        | 27.07        | 4.39        | 8.96 🟢         |
| SIVAGANGAI       | 89          | 41.69        | 27.01        | 2.86        | 27         | 84.00        | 15.39        | 2.96        | 10.27 🟢        |
| THANJAVUR        | 143         | 23.30        | 25.63        | 2.14        | 48         | 82.75        | 18.37        | 2.65        | 17.44 🟢        |
| THE NILGIRIS     | 34          | 58.76        | 25.85        | 4.43        | 4          | 82.50        | 9.71         | 4.86        | 3.61 🟢         |
| THENI            | 53          | 46.72        | 27.16        | 3.73        | 15         | 86.80        | 6.14         | 1.59        | 9.89 🟢         |
| THIRUCHIRAPPALLI | 134         | 50.61        | 25.92        | 2.24        | 38         | 67.92        | 25.54        | 4.14        | 3.68 🟢         |
| THIRUVALLUR      | 97          | 35.94        | 26.53        | 2.69        | 17         | 82.00        | 14.20        | 3.44        | 10.54 🟢        |
| THIRUVANNAMALAI  | 149         | 40.34        | 27.65        | 2.27        | 42         | 52.93        | 25.75        | 3.97        | 2.75 🟢         |
| THIRUVARUR       | 86          | 37.02        | 28.91        | 3.12        | 23         | 71.22        | 22.32        | 4.65        | 6.11 🟢         |
| THOOTHUKUDI      | 66          | 56.67        | 24.75        | 3.05        | 20         | 75.40        | 26.91        | 6.02        | 2.78 🟢         |
| TIRUNELVELI      | 141         | 57.04        | 27.36        | 2.30        | 60         | 74.75        | 13.53        | 1.75        | 6.13 🟢         |
| VELLORE          | 227         | 45.22        | 25.72        | 1.71        | 50         | 66.44        | 20.10        | 2.84        | 6.40 🟢         |
| VILLUPURAM       | 184         | 36.74        | 22.91        | 1.69        | 48         | 54.19        | 19.78        | 2.85        | 5.26 🟢         |
| VIRUDHUNAGAR     | 84          | 55.64        | 22.34        | 2.44        | 34         | 72.68        | 21.97        | 3.77        | 3.80 🟢         |
| <b>Total</b>     | <b>3291</b> | <b>41.01</b> | <b>27.91</b> | <b>0.49</b> | <b>940</b> | <b>70.62</b> | <b>23.12</b> | <b>0.75</b> | <b>33.01 🟢</b> |

🟢 significantly improved

⇄ no significant improvement found

Overall, mean achievement of children was found to be 70.62% during 2008 as compared to baseline 41.01% which is significant. Out of 30 districts, performance of children in 28 districts was significantly improved. Maximum improvement was observed in Thanjavur and Pudukottai and minimum improvement was found in

Dindigul. However, despite a sizeable improvement, performance in Chennai district is the lowest in English during 2008 study.



**Table 20: Class II Achievement in English by Gender**

| Subject | Testing term | Boys    |       |       |      | Girls   |       |       |      | t-ratio |
|---------|--------------|---------|-------|-------|------|---------|-------|-------|------|---------|
|         |              | N       | Mean  | SD    | SEM  | N       | Mean  | SD    | SEM  |         |
| English | Baseline     | 1576    | 39.54 | 28.11 | 0.71 | 1724    | 42.35 | 27.66 | 0.67 | 2.89**  |
|         | Year-end     | 439     | 70.22 | 23.32 | 1.11 | 501     | 70.98 | 22.95 | 1.03 | 0.50    |
|         | t-ratio      | 23.26** |       |       |      | 23.41** |       |       |      |         |

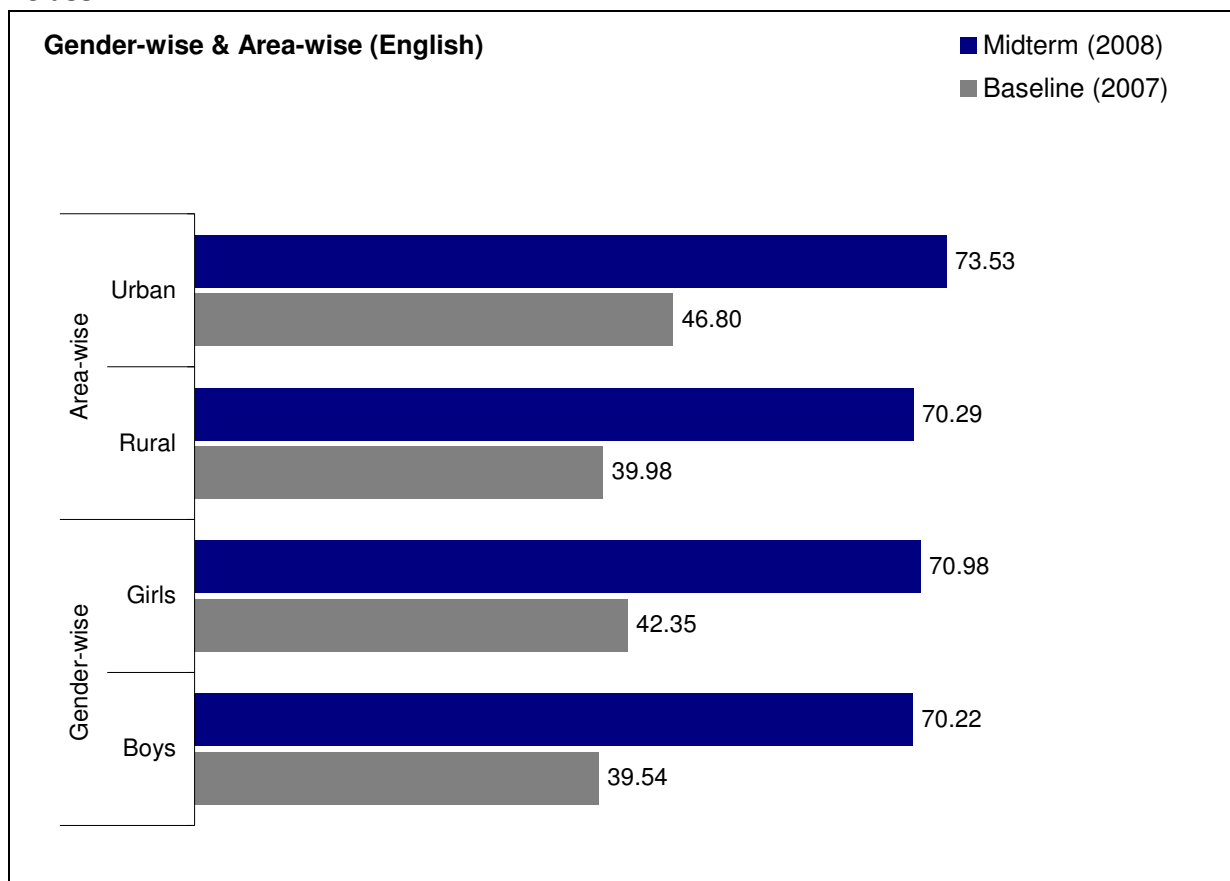
The above table value indicates that, girls scored significantly better than boys in English during the baseline. Within the gender, achievement of boys and girls significantly improved during year-end (2008) as compared to the baseline study.

**Table 21: Class II English by Location**

| Subject | Testing term | Rural   |       |       |      | Urban   |       |       |      | t-ratio |
|---------|--------------|---------|-------|-------|------|---------|-------|-------|------|---------|
|         |              | N       | Mean  | SD    | SEM  | N       | Mean  | SD    | SEM  |         |
| English | Baseline     | 2796    | 39.98 | 27.79 | 0.53 | 495     | 46.80 | 27.87 | 1.25 | 5.02**  |
|         | Year-end     | 842     | 70.29 | 23.17 | 0.80 | 98      | 73.53 | 22.61 | 2.28 | 1.34    |
|         | t-ratio      | 31.70** |       |       |      | 10.26** |       |       |      |         |

The above table value demonstrates that, urban children scored significantly better than their rural counterparts in English during the baseline. Within the area, achievement of rural and urban significantly improved during the year-end (2008) as compared to the baseline (2007) in English achievement. Moreover, during the end of the year survey gender gaps in achievement narrowed down.

#### Class II



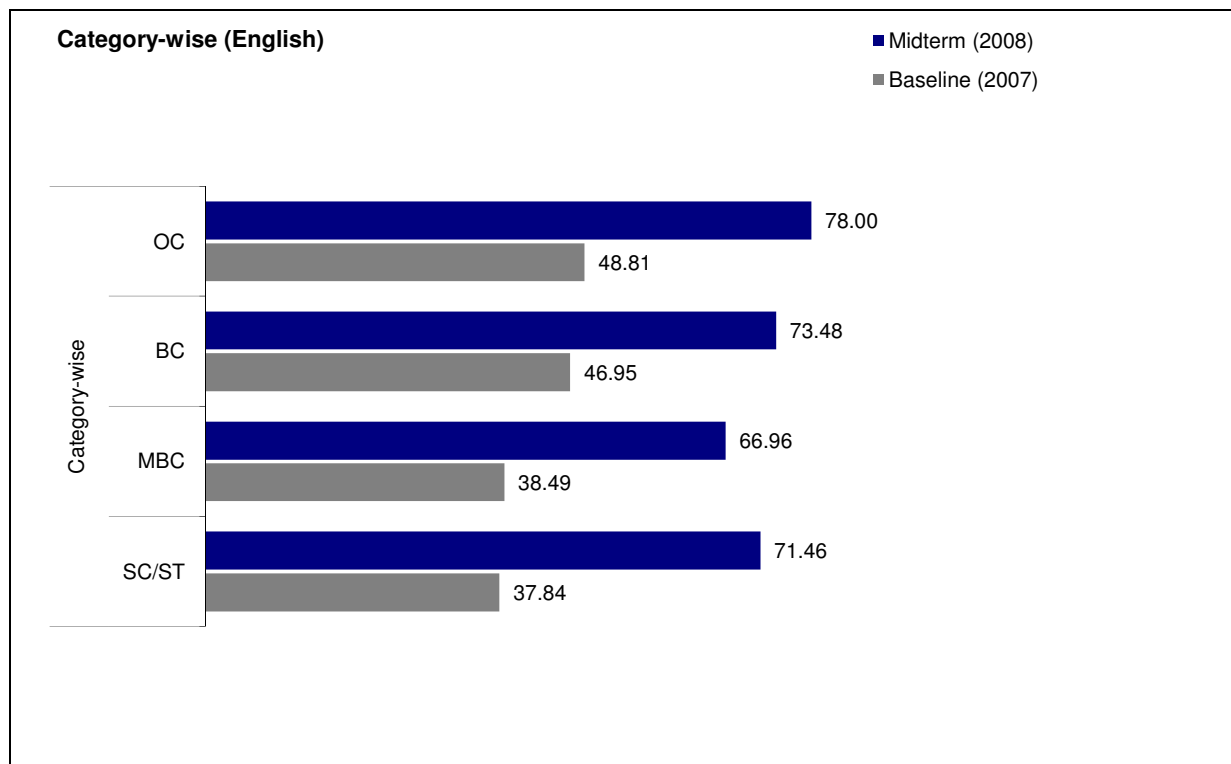
**Table 22: Class II Achievement in English by Community**

| Subject | Testing term   | Baseline (2007) |       |       |      | Year-end (2008) |       |       |      | t-ratio |
|---------|----------------|-----------------|-------|-------|------|-----------------|-------|-------|------|---------|
|         |                | N               | Mean  | SD    | SEM  | N               | Mean  | SD    | SEM  |         |
| English | SC/ST          | 1182            | 37.84 | 27.83 | 0.81 | 294             | 71.46 | 22.40 | 1.31 | 21.88** |
|         | MBC            | 1046            | 38.49 | 26.90 | 0.83 | 322             | 66.96 | 23.98 | 1.34 | 18.09** |
|         | BC             | 1031            | 46.95 | 27.97 | 0.87 | 322             | 73.48 | 22.48 | 1.25 | 17.39** |
|         | OC             | 32              | 48.81 | 30.68 | 5.42 | 2               | 78    | 28.28 | 20   | 1.41    |
|         | <b>F-value</b> | <b>24.87**</b>  |       |       |      | <b>4.58**</b>   |       |       |      |         |

The table value reveals that, OC children scored significantly better than their counterparts in English during both baseline and mid term. Within each category, achievement of children was significantly improved during year-end (2008) survey as

compared to the baseline (2007) in English. Moreover, the reduction in SD revealed that children during the year-end study homogenously performed as compared to the baseline study.

### Class II



**Table 23: Class II Achievement in English in Different Schools**

| Subject | Testing term    | Baseline (2007) |       |       |      | Year-end (2008) |       |       |      | t-ratio |
|---------|-----------------|-----------------|-------|-------|------|-----------------|-------|-------|------|---------|
|         |                 | N               | Mean  | SD    | SEM  | N               | Mean  | SD    | SEM  |         |
| English | Govt Local Body | 2307            | 39.60 | 27.26 | 0.57 | 674             | 67.74 | 23.22 | 0.89 | 26.56** |
|         | ADW             | 110             | 35.55 | 29.29 | 2.79 | 15              | 48.67 | 34.74 | 8.97 | 1.40    |
|         | Private Aided   | 874             | 45.41 | 28.91 | 0.98 | 251             | 79.69 | 18.81 | 1.19 | 22.29** |
|         | <b>F-value</b>  | <b>16.06**</b>  |       |       |      | <b>33.51**</b>  |       |       |      |         |

The above table value demonstrates that, children from private-aided school performed significantly better during the baseline (2007) and year-end survey (2008). However, achievement of children from each type of school management significantly improved during year-end (2008) as compared to baseline (2007) except children from ADW schools.



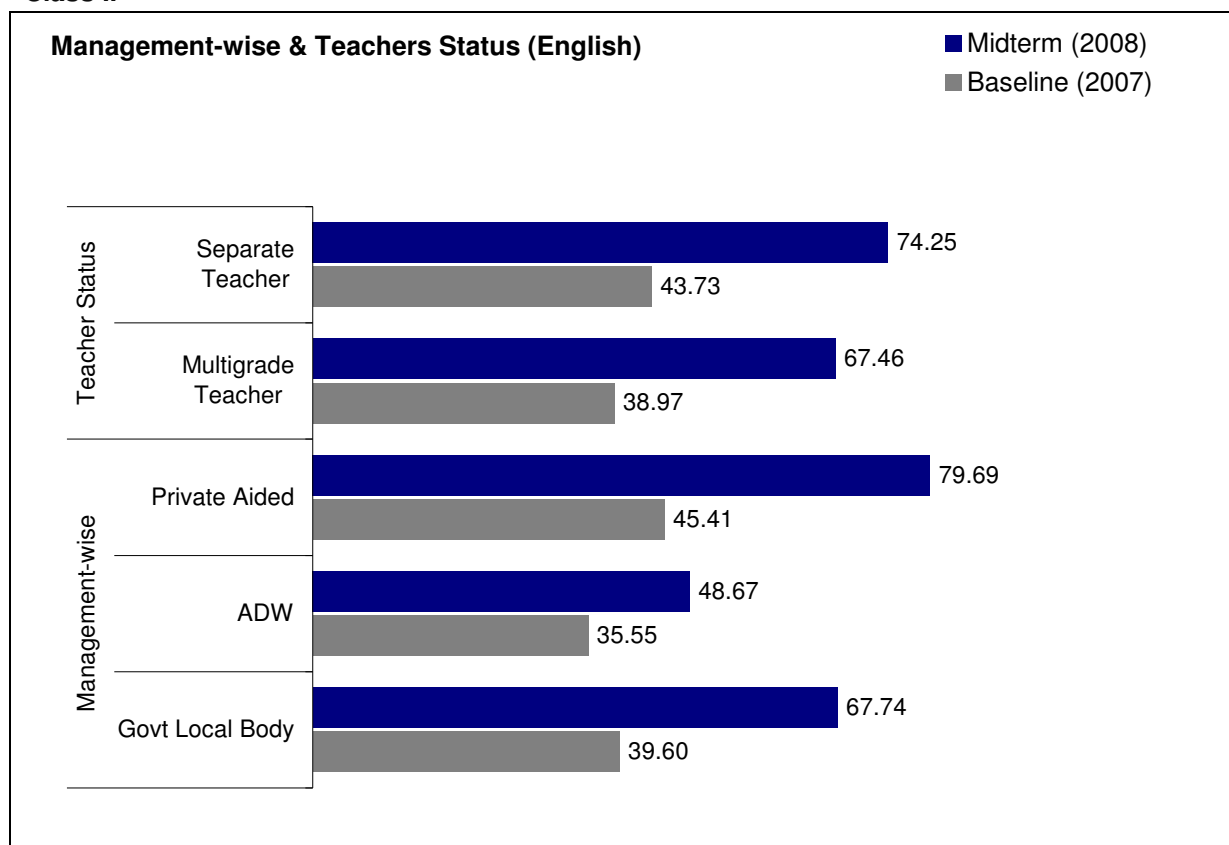
**Table 24: Class II Achievement in English by Teacher-status**

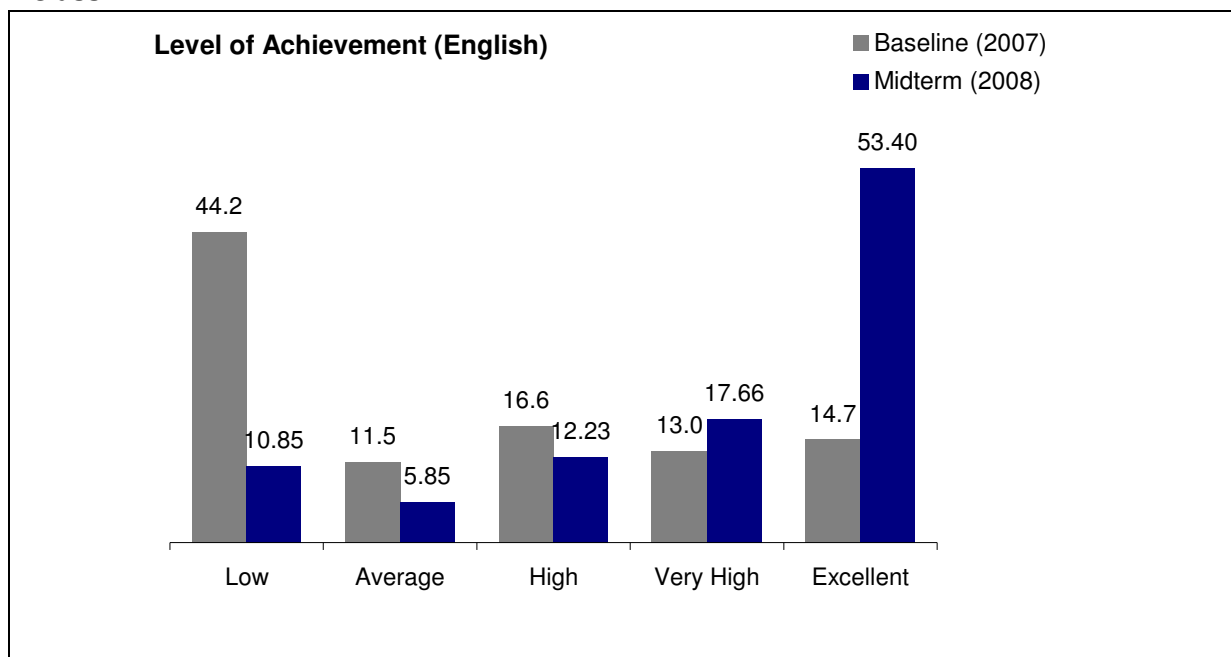
| Subject | Testing term | Multi grade Teacher |       |       |      | Separate Teacher |       |       |      | t-ratio |
|---------|--------------|---------------------|-------|-------|------|------------------|-------|-------|------|---------|
|         |              | N                   | Mean  | SD    | SEM  | N                | Mean  | SD    | SEM  |         |
| English | Baseline     | 1840                | 38.97 | 27.70 | 0.65 | 1446             | 43.73 | 27.91 | 0.73 | 4.88**  |
|         | Mid term     | 502                 | 67.46 | 23.90 | 1.07 | 438              | 74.25 | 21.65 | 1.03 | 4.56**  |
|         | t-ratio      | 22.85**             |       |       |      | 24.06**          |       |       |      |         |

The table value indicates that children performed significantly better when they were taught by a separate teacher. However, as in earlier results for other subjects, it is evident from the table that performance of children improved significantly under both (multigrade and separate teacher) conditions during the year-end as compared to baseline.

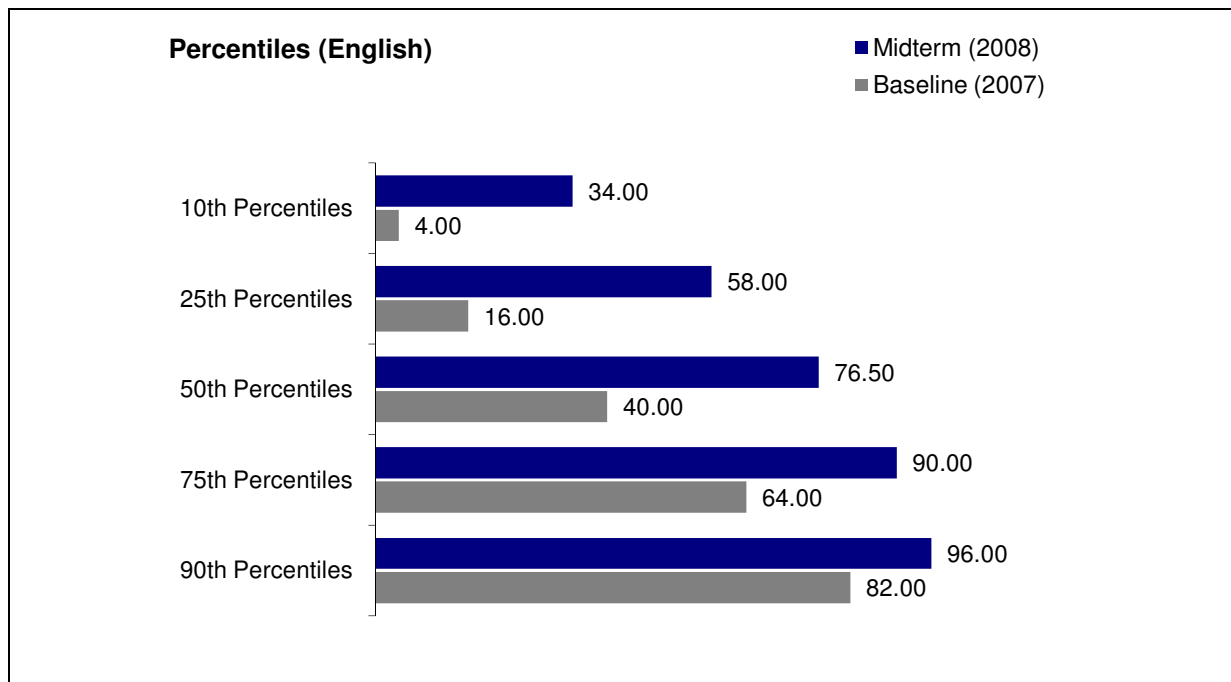
What perhaps could be derived from these results is that the ABL pedagogy is being able to address the multi-grade situation of the primary school successfully in areas of learning achievement. But, if this kind of pedagogy is not available, a single teacher for a single class enables children to perform better in assessments, rather than one teacher for more than one class, who is not trained to pay the right kind of attention to the children with different learning needs in the class.

#### Class II



**Class II**

The performance of children was categorized under five distinct groups i.e., Low (children who scored less than 35%), Average (scored between 35 and 45%), High (45% and 60%), Very high (60% to 75%) and Excellent (75% and above). The graph demonstrates that during baseline nearly 44% of the children performed at Low level and during year-end survey, low achievers reduced to 11%. Whilst, during baseline 15% scored at excellent and during the year-end assessments excellent achievers increased to 53%.

**Class II**

Percentile scores revealed that during year-end survey at every percentile rank score was improved. During the baseline study, bottom 10% children scored less than 4% marks and during year-end survey the score improved to 34%. At the same time during baseline the top 10% percent children's score span was over 82 to 100% but during year-end survey that wide span narrowed down to 96 to 100%

## 4.2 Class IV Children

### Learning Achievement in Tamil

**Table 25: Class IV Achievement in Tamil by District**

| Districts        | N           | Mean (2007)  | SD           | SEM         | N           | Mean (2008)  | SD           | SEM         | t-ratio      |
|------------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|--------------|
| CHENNAI          | 41          | 22.10        | 25.19        | 3.93        | 13          | 58.00        | 24.95        | 6.92        | 4.51         |
| COIMBATORE       | 188         | 50.73        | 29.83        | 2.18        | 69          | 71.80        | 20.68        | 2.49        | 6.37         |
| CUDDALORE        | 179         | 27.63        | 23.58        | 1.76        | 33          | 64.21        | 17.73        | 3.09        | 10.29        |
| DHARMAPURI       | 288         | 30.18        | 23.41        | 1.38        | 33          | 52.27        | 29.95        | 5.21        | 4.10         |
| DINDIGUL         | 127         | 42.93        | 26.01        | 2.31        | 19          | 71.26        | 18.07        | 4.14        | 5.97         |
| ERODE            | 131         | 43.04        | 27.36        | 2.39        | 36          | 67.67        | 16.67        | 2.78        | 6.72         |
| KANCHIPURAM      | 109         | 30.20        | 24.59        | 2.35        | 38          | 38.95        | 23.14        | 3.75        | 1.97         |
| KANYAKUMARI      | 76          | 51.29        | 24.25        | 2.78        | 12          | 52.33        | 36.02        | 10.40       | 0.10         |
| KARUR            | 72          | 39.69        | 29.58        | 3.49        | 22          | 76.55        | 19.02        | 4.06        | 6.89         |
| KRISHNAGIRI      | 184         | 38.33        | 26.45        | 1.95        | 51          | 49.22        | 25.48        | 3.57        | 2.68         |
| MADURAI          | 165         | 36.18        | 25.47        | 1.98        | 35          | 68.63        | 17.85        | 3.02        | 8.99         |
| NAGAPATTINAM     | 121         | 29.31        | 26.73        | 2.43        | 22          | 65.82        | 20.16        | 4.30        | 7.40         |
| NAMAKKAL         | 67          | 30.63        | 24.46        | 2.99        | 17          | 62.94        | 31.58        | 7.66        | 3.93         |
| PERAMBALUR       | 92          | 23.72        | 23.83        | 2.48        | 33          | 71.70        | 17.20        | 2.99        | 12.33        |
| PUDUKOTTAI       | 158         | 36.72        | 27.12        | 2.16        | 33          | 67.21        | 28.97        | 5.04        | 5.56         |
| RAMANATHAPURAM   | 95          | 38.63        | 26.22        | 2.69        | 26          | 63.88        | 16.84        | 3.30        | 5.93         |
| SALEM            | 174         | 27.59        | 24.13        | 1.83        | 47          | 50.38        | 23.37        | 3.41        | 5.89         |
| SIVAGANGAI       | 115         | 44.82        | 27.28        | 2.54        | 23          | 73.30        | 15.72        | 3.28        | 6.86         |
| THANJAVUR        | 163         | 30.01        | 27.74        | 2.17        | 39          | 59.18        | 21.01        | 3.36        | 7.28         |
| THE NILGIRIS     | 33          | 36.42        | 26.05        | 4.54        | 7           | 74.00        | 18.94        | 7.16        | 4.43         |
| THENI            | 62          | 53.55        | 23.66        | 3.00        | 24          | 84.08        | 10.05        | 2.05        | 8.39         |
| THIRUCHIRAPPALLI | 145         | 36.03        | 24.48        | 2.03        | 44          | 74.55        | 22.70        | 3.42        | 9.68         |
| THIRUVALLUR      | 128         | 33.06        | 25.55        | 2.26        | 34          | 69.76        | 15.31        | 2.63        | 10.60        |
| THIRUVANNAMALAI  | 183         | 29.36        | 24.81        | 1.83        | 43          | 56.65        | 25.73        | 3.92        | 6.30         |
| THIRUVARUR       | 104         | 34.23        | 26.22        | 2.57        | 19          | 49.47        | 35.16        | 8.07        | 1.80         |
| THOOTHUKUDI      | 83          | 52.27        | 26.68        | 2.93        | 18          | 61.17        | 23.22        | 5.47        | 1.43         |
| TIRUNELVELI      | 162         | 53.36        | 26.47        | 2.08        | 59          | 72.54        | 17.54        | 2.28        | 6.21         |
| VELLORE          | 275         | 36.84        | 28.29        | 1.71        | 61          | 61.08        | 22.96        | 2.94        | 7.13         |
| VILLUPURAM       | 226         | 29.12        | 23.49        | 1.56        | 54          | 49.39        | 25.17        | 3.43        | 5.38         |
| VIRUDHUNAGAR     | 95          | 49.03        | 29.58        | 3.03        | 38          | 73.87        | 10.86        | 1.76        | 7.08         |
| <b>Total</b>     | <b>4041</b> | <b>36.53</b> | <b>27.20</b> | <b>0.43</b> | <b>1002</b> | <b>63.19</b> | <b>24.07</b> | <b>0.76</b> | <b>30.56</b> |

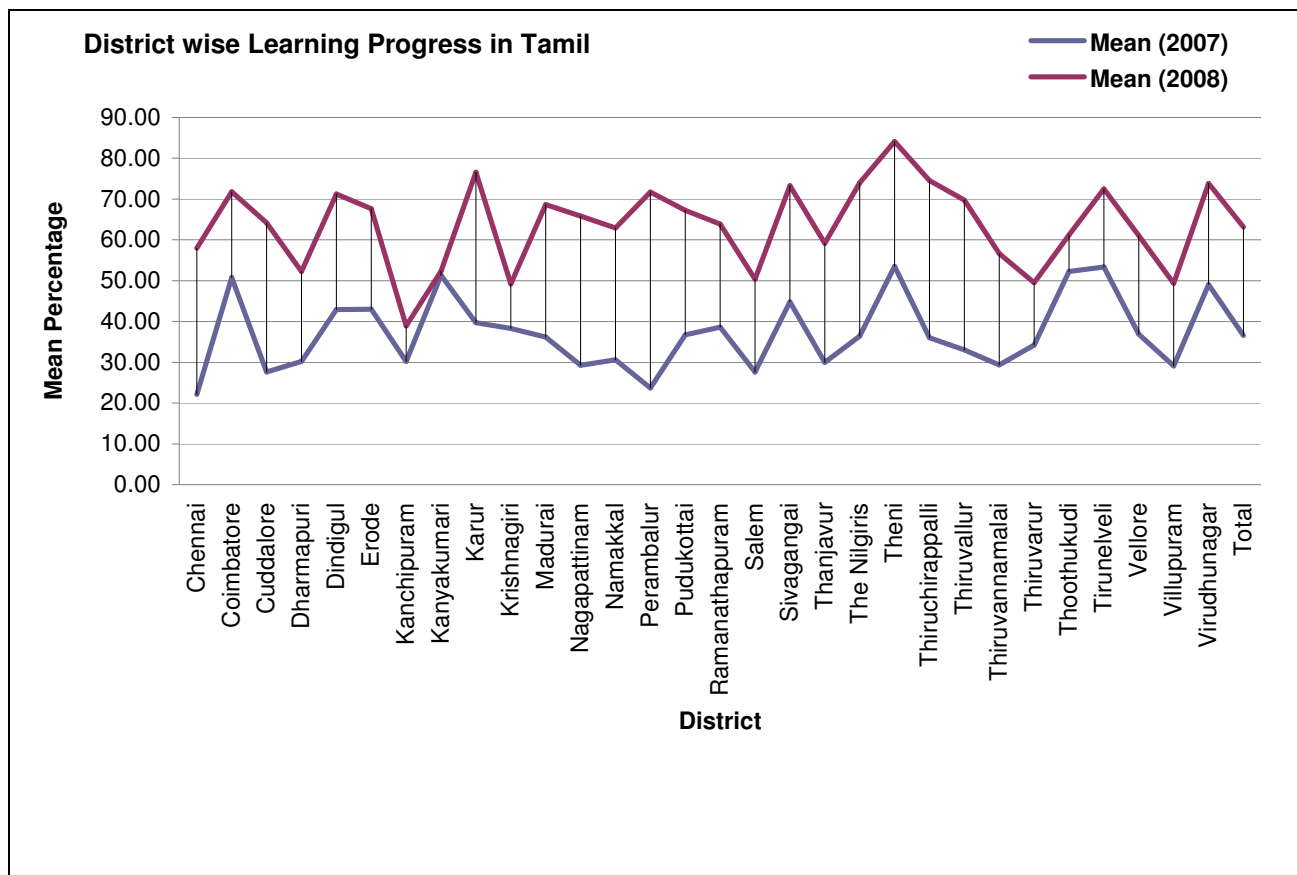
🟢 Significantly improved

🟡 not improved

Overall, mean achievement of Class IV children was found to be 63.19% during 2008 as compared to baseline 36.53% which is significant. Out of 30 districts, performance of children in 27 districts was significantly improved. Maximum

improvement was observed in Perumbalur and minimum improvement was found in Kanyakumari. However, despite significant improvement, performance in Kanchipuram district is the lowest in Tamil during 2008 study.

#### Class IV



**Table 26: Class IV Achievement in Tamil by Gender**

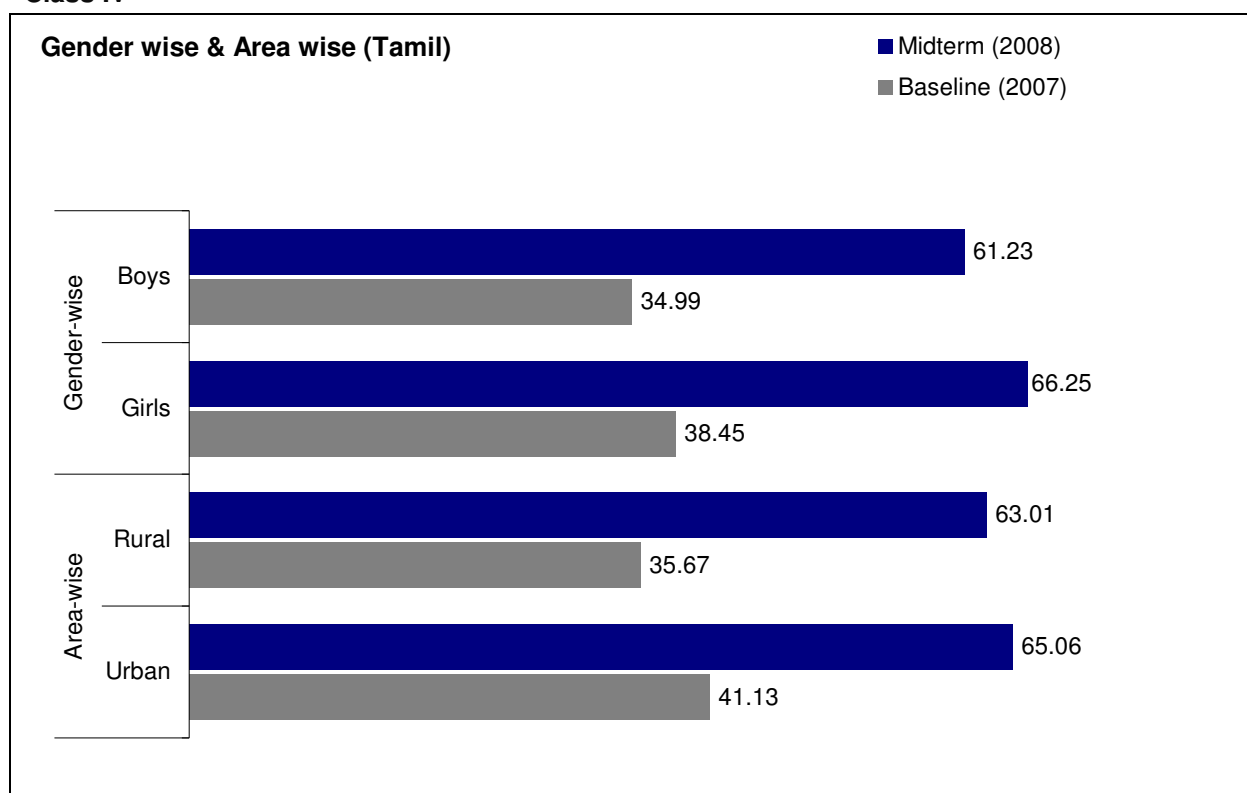
| Subject | Testing term | Boys |         |       |      | Girls |         |       |      | t-ratio |
|---------|--------------|------|---------|-------|------|-------|---------|-------|------|---------|
|         |              | N    | Mean    | SD    | SEM  | N     | Mean    | SD    | SEM  |         |
| Tamil   | Baseline     | 2249 | 34.99   | 26.52 | 0.56 | 1792  | 38.45   | 27.93 | 0.66 | 4.02**  |
|         | Year-end     | 611  | 61.23   | 23.77 | 0.96 | 391   | 66.25   | 24.25 | 1.23 | 3.24**  |
|         | t-ratio      |      | 23.59** |       |      |       | 19.96** |       |      |         |

The above table value indicates that, girls scored significantly better than boys in Tamil during the base line survey. Within the gender, achievement of boys and girls significantly improved during the year end (2008) as compared to the baseline study.

**Table 27: Class IV Achievement in Tamil by Location**

| Subject | Testing term | Rural |         |       |      | Urban |        |       |      | t-ratio |
|---------|--------------|-------|---------|-------|------|-------|--------|-------|------|---------|
|         |              | N     | Mean    | SD    | SEM  | N     | Mean   | SD    | SEM  |         |
| Tamil   | Baseline     | 3410  | 35.67   | 26.79 | 0.46 | 631   | 41.13  | 28.94 | 1.15 | 4.64**  |
|         | Year-end     | 912   | 63.01   | 24.33 | 0.81 | 90    | 65.06  | 21.31 | 2.25 | 0.77    |
|         | t-ratio      |       | 29.48** |       |      |       | 9.48** |       |      |         |

The above table value demonstrates that, urban children scored significantly better than their rural counterparts in Tamil during the base line and year-end surveys. Within the location or area, achievement of rural and urban significantly improved during the year end (2008) as compared to the baseline (2007) in Tamil achievement. Moreover, during the year end survey area wise gaps in achievement narrowed down as there was no significant difference found in boys and girls achievement.

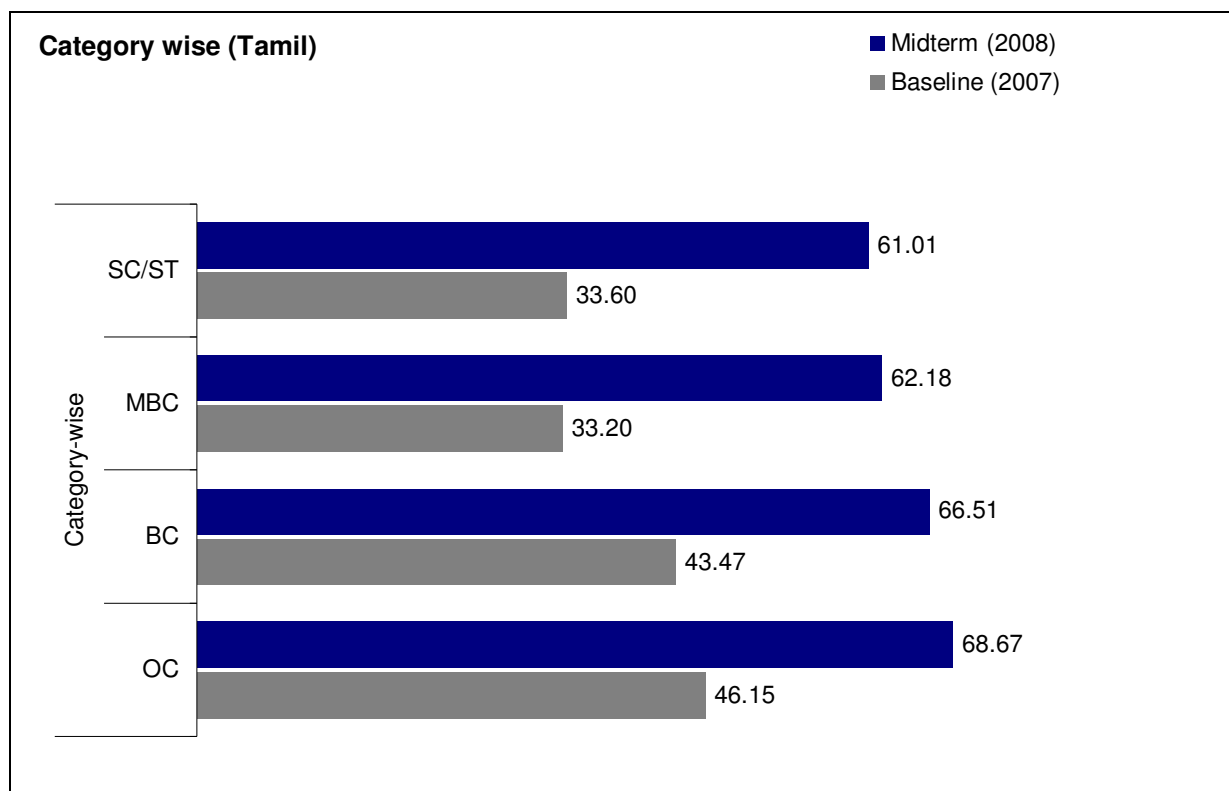
**Class IV**

**Table 28: Class IV Achievement in Tamil by Community**

| Subject | Category | Baseline (2007) |         |       |      | Year-end (2008) |       |       |       | t-ratio |
|---------|----------|-----------------|---------|-------|------|-----------------|-------|-------|-------|---------|
|         |          | N               | Mean    | SD    | SEM  | N               | Mean  | SD    | SEM   |         |
| Tamil   | SC/ST    | 1393            | 33.60   | 26.68 | 0.71 | 318             | 61.01 | 25.06 | 1.41  | 17.39** |
|         | MBC      | 1399            | 33.20   | 25.77 | 0.69 | 366             | 62.18 | 24.43 | 1.28  | 19.97** |
|         | BC       | 1222            | 43.47   | 28.01 | 0.80 | 315             | 66.51 | 22.30 | 1.26  | 15.47** |
|         | OC       | 27              | 46.15   | 30.67 | 5.90 | 3               | 68.67 | 27.01 | 15.59 | 1.35    |
|         | F-value  |                 | 41.22** |       |      |                 | 3.16* |       |       |         |

The table value reveals that, OC children scored significantly better than their counterparts in Tamil during both base line and year-end surveys. Within each category, achievement of children was significantly improved during year-end (2008) as compared to baseline (2007) except children from Others Category. Moreover, the reduction in SD revealed that children during the end of the year study homogenously performed as compared to baseline study.

#### Class IV



**Table 29: Class IV Achievement in Tamil by Different Types of Schools**

| Subject | Management      | Baseline (2007) |         |       |      | Year-end (2008) |        |       |      | t-ratio |
|---------|-----------------|-----------------|---------|-------|------|-----------------|--------|-------|------|---------|
|         |                 | N               | Mean    | SD    | SEM  | N               | Mean   | SD    | SEM  |         |
| Tamil   | Govt Local Body | 2849            | 33.58   | 26.15 | 0.49 | 749             | 62.03  | 24.37 | 0.89 | 27.99** |
|         | ADW             | 129             | 30.08   | 24.75 | 2.18 | 18              | 52.33  | 25.19 | 5.94 | 3.52**  |
|         | Private Aided   | 1063            | 45.20   | 28.36 | 0.87 | 235             | 67.73  | 22.36 | 1.46 | 13.26** |
|         | <b>F-value</b>  |                 | 77.18** |       |      |                 | 6.97** |       |      |         |

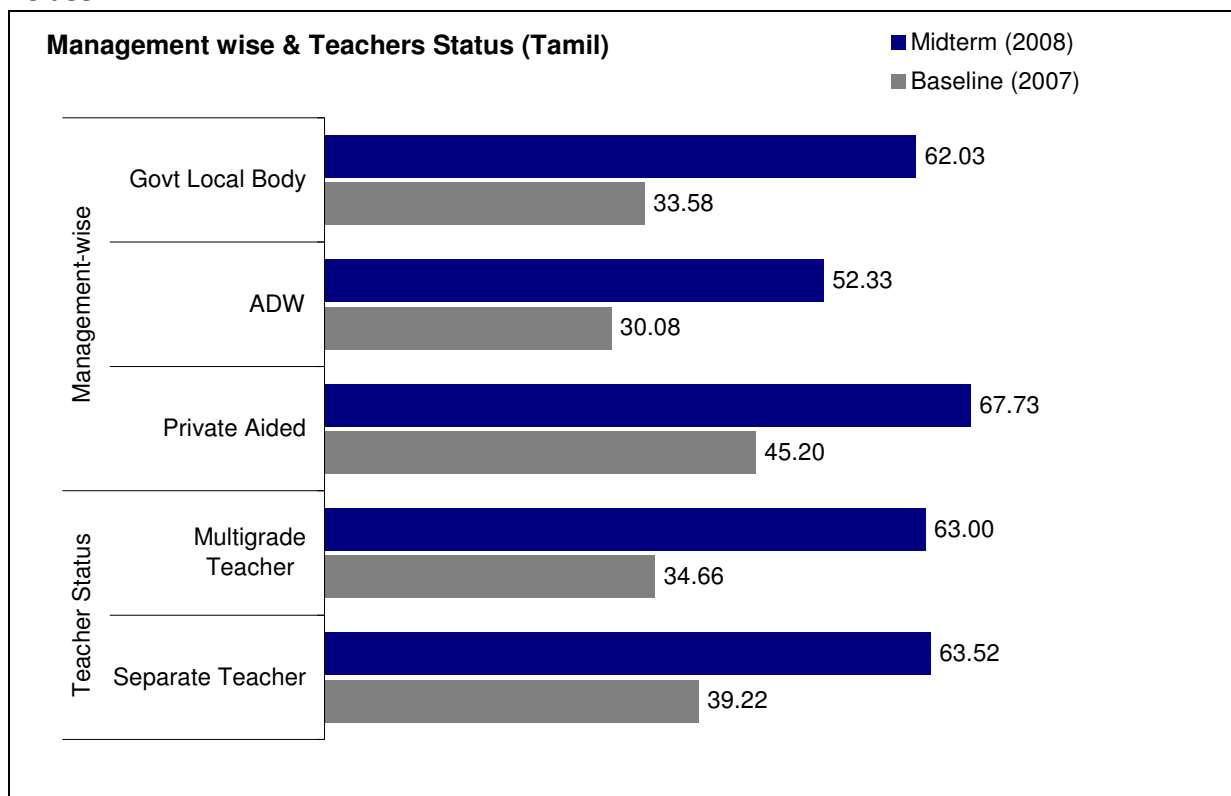
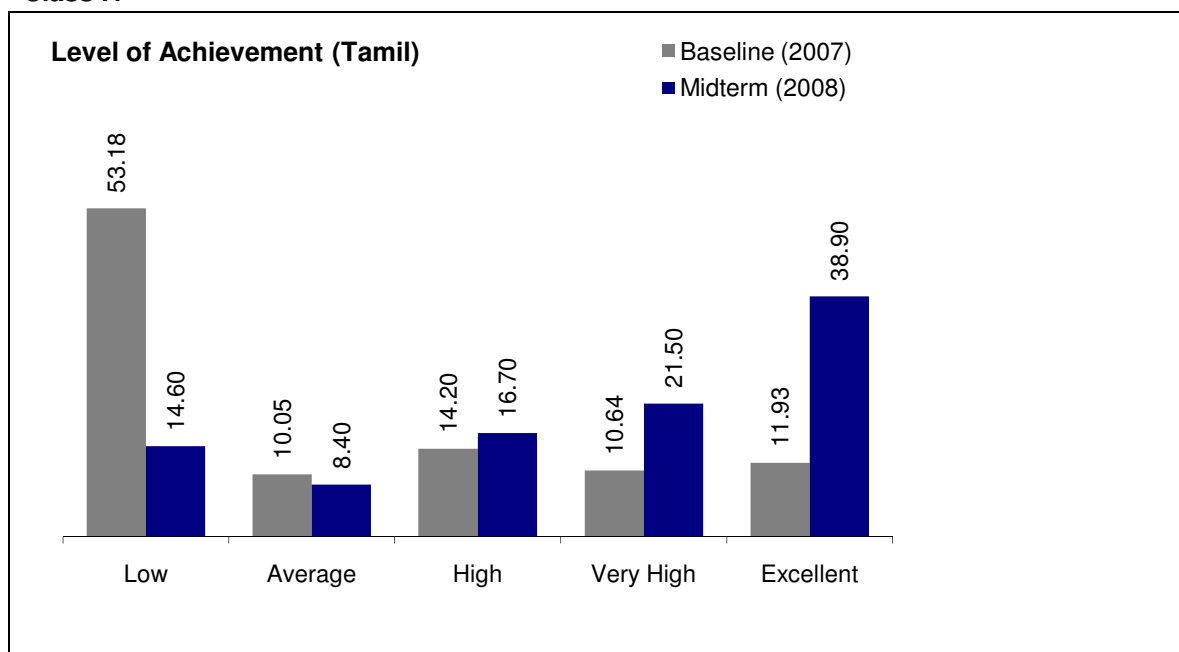
The above table value demonstrates that, children from private aided school performed significantly better during the baseline (2007) and year end (2008) surveys. Further, achievement of children from each type of school management significantly improved during the year end (2008) as compared to the baseline (2007).

**Table 30: Class IV Achievement in Tamil by Teachers Status**

| Subject | Testing term | Multigrade Teacher |         |       |      | Separate Teacher |         |       |      | t-ratio |
|---------|--------------|--------------------|---------|-------|------|------------------|---------|-------|------|---------|
|         |              | N                  | Mean    | SD    | SEM  | N                | Mean    | SD    | SEM  |         |
| Tamil   | Baseline     | 2414               | 34.66   | 26.52 | 0.54 | 1624             | 39.22   | 27.94 | 0.69 | 5.19**  |
|         | Year-end     | 636                | 63.00   | 23.73 | 0.94 | 366              | 63.52   | 24.68 | 1.29 | 0.33    |
|         | t-ratio      |                    | 26.13** |       |      |                  | 16.59** |       |      |         |

The table value indicates that children performed significantly better when they were taught by separate teacher for ABL activities during the baseline study. Further, it is evident from the table that children performed similarly under both (multigrade and separate teacher) condition during the year end as compared to the baseline. So it is inferred that the multigrade teachers are now better equipped to handle the ABL conditions in the classrooms.

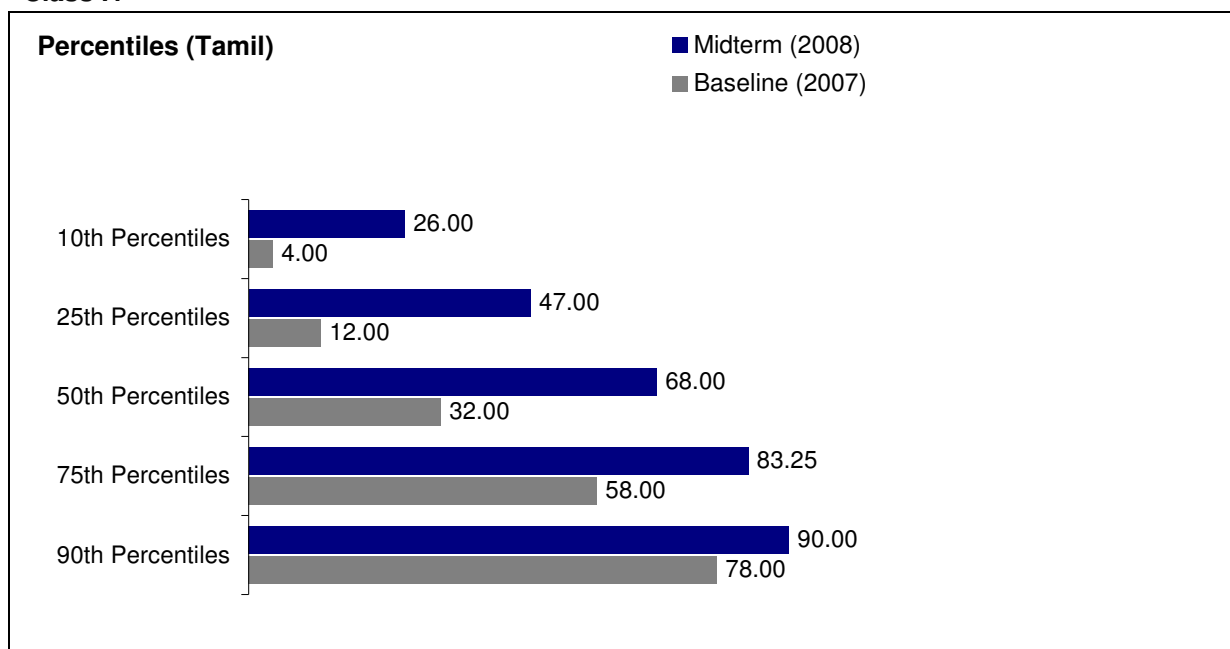


**Class IV****Class IV**

The performance of children was categorized under five distinct groups i.e., Low (children who scored less than 35%), Average (scored between 35 and 45%), High (45% and 60%), Very high (60% to 75%) and Excellent (75% and above). The graph demonstrates that during the baseline nearly 53% of the children performed at the
































low level and during year end, low achievers reduced to 15%. Whilst, during the base line 12% scored at excellent and during the year end assessments excellent achievers increased to 39%.

#### Class IV



Percentile scores revealed that during the year-end survey at every percentile rank score was improved. During the baseline study, bottom 10% children scored less than 4% marks and during the year-end survey the score improved to 26%. At the same time during the baseline to ten percent children's scored span over 78 to 100% but during the year-end survey that wide span narrowed down to 90 to 100%

Class IV: Learning Achievement in Mathematics**Table 31: Class IV Achievement in Mathematics by District**

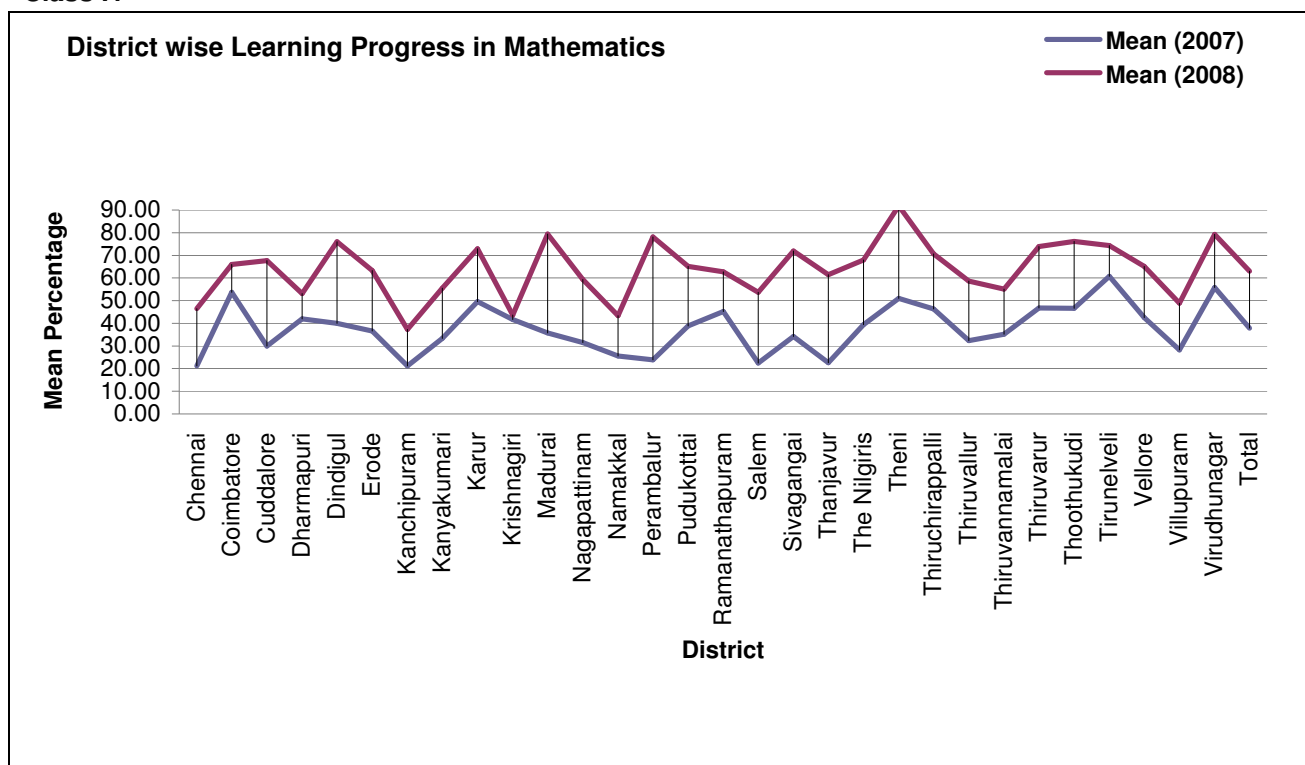
| Districts        | N           | Mean (2007)  | SD           | SEM         | N          | Mean (2008)  | SD           | SEM         | t-ratio  |
|------------------|-------------|--------------|--------------|-------------|------------|--------------|--------------|-------------|--|
| CHENNAI          | 34          | 21.24        | 15.85        | 2.72        | 12         | 46.42        | 20.20        | 5.83        | 3.91            |
| COIMBATORE       | 178         | 53.66        | 24.17        | 1.81        | 68         | 65.93        | 17.94        | 2.18        | 4.33            |
| CUDDALORE        | 167         | 29.96        | 26.02        | 2.01        | 29         | 67.62        | 23.23        | 4.31        | 7.91            |
| DHARMAPURI       | 272         | 41.97        | 26.31        | 1.60        | 31         | 53.16        | 26.31        | 4.72        | 2.24            |
| DINDIGUL         | 120         | 40.05        | 22.69        | 2.07        | 19         | 75.95        | 17.95        | 4.12        | 7.79            |
| ERODE            | 108         | 36.63        | 23.51        | 2.26        | 30         | 63.30        | 22.83        | 4.17        | 5.62            |
| KANCHIPURAM      | 93          | 21.23        | 21.43        | 2.22        | 33         | 37.33        | 26.15        | 4.55        | 3.18            |
| KANYAKUMARI      | 56          | 33.36        | 18.85        | 2.52        | 12         | 55.50        | 33.99        | 9.81        | 2.19            |
| KARUR            | 60          | 49.57        | 27.06        | 3.49        | 21         | 72.86        | 8.75         | 1.91        | 5.85            |
| KRISHNAGIRI      | 162         | 41.65        | 26.01        | 2.04        | 50         | 43.72        | 20.58        | 2.91        | 0.58            |
| MADURAI          | 162         | 35.74        | 23.46        | 1.84        | 32         | 79.47        | 9.00         | 1.59        | 17.96           |
| NAGAPATTINAM     | 113         | 31.52        | 25.94        | 2.44        | 20         | 59.30        | 26.94        | 6.02        | 4.27            |
| NAMAKKAL         | 58          | 25.55        | 22.99        | 3.02        | 21         | 43.33        | 23.38        | 5.10        | 3.00           |
| PERAMBALUR       | 80          | 23.93        | 21.30        | 2.38        | 21         | 78.10        | 16.11        | 3.51        | 12.76         |
| PUDUKOTTAI       | 150         | 38.91        | 26.06        | 2.13        | 32         | 65.19        | 14.27        | 2.52        | 7.96          |
| RAMANATHAPURAM   | 86          | 45.19        | 25.79        | 2.78        | 21         | 62.67        | 17.14        | 3.74        | 3.75          |
| SALEM            | 181         | 22.51        | 20.35        | 1.51        | 44         | 53.70        | 22.08        | 3.33        | 8.53          |
| SIVAGANGAI       | 103         | 34.23        | 25.87        | 2.55        | 20         | 71.85        | 9.81         | 2.19        | 11.18         |
| THANJAVUR        | 167         | 22.65        | 21.75        | 1.68        | 34         | 61.47        | 20.79        | 3.56        | 9.85          |
| THE NILGIRIS     | 32          | 39.38        | 22.85        | 4.04        | 6          | 68.00        | 8.00         | 3.27        | 5.51          |
| THENI            | 53          | 50.94        | 33.24        | 4.57        | 17         | 91.88        | 10.66        | 2.59        | 7.80          |
| THIRUCHIRAPPALLI | 137         | 46.34        | 27.36        | 2.34        | 40         | 70.63        | 20.77        | 3.28        | 6.03          |
| THIRUVALLUR      | 118         | 32.31        | 24.02        | 2.21        | 27         | 58.67        | 18.78        | 3.61        | 6.22          |
| THIRUVANNAMALAI  | 160         | 35.23        | 27.14        | 2.15        | 41         | 55.07        | 23.31        | 3.64        | 4.70          |
| THIRUVARUR       | 82          | 46.73        | 30.53        | 3.37        | 17         | 73.88        | 10.76        | 2.61        | 6.37          |
| THOOTHUKUDI      | 60          | 46.60        | 21.56        | 2.78        | 17         | 76.12        | 19.24        | 4.67        | 5.43          |
| TIRUNELVELI      | 148         | 60.81        | 22.98        | 1.89        | 64         | 74.38        | 11.51        | 1.44        | 5.71          |
| VELLORE          | 248         | 42.46        | 27.81        | 1.77        | 63         | 65.10        | 23.80        | 3.00        | 6.50          |
| VILLUPURAM       | 192         | 28.29        | 22.27        | 1.61        | 52         | 48.85        | 23.99        | 3.33        | 5.56          |
| VIRUDHUNAGAR     | 87          | 55.84        | 26.72        | 2.86        | 35         | 79.20        | 16.04        | 2.71        | 5.92          |
| <b>Total</b>     | <b>3667</b> | <b>37.93</b> | <b>26.79</b> | <b>0.44</b> | <b>929</b> | <b>63.01</b> | <b>23.09</b> | <b>0.76</b> | <b>28.60 </b> |

 significantly improved not improved

Overall, mean achievement of children was found to be 63.01% during year end (2008) survey as compared to the baseline 37.93% which is significant. Out of 30 districts, performance of children in 29 districts was significantly improved. Maximum improvement was observed in Perumbalur and minimum improvement was found in

Krishnagiri. However, despite significant improvement, performance in Kanchipuram district is the lowest in Mathematics during 2008 study.

#### Class IV



**Table 32: Class IV Achievement in Mathematics by Gender**

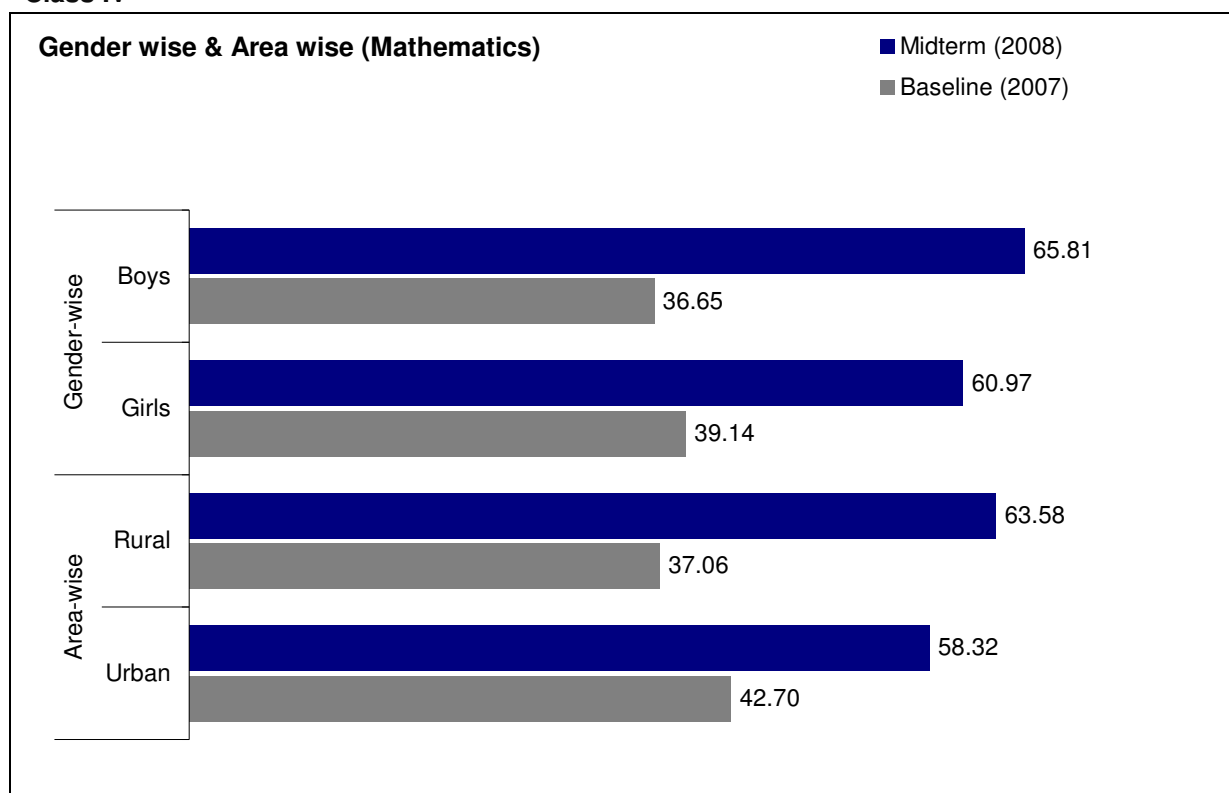
| Subject     | Testing term | Boys |         |       |      | Girls |         |       |      | t-ratio |
|-------------|--------------|------|---------|-------|------|-------|---------|-------|------|---------|
|             |              | N    | Mean    | SD    | SEM  | N     | Mean    | SD    | SEM  |         |
| Mathematics | Baseline     | 1788 | 36.65   | 26.38 | 0.62 | 1879  | 39.14   | 27.12 | 0.63 | 2.83**  |
|             | Year-end     | 391  | 65.81   | 21.80 | 1.10 | 538   | 60.97   | 23.79 | 1.03 | 3.17**  |
|             | t-ratio      |      | 23.02** |       |      |       | 18.17** |       |      |         |

The above table value indicates that, girls scored significantly better than boys in Mathematics during the base line and boys scored significantly better during the year-end survey. Within the gender, achievement of boys and girls significantly improved during the year-end (2008) as compared to the baseline study.

**Table 33: Class IV Achievement by Location**

| Subject     | Testing term | Rural |         |       |      | Urban |        |       |      | t-ratio |
|-------------|--------------|-------|---------|-------|------|-------|--------|-------|------|---------|
|             |              | N     | Mean    | SD    | SEM  | N     | Mean   | SD    | SEM  |         |
| Mathematics | Baseline     | 3103  | 37.06   | 26.88 | 0.48 | 564   | 42.70  | 25.78 | 1.09 | 4.61**  |
|             | Year-end     | 829   | 63.58   | 23.40 | 0.81 | 100   | 58.32  | 19.82 | 1.98 | 2.15**  |
|             | t-ratio      |       | 28.06** |       |      |       | 6.91** |       |      |         |

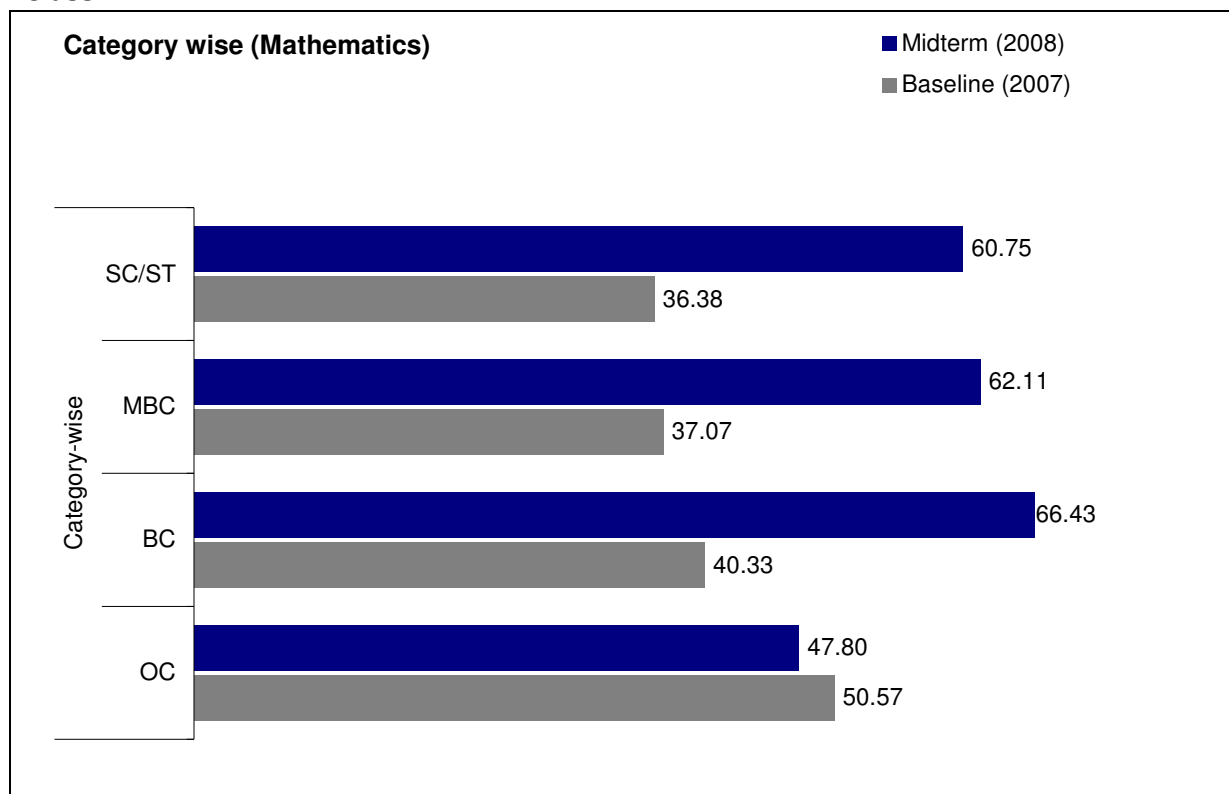
The above table value demonstrates that, urban children scored significantly better than their rural counterparts in Mathematics during base line and rural children scored significantly better during year-end. Within the location or area, achievement of rural and urban significantly improved during the academic year end assessment (2008) as compared to baseline (2007).

**Class IV**

**Table 34: Class IV Achievement in Mathematics by Community**

| Subject     | Category       | Baseline (2007) |        |       |      | Year-end (2008) |        |       |       | t-ratio |
|-------------|----------------|-----------------|--------|-------|------|-----------------|--------|-------|-------|---------|
|             |                | N               | Mean   | SD    | SEM  | N               | Mean   | SD    | SEM   |         |
| Mathematics | SC/ST          | 1269            | 36.38  | 27.70 | 0.78 | 303             | 60.75  | 23.20 | 1.33  | 15.80** |
|             | MBC            | 1228            | 37.07  | 26.20 | 0.75 | 316             | 62.11  | 24.06 | 1.35  | 16.20** |
|             | BC             | 1149            | 40.33  | 26.23 | 0.77 | 305             | 66.43  | 21.51 | 1.23  | 17.95** |
|             | OC             | 21              | 50.57  | 24.62 | 5.37 | 5               | 47.80  | 26.04 | 11.65 | 0.22    |
|             | <b>F-value</b> |                 | 6.50** |       |      |                 | 4.12** |       |       |         |

The table value reveals that, OC children scored significantly better than their counterparts in Mathematics during base line and BC children scored significantly better during the year-end study. Within each category, achievement of children was significantly improved during the year-end (2008) as compared to the baseline (2007) except children from Others Category. Moreover, the reduction in SD revealed that children during the year-end study homogenously performed as compared to the baseline study.

**Class IV**

**Table 35: Class IV Achievement in Mathematics by Different types of Schools**

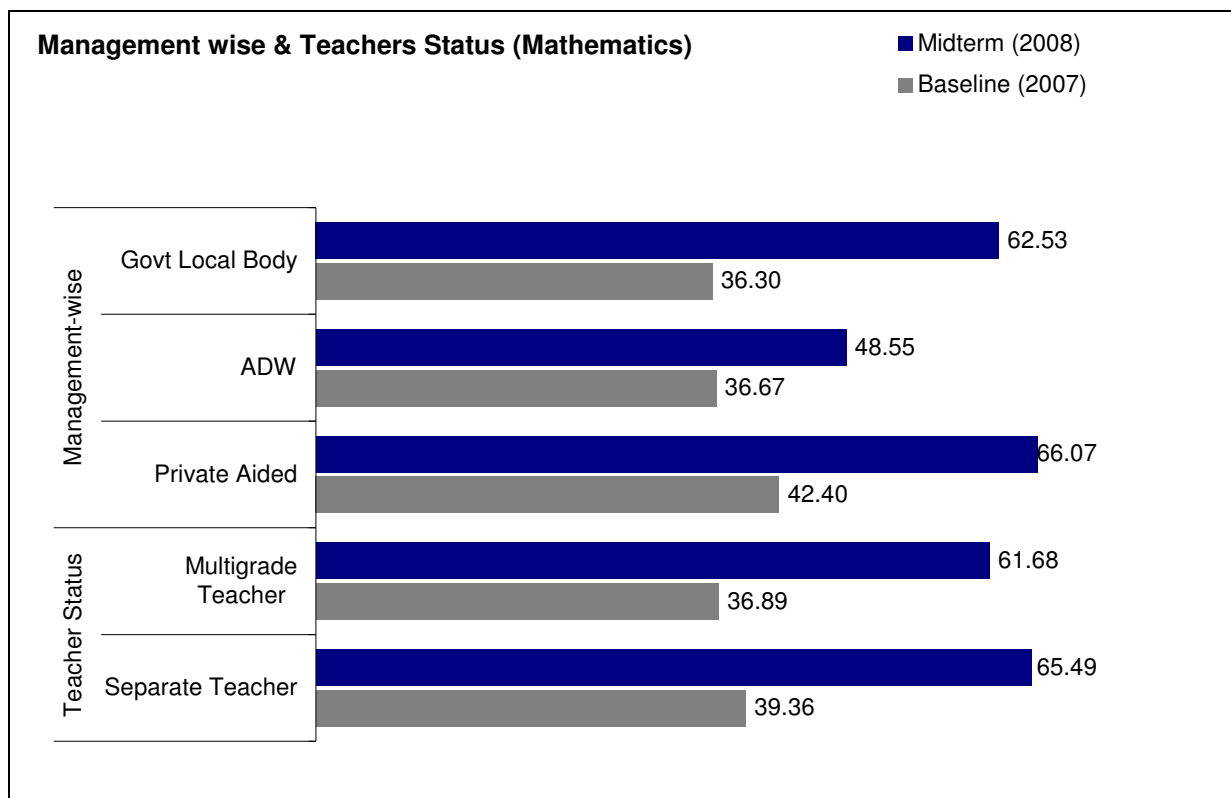
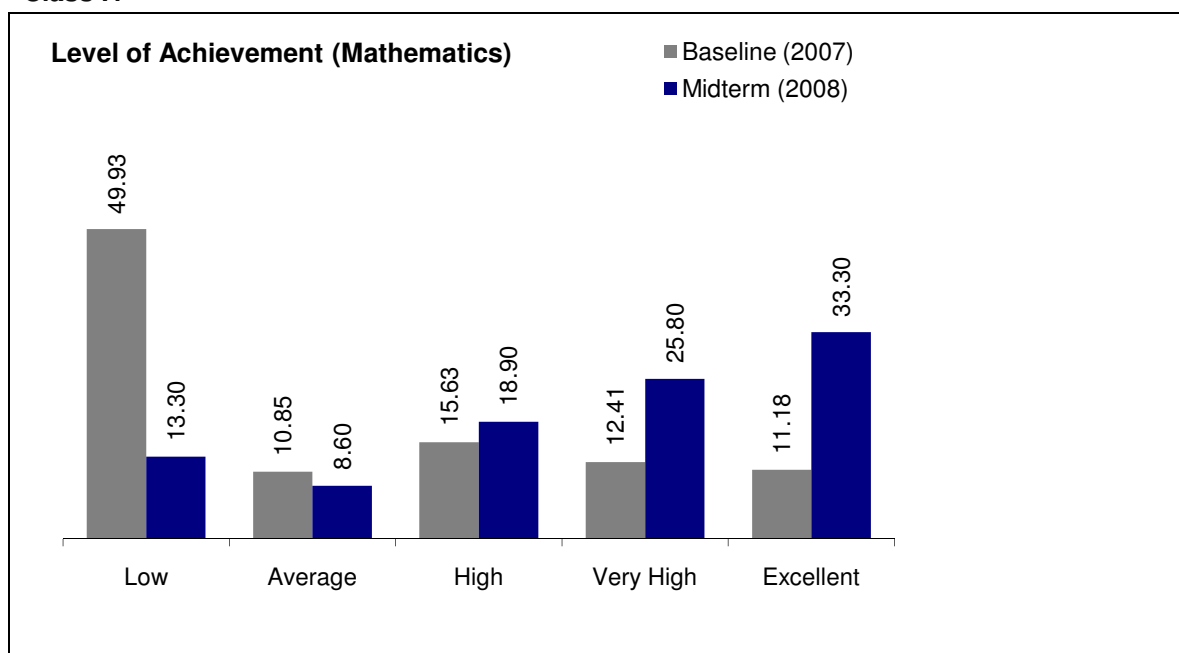
| Subject     | Management      | Baseline (2007) |        |       |      | Year-end (2008) |        |       |      | t-ratio |
|-------------|-----------------|-----------------|--------|-------|------|-----------------|--------|-------|------|---------|
|             |                 | N               | Mean   | SD    | SEM  | N               | Mean   | SD    | SEM  |         |
| Mathematics | Govt Local Body | 2579            | 36.30  | 26.50 | 0.52 | 694             | 62.53  | 23.36 | 0.89 | 25.49** |
|             | ADW             | 117             | 36.67  | 24.59 | 2.27 | 22              | 48.55  | 29.15 | 6.21 | 1.80    |
|             | Private Aided   | 971             | 42.40  | 27.31 | 0.88 | 213             | 66.07  | 20.81 | 1.43 | 14.14** |
|             | F-value         |                 | 18.6** |       |      |                 | 6.41** |       |      |         |

The above table value demonstrates that, children from private aided school performed significantly better during the baseline (2007) and year-end (2008) assessments. Further, achievement of children from each type of school management significantly improved during year-end (2008) as compared to the baseline (2007).

**Table 36: Class IV Achievement in Mathematics by Teacher-status**

| Subject     | Testing term | Multigrade Teacher |         |       |      | Separate Teacher |         |       |      | t-ratio |
|-------------|--------------|--------------------|---------|-------|------|------------------|---------|-------|------|---------|
|             |              | N                  | Mean    | SD    | SEM  | N                | Mean    | SD    | SEM  |         |
| Mathematics | Baseline     | 2126               | 36.89   | 26.96 | 0.58 | 1540             | 39.36   | 26.50 | 0.68 | 2.76**  |
|             | Year-end     | 605                | 61.68   | 23.53 | 0.96 | 324              | 65.49   | 22.06 | 1.23 | 2.45**  |
|             | t-ratio      |                    | 22.11** |       |      |                  | 18.68** |       |      |         |

The table value indicates that children performed significantly better when they were taught by separate teacher for ABL activities during baseline and year-end studies. Further, it is evident from the table that performance of children improved significantly under both (multigrade and separate teacher) condition at the year-end tests as compared to the baseline.

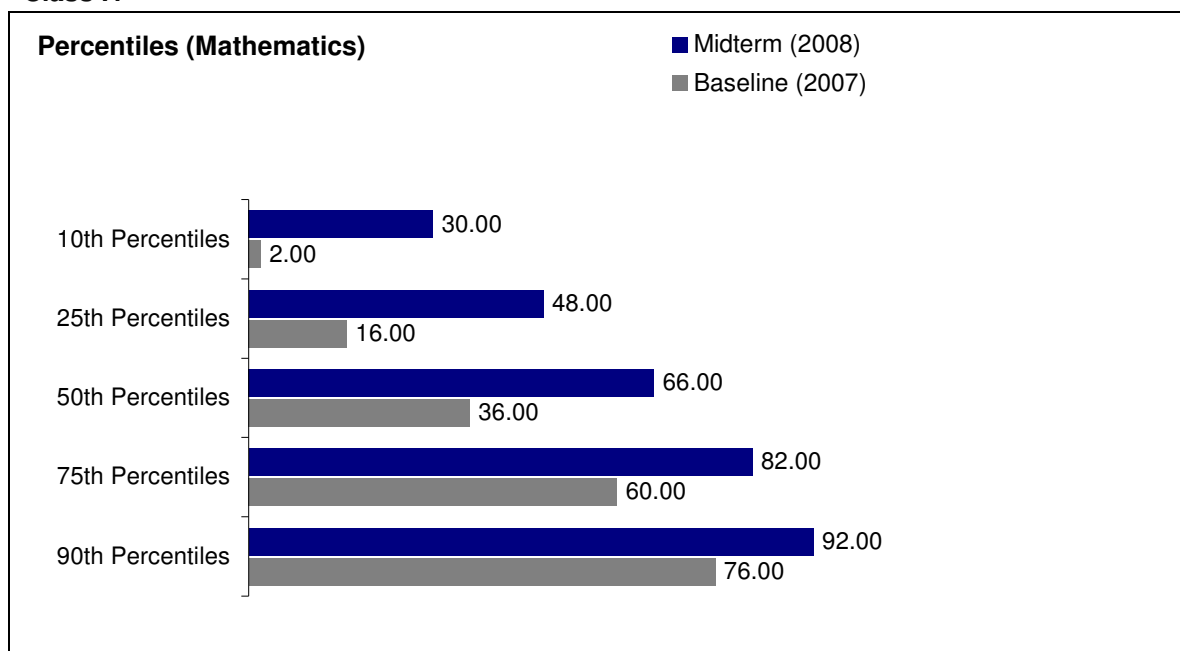
**Class IV****Class IV**

The performance of children was categorized under five distinct groups i.e., Low (children who scored less than 35%), Average (scored between 35 and 45%), High (45% and 60%), Very high (60% to 75%) and Excellent (75% and above). The graph demonstrates that during baseline nearly half of the children performed at the Low



level and during the year-end, low achievers reduced to 13%. Whilst, during base line 11% scored at excellent and during the end of the year tests excellent achievers increased to 33%.

#### Class IV



Percentile scores revealed that during the year-end survey at every percentile rank score was improved. During baseline study, bottom 10% children scored less than 2% marks and during year end survey the score improved to 30%. At the same time during baseline to ten percent children's scored span was over 76 to 100% but during the end of the year survey that wide span narrowed down to 92 to 100%

## Class IV Learning Achievement in English

Table 37: Class IV Achievement in English by District

| District         | N           | Mean (2007)  | SD           | SEM         | N          | Mean (2008)  | SD           | SEM         | t-ratio       |
|------------------|-------------|--------------|--------------|-------------|------------|--------------|--------------|-------------|---------------|
| CHENNAI          | 41          | 16.49        | 12.21        | 1.91        | 12         | 19.50        | 8.16         | 2.36        | 0.99↔         |
| COIMBATORE       | 169         | 48.82        | 25.08        | 1.93        | 60         | 63.92        | 20.74        | 2.68        | 4.57🟢         |
| CUDDLALORE       | 169         | 19.49        | 20.39        | 1.57        | 30         | 58.80        | 20.99        | 3.83        | 9.49🟢         |
| DHARMAPURI       | 244         | 30.16        | 18.40        | 1.18        | 30         | 47.90        | 23.64        | 4.32        | 3.96🟢         |
| DINDIGUL         | 124         | 27.15        | 21.72        | 1.95        | 17         | 57.35        | 28.35        | 6.88        | 4.23🟢         |
| ERODE            | 115         | 27.98        | 19.02        | 1.77        | 36         | 68.56        | 21.38        | 3.56        | 10.19🟢        |
| KANCHIPURAM      | 102         | 21.12        | 17.27        | 1.71        | 36         | 30.19        | 21.60        | 3.60        | 2.28🟢         |
| KANYAKUMARI      | 62          | 31.32        | 19.86        | 2.52        | 12         | 34.33        | 21.28        | 6.14        | 0.45↔         |
| KARUR            | 67          | 37.70        | 20.72        | 2.53        | 21         | 73.10        | 12.19        | 2.66        | 9.64🟢         |
| KRISHNAGIRI      | 145         | 27.75        | 22.68        | 1.88        | 52         | 31.31        | 20.49        | 2.84        | 1.04↔         |
| MADURAI          | 159         | 20.77        | 18.00        | 1.43        | 32         | 58.38        | 10.47        | 1.85        | 16.09🟢        |
| NAGAPATTINAM     | 116         | 24.71        | 24.18        | 2.24        | 23         | 58.91        | 23.97        | 5.00        | 6.24🟢         |
| NAMAKKAL         | 58          | 19.24        | 16.84        | 2.21        | 18         | 37.22        | 22.92        | 5.40        | 3.08🟢         |
| PERAMBALUR       | 83          | 9.35         | 12.09        | 1.33        | 19         | 58.53        | 17.29        | 3.97        | 11.76🟢        |
| PUDUKOTTAI       | 141         | 28.88        | 24.41        | 2.06        | 33         | 54.97        | 18.07        | 3.15        | 6.94🟢         |
| RAMANATHAPURAM   | 83          | 28.12        | 21.58        | 2.37        | 22         | 52.68        | 22.62        | 4.82        | 4.57🟢         |
| SALEM            | 158         | 19.76        | 18.19        | 1.45        | 42         | 44.07        | 19.44        | 3.00        | 7.30🟢         |
| SIVAGANGAI       | 101         | 21.68        | 20.30        | 2.02        | 21         | 65.67        | 20.46        | 4.46        | 8.98🟢         |
| THANJAVUR        | 150         | 11.60        | 11.64        | 0.95        | 36         | 56.31        | 23.30        | 3.88        | 11.18🟢        |
| THE NILGIRIS     | 32          | 39.31        | 23.45        | 4.15        | 5          | 64.80        | 12.07        | 5.40        | 3.74🟢         |
| THENI            | 59          | 33.25        | 28.40        | 3.70        | 19         | 78.11        | 6.78         | 1.56        | 11.18🟢        |
| THIRUCHIRAPPALLI | 139         | 28.79        | 19.92        | 1.69        | 41         | 52.68        | 18.86        | 2.95        | 7.04🟢         |
| THIRUVALLUR      | 122         | 18.92        | 17.47        | 1.58        | 28         | 56.29        | 20.09        | 3.80        | 9.09🟢         |
| THIRUVANNAMALAI  | 170         | 22.51        | 18.53        | 1.42        | 38         | 36.79        | 17.94        | 2.91        | 4.41🟢         |
| THIRUVARUR       | 93          | 30.52        | 26.63        | 2.76        | 17         | 57.06        | 16.27        | 3.94        | 5.51🟢         |
| THOOTHUKUDI      | 73          | 26.63        | 20.09        | 2.35        | 16         | 59.75        | 19.90        | 4.98        | 6.02🟢         |
| TIRUNELVELI      | 144         | 51.85        | 23.43        | 1.95        | 61         | 62.33        | 18.64        | 2.39        | 3.40🟢         |
| VELLORE          | 268         | 33.72        | 27.48        | 1.68        | 63         | 51.60        | 21.74        | 2.74        | 5.57🟢         |
| VILLUPURAM       | 212         | 20.37        | 13.79        | 0.95        | 53         | 31.58        | 14.57        | 2.00        | 5.07🟢         |
| VIRUDHUNAGAR     | 84          | 31.24        | 24.22        | 2.64        | 37         | 66.57        | 21.93        | 3.61        | 7.90🟢         |
| <b>Total</b>     | <b>3683</b> | <b>27.13</b> | <b>22.73</b> | <b>0.37</b> | <b>930</b> | <b>52.33</b> | <b>23.49</b> | <b>0.77</b> | <b>29.43🟢</b> |

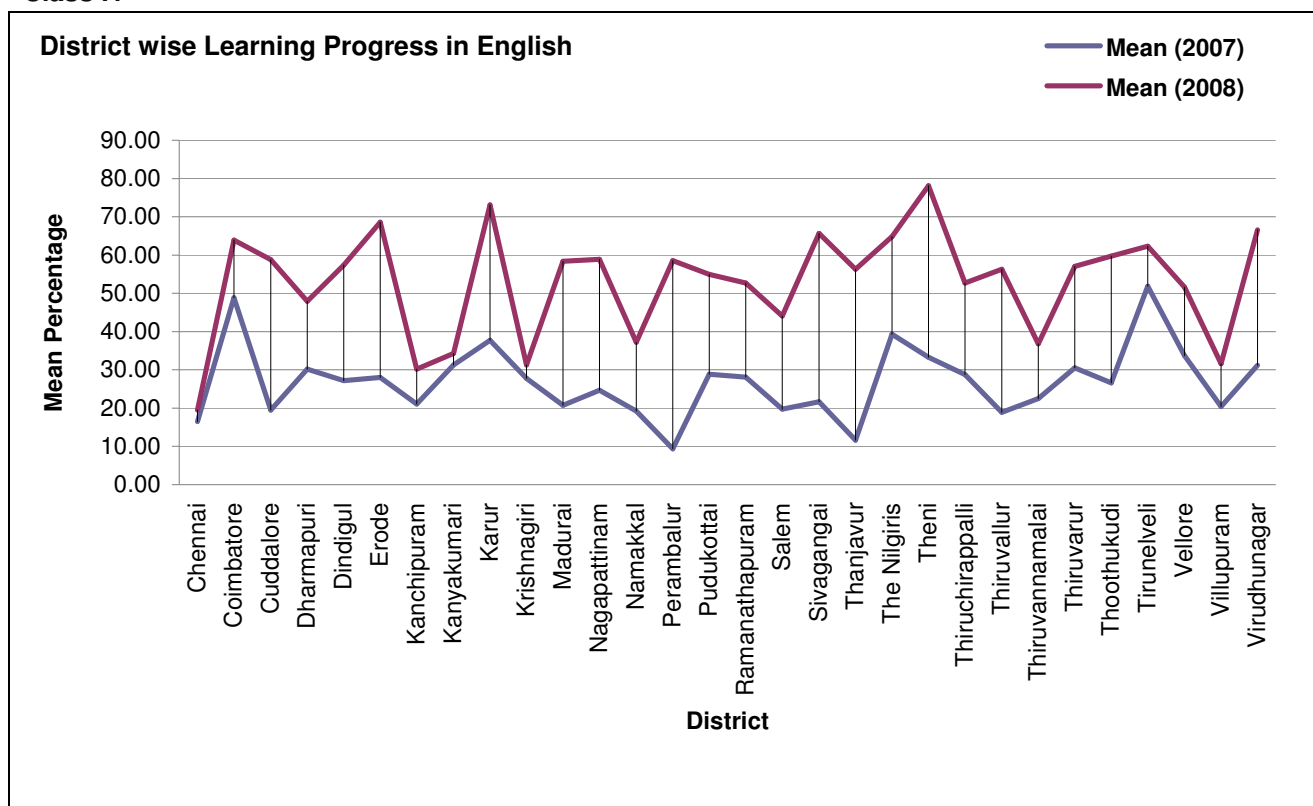
🟢 significantly improved

↔ not improved

Overall, mean achievement of children was found to be 52.33% during 2008 as compared to baseline 27.13% which is significant. Out of 30 districts, performance of children in 27 districts was significantly improved. Maximum improvement was

observed in Perumbalur and minimum improvement was found in Chennai also the lowest among the districts in English during 2008 study.

#### Class IV



**Table 38: Class IV Achievement in English by Gender**

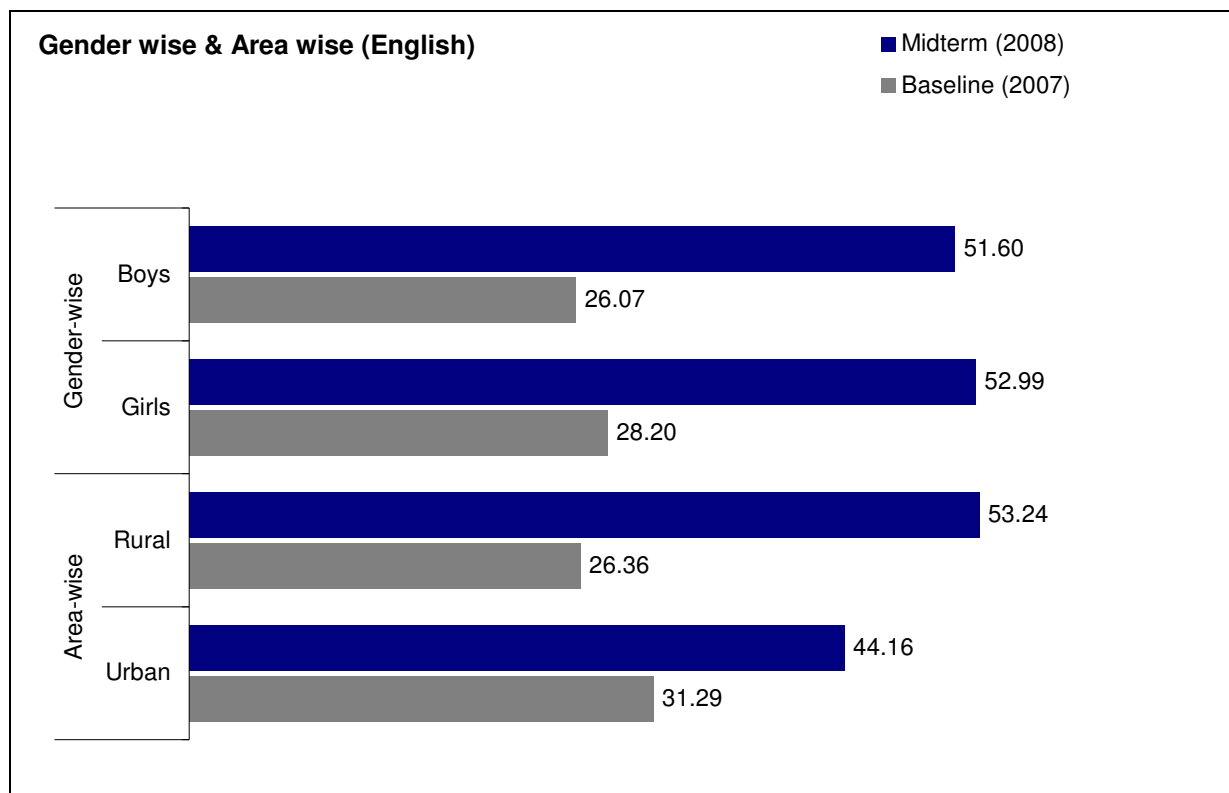
| Subject | Testing term | Boys |         |       |      | Girls |         |       |      | t-ratio |
|---------|--------------|------|---------|-------|------|-------|---------|-------|------|---------|
|         |              | N    | Mean    | SD    | SEM  | N     | Mean    | SD    | SEM  |         |
| English | Baseline     | 1855 | 26.07   | 22.68 | 0.53 | 1828  | 28.20   | 22.74 | 0.53 | 2.85**  |
|         | Year-end     | 440  | 51.60   | 24.12 | 1.15 | 490   | 52.99   | 22.92 | 1.04 | 0.90    |
|         | t-ratio      |      | 20.18** |       |      |       | 21.30** |       |      |         |

The above table value indicates that, girls scored significantly better than boys in English during the base line and no significant difference observed during year-end survey. Within the gender, achievement of boys and girls significantly improved during year-end (2008) as compared to the baseline study.

**Table 39: Class IV English by Location**

| Subject | Testing term | Rural |         |       |      | Urban |        |       |      | t-ratio |
|---------|--------------|-------|---------|-------|------|-------|--------|-------|------|---------|
|         |              | N     | Mean    | SD    | SEM  | N     | Mean   | SD    | SEM  |         |
| English | Baseline     | 3112  | 26.36   | 22.31 | 0.40 | 571   | 31.29  | 24.51 | 1.03 | 4.77**  |
|         | Year-end     | 837   | 53.24   | 23.68 | 0.82 | 93    | 44.16  | 20.06 | 2.08 | 3.56**  |
|         | t-ratio      |       | 29.50** |       |      |       | 5.55** |       |      |         |

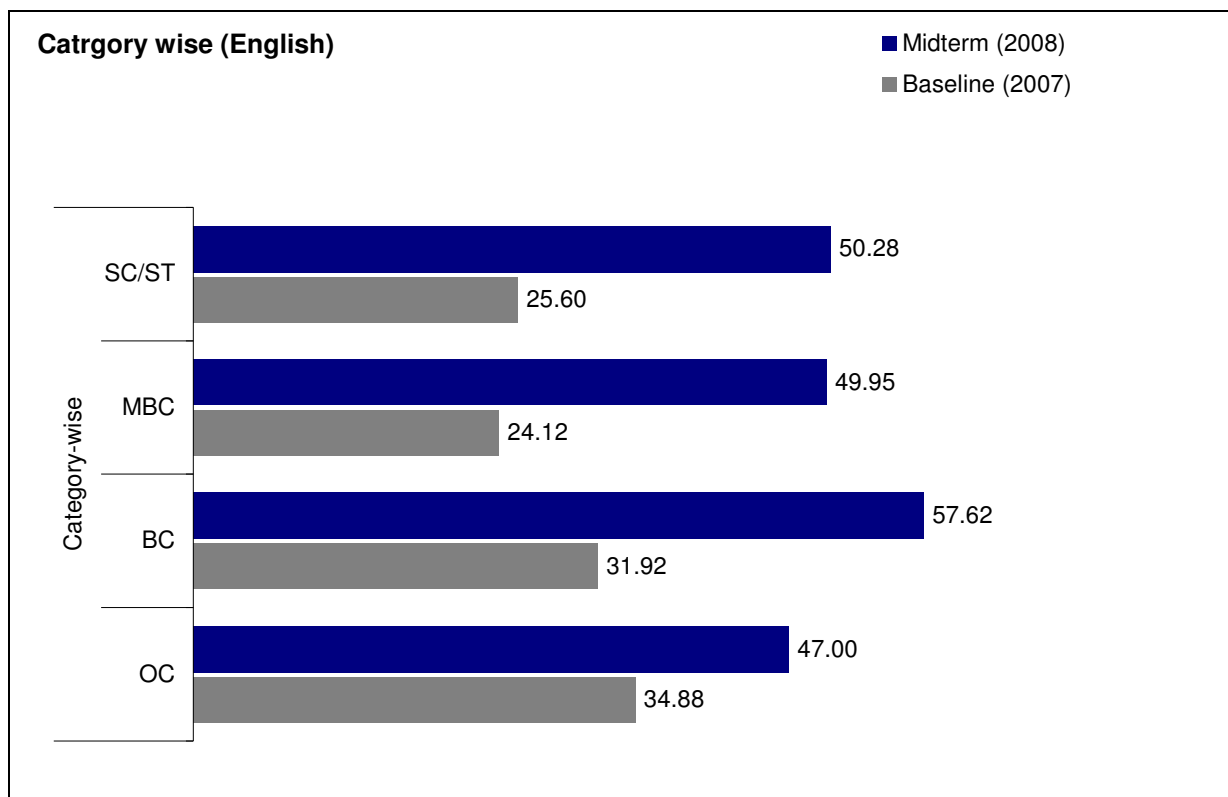
The above table value demonstrates that, urban children scored significantly better than their rural counterparts in English during the base line and rural children scored significantly better during the year-end. Within the area, achievement of rural and urban significantly improved during the end of the year survey (2008) as compared to the baseline (2007).

**Class IV**

**Table 40: Class IV Achievement in English by Community**

| Subject | Category       | Baseline (2007) |         |       |      | Year-end (2008) |        |       |       | t-ratio |
|---------|----------------|-----------------|---------|-------|------|-----------------|--------|-------|-------|---------|
|         |                | N               | Mean    | SD    | SEM  | N               | Mean   | SD    | SEM   |         |
| English | SC/ST          | 1223            | 25.60   | 22.23 | 0.64 | 285             | 50.28  | 23.23 | 1.38  | 16.28** |
|         | MBC            | 1280            | 24.12   | 20.67 | 0.58 | 363             | 49.95  | 23.16 | 1.22  | 19.19** |
|         | BC             | 1164            | 31.92   | 24.54 | 0.72 | 278             | 57.62  | 23.40 | 1.40  | 16.29** |
|         | OC             | 16              | 34.88   | 25.97 | 6.49 | 4               | 47.00  | 27.98 | 13.99 | 0.79    |
|         | <b>F-value</b> |                 | 27.77** |       |      |                 | 6.86** |       |       |         |

The table value reveals that, OC children scored significantly better than their counterparts in English the during base line and BC children scored significantly better during year end study. Within each category, achievement of children was significantly improved during the year-end study (2008) as compared to the baseline (2007) except children from Others Category.

**Class IV**

**Table 41: Class IV Achievement in English in Different Schools**

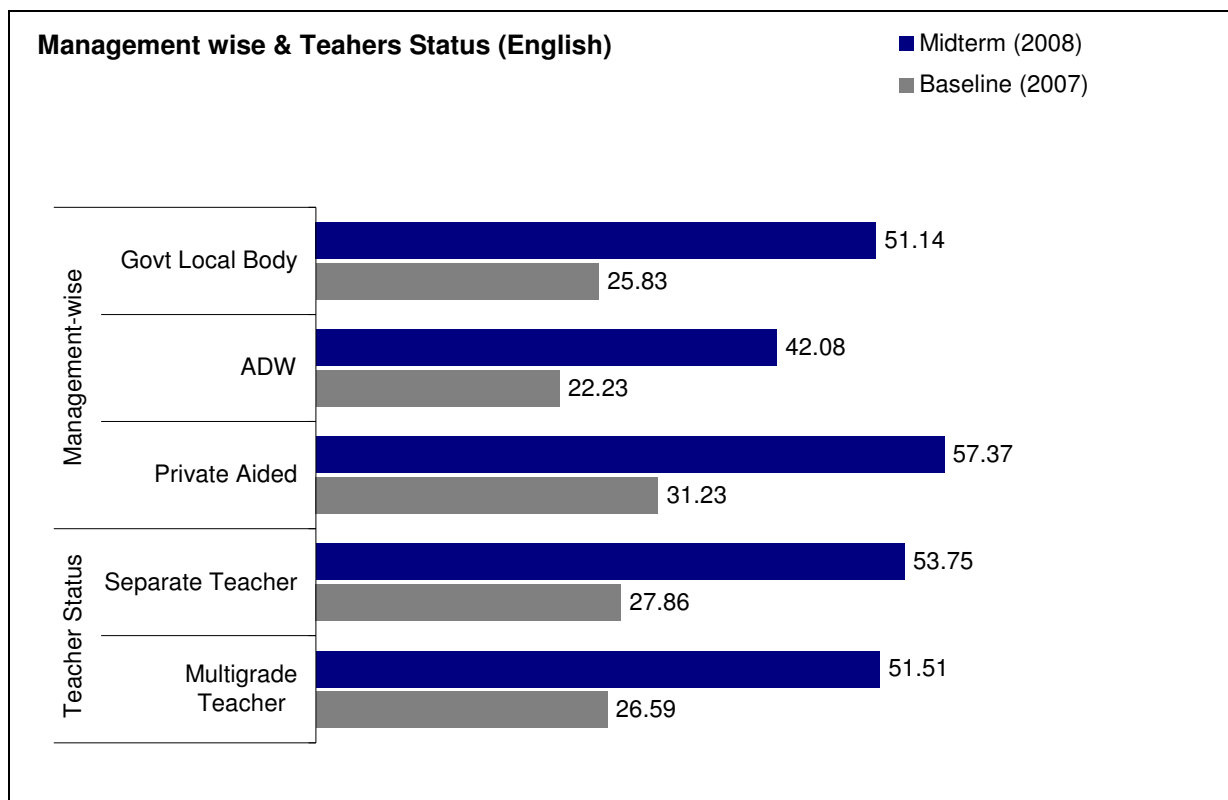
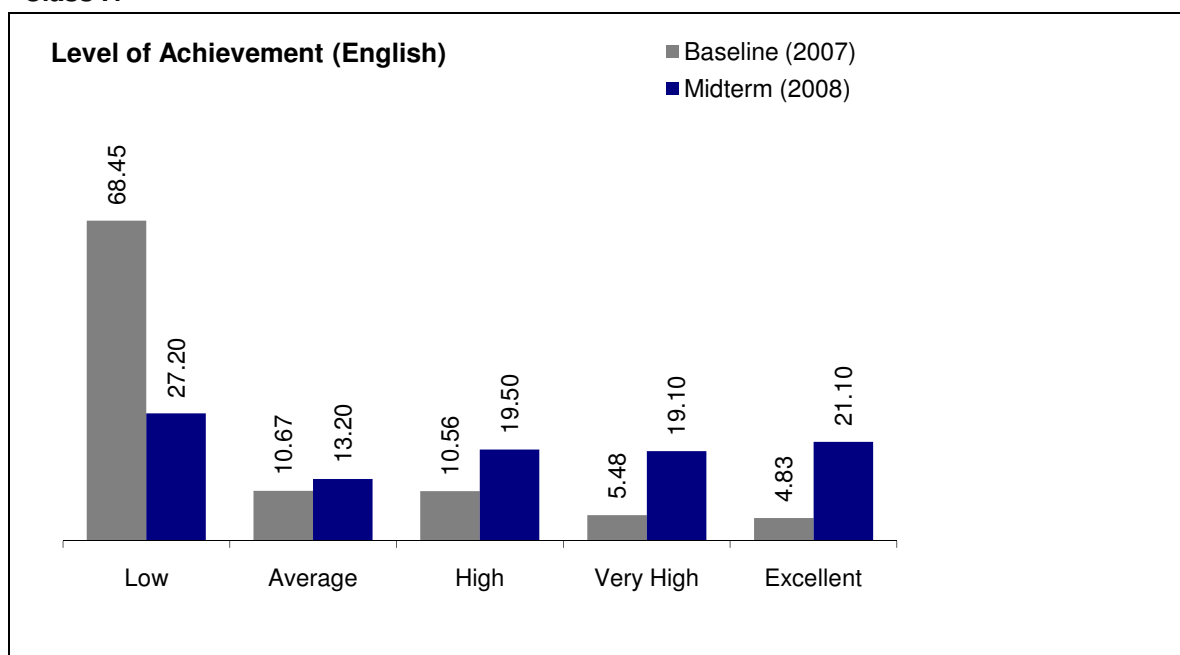
| Subject | Management      | Baseline (2007) |         |       |      | Year-end (2008) |        |       |      | t-ratio |
|---------|-----------------|-----------------|---------|-------|------|-----------------|--------|-------|------|---------|
|         |                 | N               | Mean    | SD    | SEM  | N               | Mean   | SD    | SEM  |         |
| English | Govt Local Body | 2596            | 25.83   | 21.84 | 0.43 | 688             | 51.14  | 23.79 | 0.91 | 25.22** |
|         | ADW             | 123             | 22.23   | 17.53 | 1.58 | 26              | 42.08  | 21.54 | 4.22 | 4.40**  |
|         | Private Aided   | 964             | 31.23   | 25.04 | 0.81 | 216             | 57.37  | 21.89 | 1.49 | 15.43** |
|         | <b>F-value</b>  |                 | 23.06** |       |      |                 | 8.47** |       |      |         |

The above table value demonstrates that, children from private aided school performed significantly better during the baseline (2007) and year end survey (2008). Further, achievement of children from each type of school management significantly improved during year end (2008) as compared to the baseline (2007).

**Table 42: Achievement in English by Teachers Status**

| Subject | Testing term | Multigrade Teacher |         |       |      | Separate Teacher |         |       |      | t-ratio |
|---------|--------------|--------------------|---------|-------|------|------------------|---------|-------|------|---------|
|         |              | N                  | Mean    | SD    | SEM  | N                | Mean    | SD    | SEM  |         |
| English | Baseline     | 2134               | 26.59   | 22.21 | 0.48 | 1548             | 27.86   | 23.42 | 0.60 | 1.66    |
|         | Year-end     | 588                | 51.51   | 23.34 | 0.96 | 342              | 53.75   | 23.71 | 1.28 | 1.40    |
|         | t-ratio      |                    | 25.88** |       |      |                  | 20.19** |       |      |         |

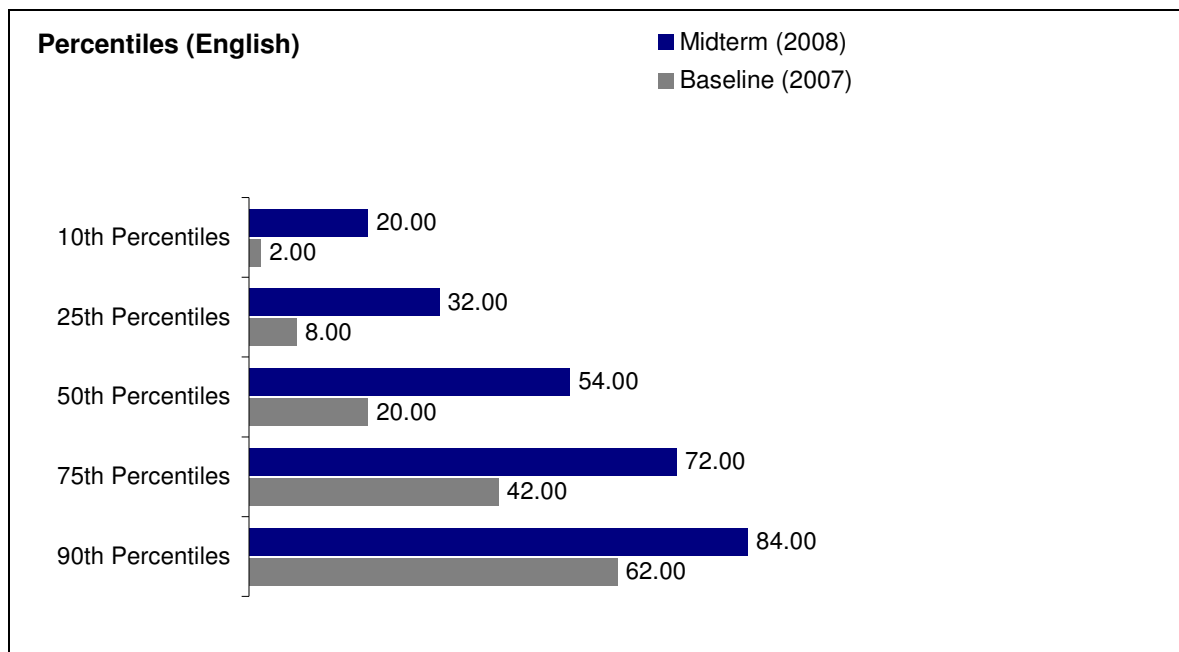
The table value indicates that there was no significant difference in achievement of children during the baseline and the year end, when they were taught by separate teacher or multi grade condition for ABL activities. Further, it is evident from the table that performance of children improved significantly under both (multigrade and separate teacher) condition during the year end as compared to the baseline.

**Class IV****Class IV**

The performance of children was categorized under five distinct groups i.e., Low (children who scored less than 35%), Average (scored between 35 and 45%), High (45% and 60%), Very high (60% to 75%) and Excellent (75% and above). The graph demonstrates that during baseline nearly 68% children performed at the Low level

and during year end, low achievers reduced to 27%. Whilst, during the base line 5% scored at excellent and during year end assessments excellent achievers increased to 21%.

#### Class IV



Percentile scores revealed that during year end survey at every percentile rank score was improved. During the baseline study, bottom 10% children scored less than 2% marks and during year end survey the score improved to 20%. At the same time during baseline the top 10% children's score span was over 62 to 100% but during the year end survey that wide span narrowed down to 84 to 100%.



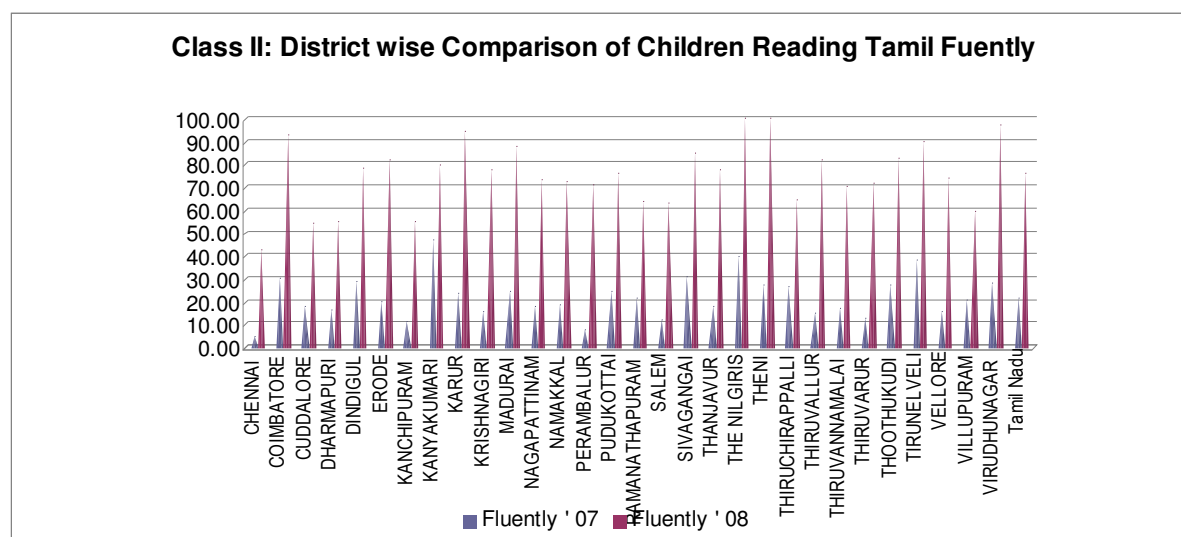
## CHAPTER FIVE – Reading Analysis

Apart from studying and analysing learning achievement of the children in school subjects, the reading skills of the children were also tested. While Class II children were tested for reading skills in Tamil only, Class IV children were tested for reading skills in both Tamil and English. The trends in students' proficiency in reading skills are analysed hereunder by class, subject, district, gender, location and community.

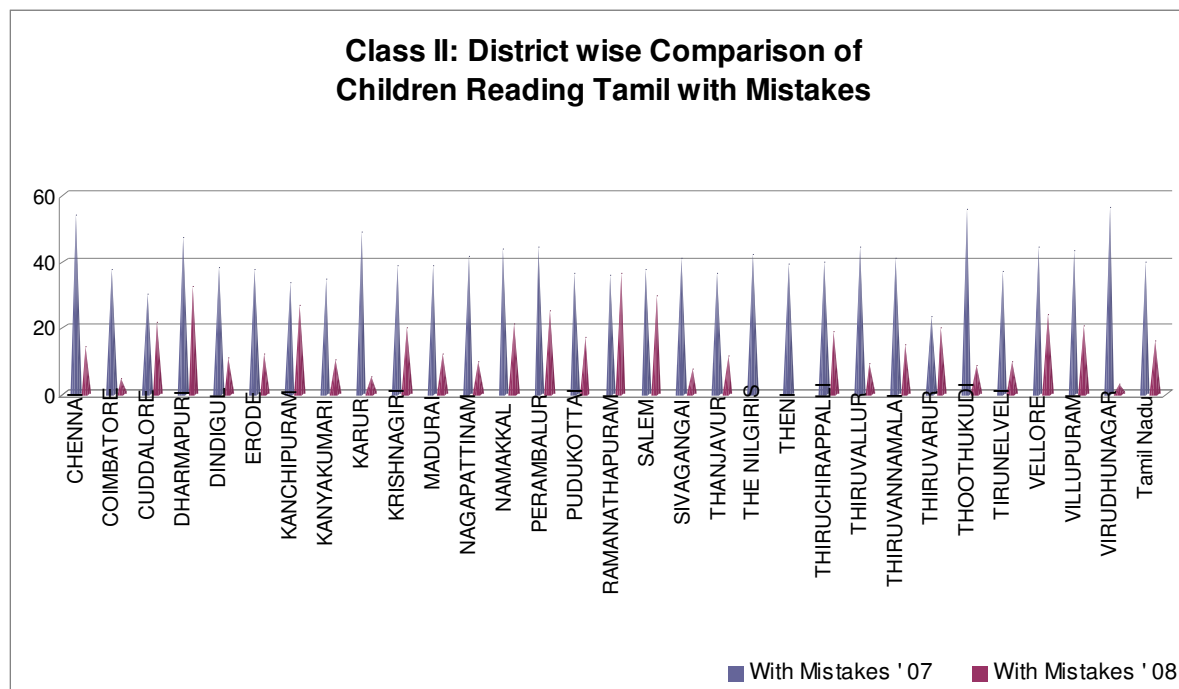
### 5.1 Class Two Children

#### Reading Skills in Tamil

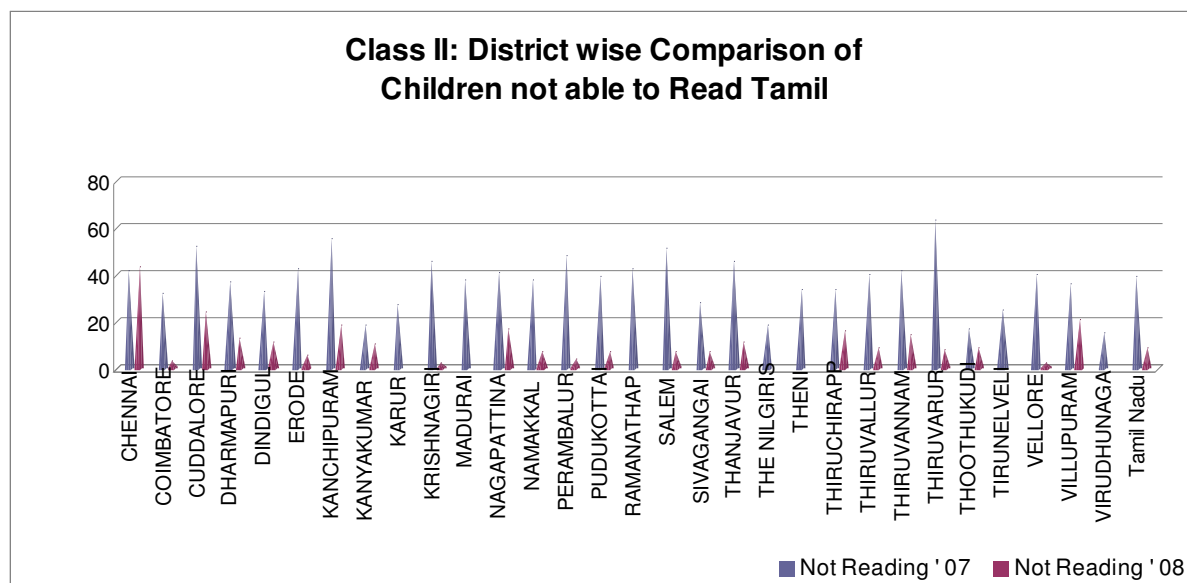
##### **Class II: District-wise Comparison of Children Reading Tamil Fluently**



The above graph depicted that, the improvement in Tamil reading skill was significant and very appreciable during 2008 as compared to 2007 in all districts. Overall, during 2007 only 21% children were able to read Tamil fluently. However, after the intervention of ABL, it was found that nearly 76% children were able to read Tamil fluently. District wise, maximum improvement was observed in The Nilgiris and Theni. Moreover, children of these two districts have achieved universal in reading skill as during 2008 all the children who participated were able to read Tamil fluently. However, minimum improvement was noticed in Chennai as only 42% of children were able to read Tamil fluently after the intervention.

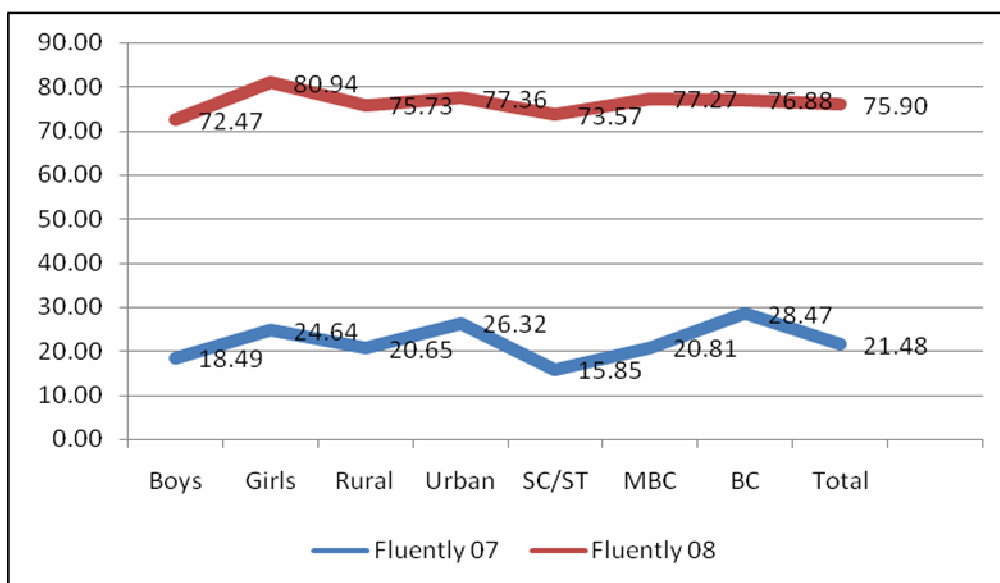
**Class II: District-wise Comparison of Children Reading Tamil with Mistakes**

In contrast to the previous graph (showing the data of children reading fluently), the number of children who read Tamil with mistakes during 2007 has significantly decreased during 2008. Overall, nearly 40% children read Tamil with mistakes during 2007 as compared to only 15% children with same proficiency during 2008. Further, only 2 – 5% children in Virudhunagar, Coimbatore and Karur read Tamil with mistakes.

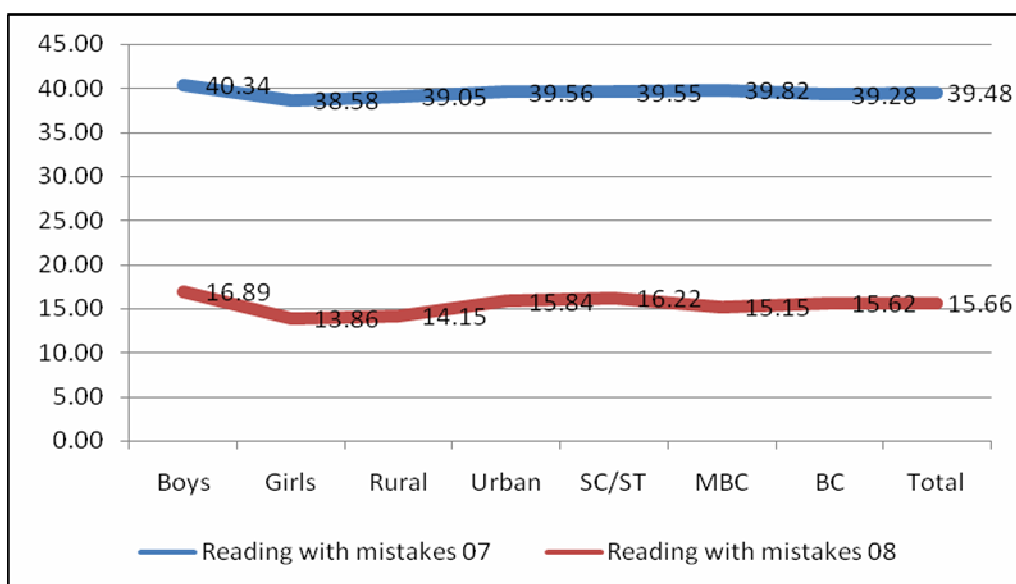
**Class II: District-wise Comparison of Children not able to Read Tamil**

During 2007, nearly 40% children were not able to read Tamil. However, after the intervention, during 2008 it was found that the number of children not able to read Tamil was reduced to only 8%. Though there were no children from The Nilgiris, Karur, Theni and Virudnagar who could not read Tamil, more intensified effort is required in Chennai and Cuddalore to achieve universal reading skills.

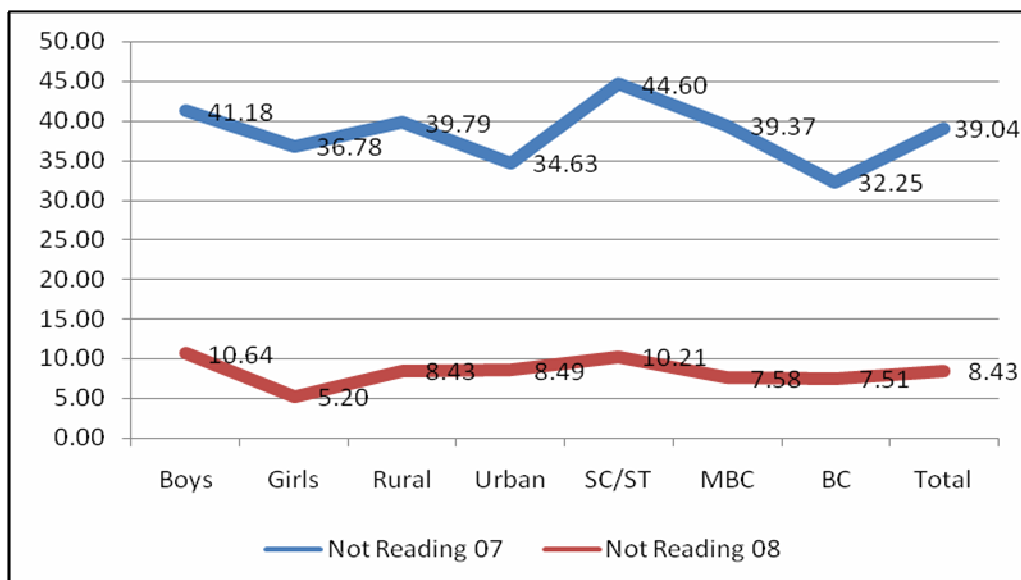
**Class II: Distribution of Children Reading Tamil Fluently during 2007 & 2008**



The above graph depicts that the fluency in Tamil reading skill has improved very significantly among the children of all groups during 2008 as compared to 2007. Further, girl children (81%) were doing better in reading skills in Tamil as compared to other groups.

**Class II: Distribution of Children Reading Tamil with Mistakes during 2007 & 2008**

The two nearly parallel lines indicate that number of children who could read Tamil with mistakes reduced symmetrically across the all groups during 2008 as compared to 2007. Further, it can be derived that the ABL techniques influence the children of different group univocally.

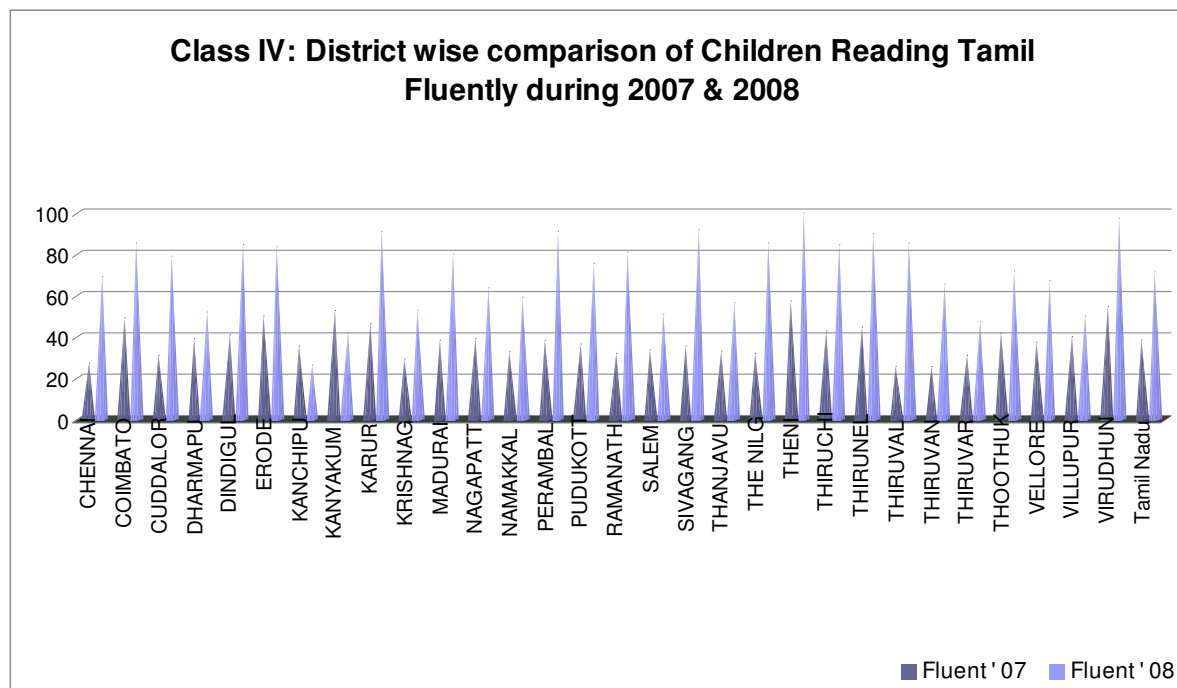
**Class II: Distribution of Children not able to Read Tamil during 2007 & 2008**

The above graph indicates that number of children who were not able to read Tamil reduced very appreciably across the all groups during 2008 as compared to 2007. Further, it can be derived that nearly 11% boys and 10% SC/ST children are not able to read Tamil even after the intervention of the ABL techniques.

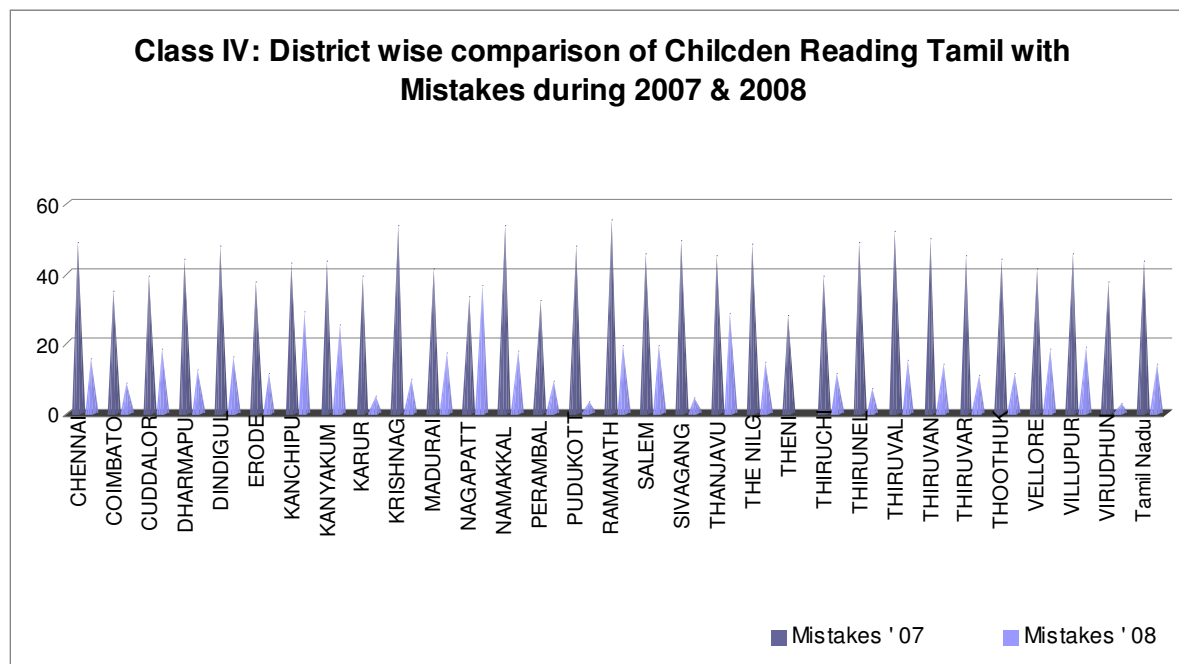
## 5.2 Class Four Children

### 5.2.1 Reading Skills in Tamil

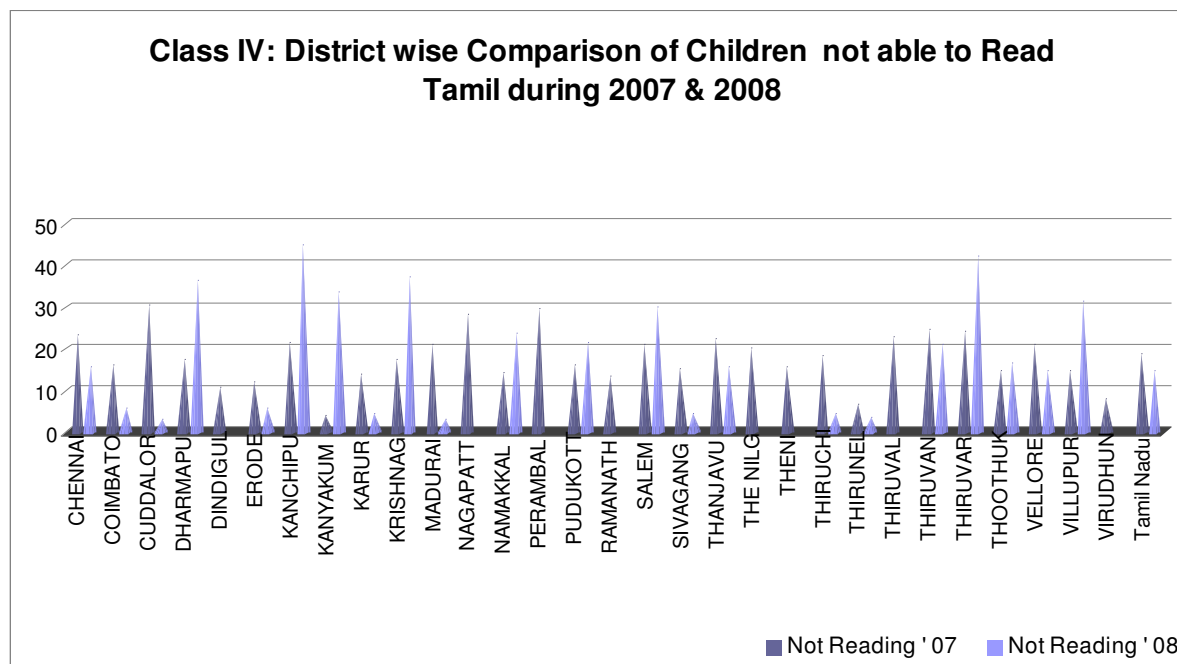
#### Class IV: District-wise Comparison of Children Reading Tamil Fluently



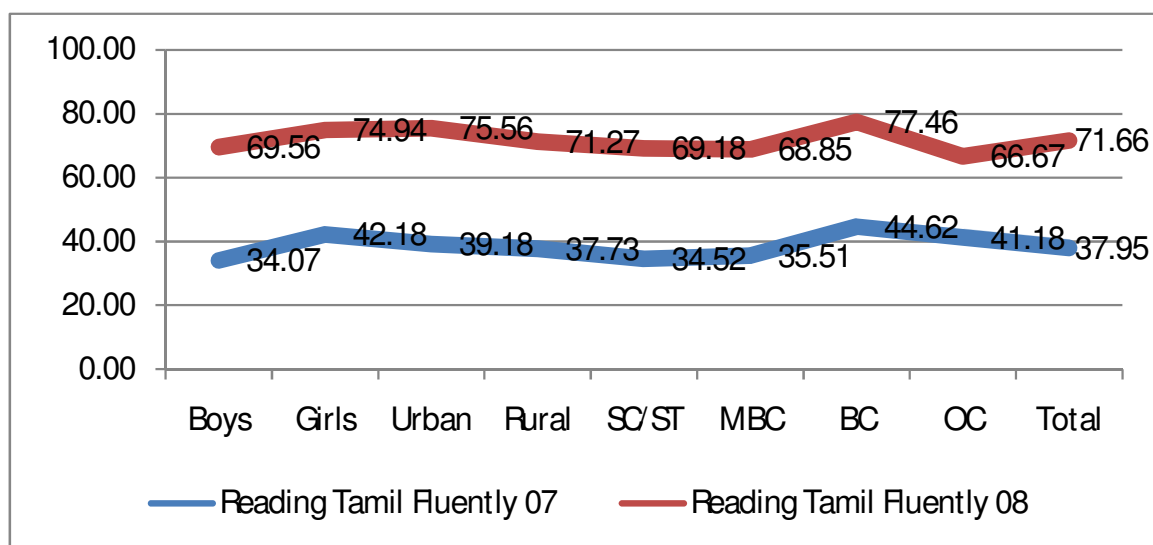
Overall, 72% of Class IV children were able to read Tamil fluently during the reading skill test in 2008 as compared to 38% children during the test in 2007. Among the districts, almost all children of Theni were able to read Tamil fluently and the trend is followed in Virudhnagar and Karur. However, a large number of children from Kanchipuram (75%) and Kanyakumari (60%) were not able to read Tamil fluently and at the same time both the districts have shown reverse trend during the reading skill test in 2008 as compared to 2007.

**Class IV: District-wise Comparison of Children Reading Tamil with Mistakes**

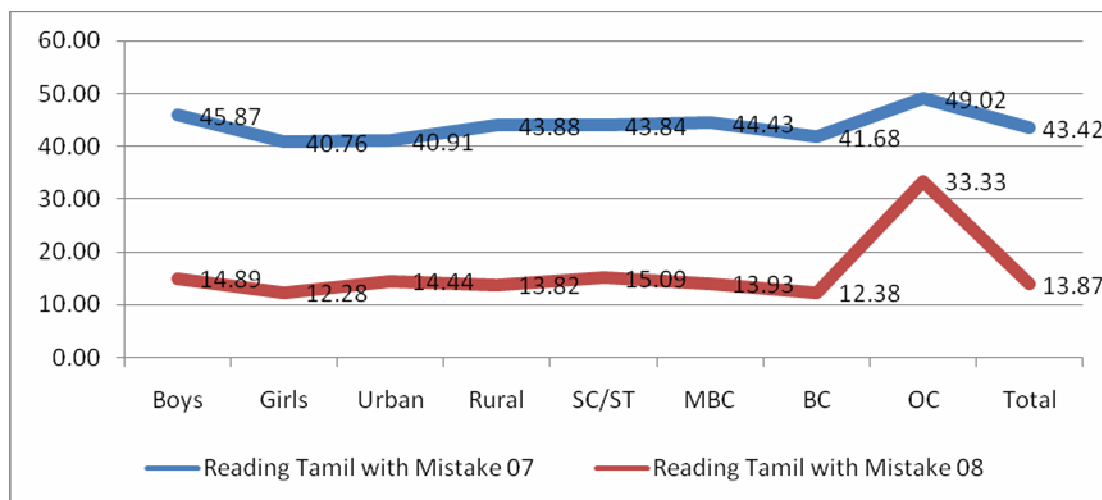
The number of children who read Tamil with mistakes (43%) during the reading skill test in 2007 substantially decreased by 29% during the reading test in 2008 (only 14%). Further, the graph depicts that the number of children who read Tamil with mistakes decreased in almost all districts except Nagapattinam. However, a good number of children (20% to 30%) from Kanchipuram, Kanyakumari and Thanjavur districts read Tamil with mistakes during the 2008 reading test.

**Class IV: District-wise Comparison of Children not able to Read Tamil Fluently**

Overall, 14% children were not able to read Tamil during the test in 2008 as compared to 18% children during the test in 2007. No child was found from Dindigul, Nagapattanam, Perambalur, Ramnathpuram, The Nilgiris, Theni, Thiruvalur, and Virudhnagar districts who was not able to read Tamil. However, nearly 30 to 40% of children from Dharmapuri, Kanchipuram, Kanyakumari, Krishnagiri, Salem, Thiruvarur and Villupuram were not able to read Tamil even in the test given in 2008.

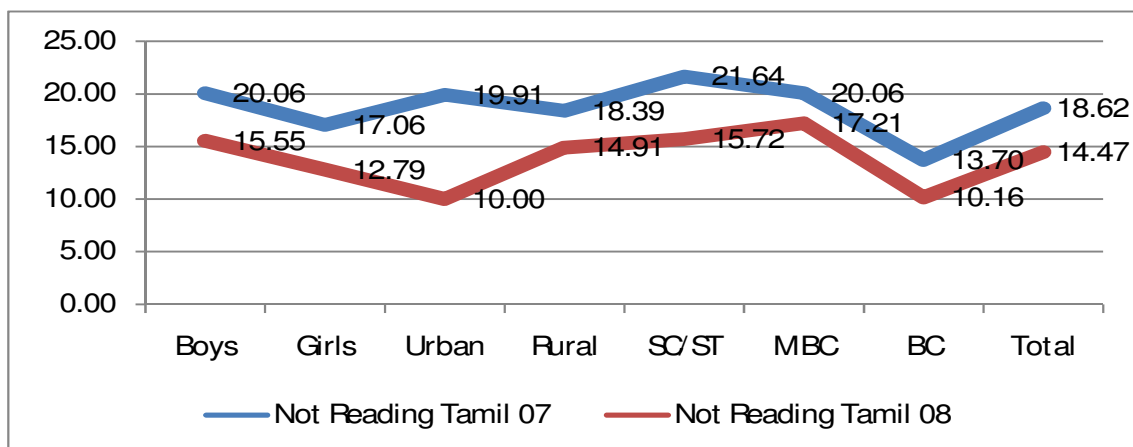
**ClassIV: Distribution of Children Reading Tamil Fluently during 2007 & 2008**

The line graph reveals that the number of children who could read Tamil fluently increased substantially in all groups. Overall, 72% of children were able to read Tamil fluently during 2008 as compared to 38% children during the reading test in 2007. The number of children who could read Tamil fluently was highest among children in the BC group and lowest among children in the OC community.

**Class IV: Distribution of Children Reading Tamil with Mistakes during 2007 & 2008**

Overall 14% children read Tamil with mistakes in 2008 and this number came down from 43% during the reading skill test conducted in 2007. Among the all groups of children, those read Tamil with mistakes decreased significantly (nearly 30% except OC category) during the reading test in 2008 as compared to 2007. However, nearly 1/3<sup>rd</sup> of the OC category children still read Tamil with mistakes.



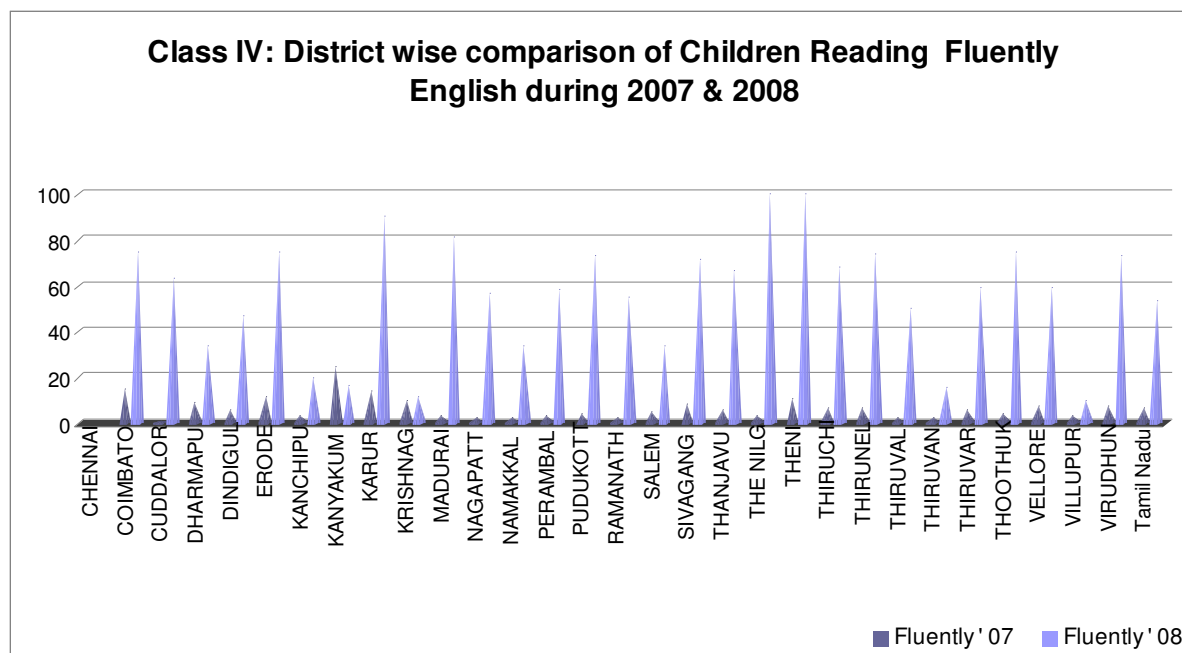
**Class IV: Distribution of Children not able to Read Tamil during 2007 & 2008**

Overall, 14% children were not able to read Tamil during the reading test conducted in 2008 as compared to 19% children during the test in 2007. Among the groups, minimum 10% from urban children and maximum 17% children from MBC category could not read Tamil during 2008.

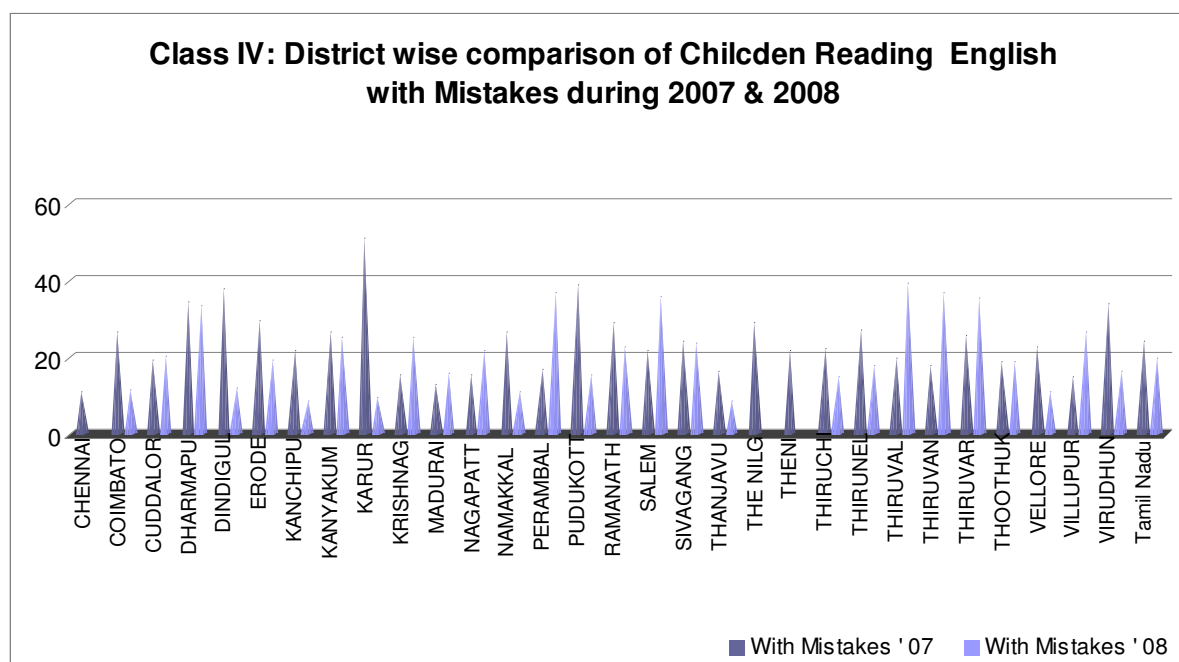
## 5.2.2 Class Four Children

### Reading Skills in English

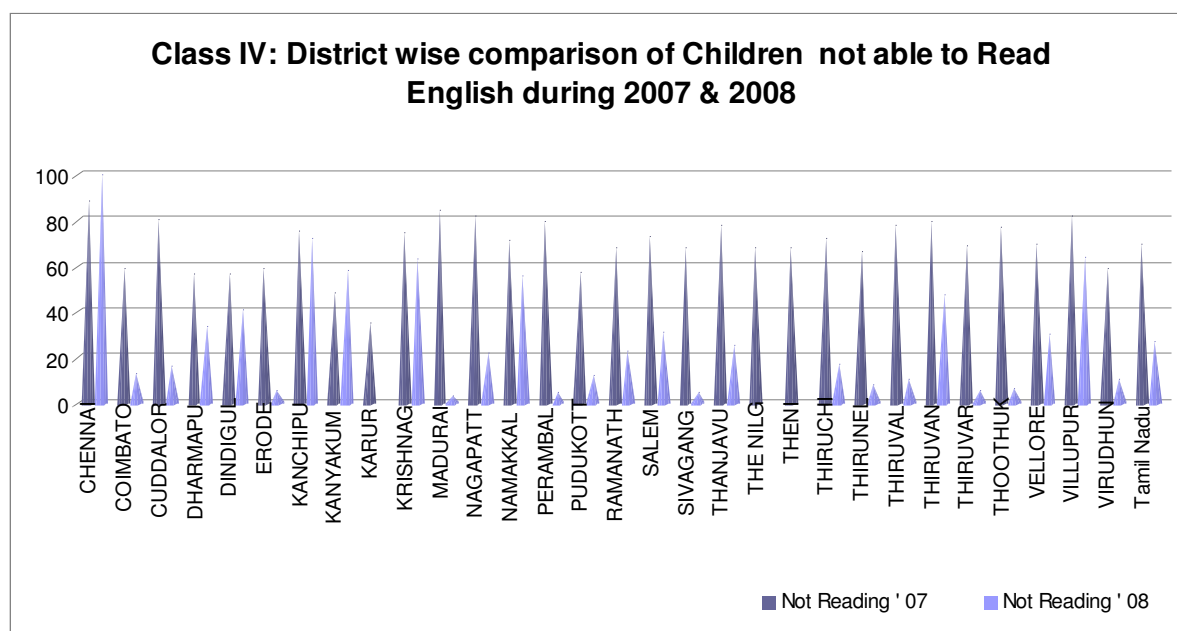
#### **Class IV: District-wise Comparison of Children Reading English Fluently**



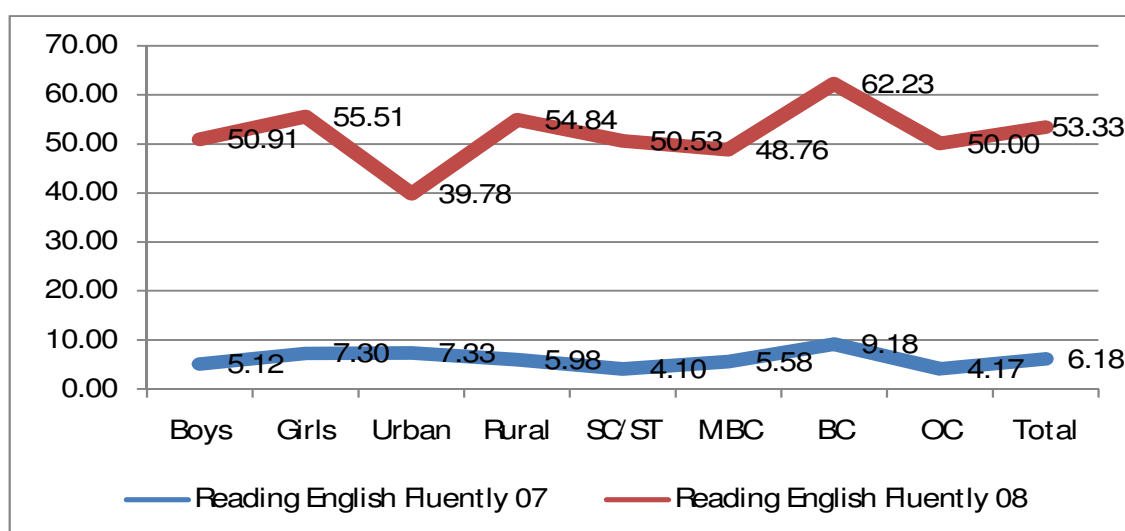
Overall, 53% Class IV children were able to read English fluently during the reading skill test in 2008 as compared to 6% children during the test held in 2007. Among the districts, almost all children of Theni and The Nilgiris were able to read English fluently and the trend is seen in Karur and Madurai also. However, a large number of children from the districts of Villupuram (90%), Krishnagiri (89%) and Thiruvavur (85%) were not able to read English fluently and at the same time none of the children from Chennai were able to read English fluently in the reading tests conducted in both 2007 and 2008.

**Class IV: District-wise Comparison of Children Reading English with Mistakes**

The number of children who read English with mistakes during the reading skill test in 2007 (24%) decreased by 4% during the reading test in 2008 (20%). Further, the graph depicts that the number of children who read English with mistakes decreased in 15 districts out of 30 districts. However, a good number of children (nearly 30%) were found in the districts of Dharmapuri, Perambalur, Salem, Thiruvallur, Thiruvannamalai and Thanjavur who read English with mistakes during the reading test conducted in 2008.

**Class IV: District-wise Comparison of Children not able to Read English**

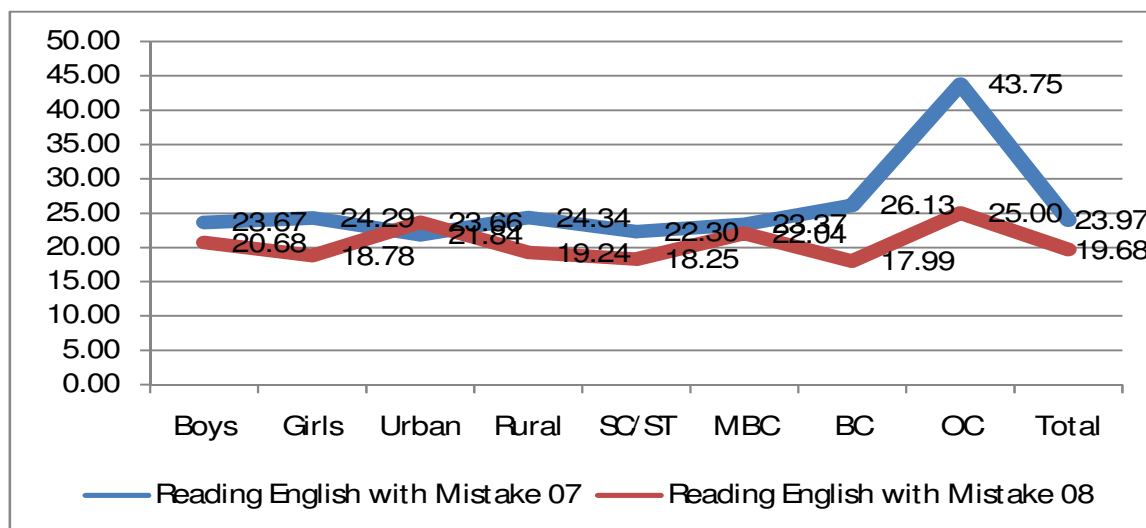
Overall, 27% children could not read English during the test held in 2008 as compared to 70% children during the test in 2008. No child was found from Karur, The Nilgiris and Theni districts who could not read English. However, more than 50% children from Chennai, Kanchipuram, Krishnagiri, and Villupuram could not read English even in the test in 2008.

**Class IV: Distribution of Children Reading English Fluently during 2007 & 2008**

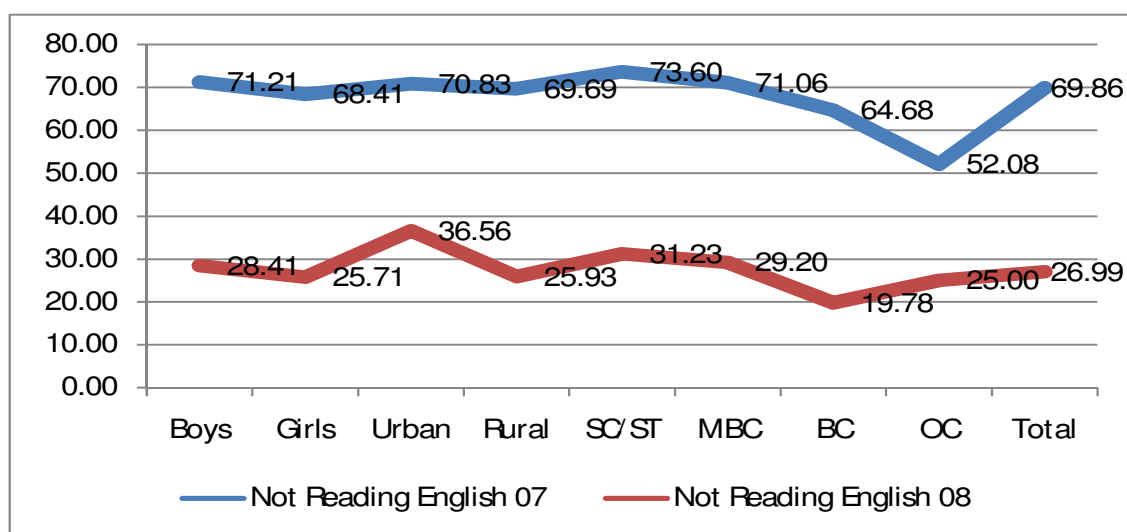
During the reading skill test conducted in 2007, only 6% children were able to read English fluently, but, in 2008 after the ABL intervention, this figure rose up to 53%. During 2008, maximum children (62%) who were able to read English fluently

belonged to the BC category and minimum children (40%) from urban area could do so. Overall, English reading skills improved significantly among children of all groups during the test in 2008 as compared to 2007.

**Class IV: Distribution of Children Reading English with Mistakes during 2007 & 2008**



Overall, 1/5<sup>th</sup> of the children during the reading skill test in 2008 read English with mistakes as compared to 24% children during 2007. Community wise, 18% SC/ST children read English with mistakes as compared to children in the Others' category with 25%, where there has been a significant improvement from 44% children reading with mistakes in 2007. The performance for 'reading with mistakes' in the urban areas has only marginally decreased by a bare 2% in 2008.

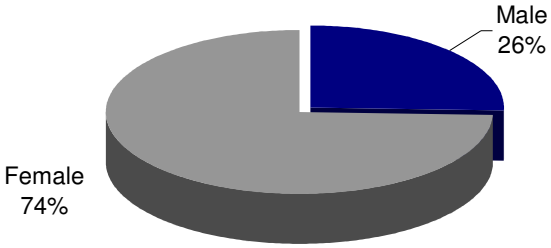
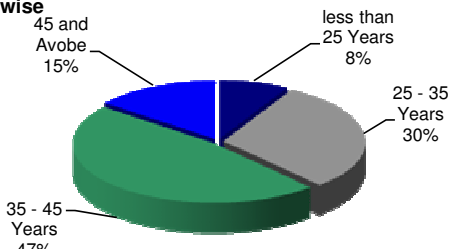
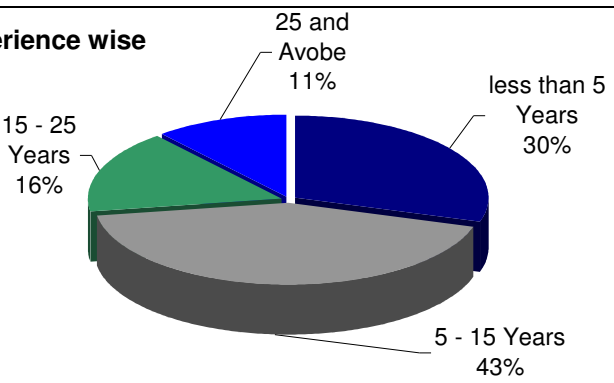
**ClassIV: Distribution of Children not able to Read English during 2007 & 2008**

The number of children who could not to read English fluently reduced substantially (by 33%) during the reading skill test in 2008 as compared to 2007. Further, this trend is true in all groups. During the reading test in 2008, minimum 20% BC category children could not read English and this number is the maximum among urban children.

Annexure 6

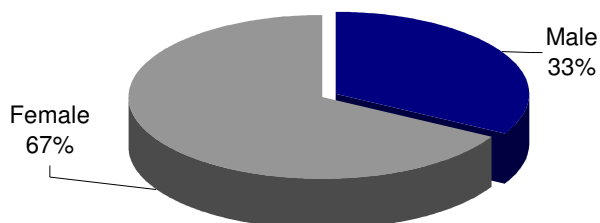
## Sample Profile of TEACHERS

### Distribution of Class II Teachers by Gender, Age and Experience

| <p><b>Gender wise</b></p>  <p>A 3D pie chart showing the gender distribution of Class II teachers. The chart is divided into two segments: a large grey segment representing females at 74% and a smaller dark blue segment representing males at 26%.</p> <table border="1"> <thead> <tr> <th>Gender</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Female</td> <td>74%</td> </tr> <tr> <td>Male</td> <td>26%</td> </tr> </tbody> </table>  | Gender           | Percentage | Female        | 74% | Male              | 26% | <ul style="list-style-type: none"> <li>• Out of 902 teachers, 74% were female and 26% were male</li> </ul> |     |                    |     |  |
|---|------------------|------------|---------------|-----|-------------------|-----|--|-----|--------------------|-----|--|
| Gender  | Percentage       |            |               |     |                   |     |  |     |                    |     |  |
| Female  | 74%              |            |               |     |                   |     |  |     |                    |     |  |
| Male  | 26%              |            |               |     |                   |     |  |     |                    |     |  |
| <p><b>Age wise</b></p>  <p>A 3D pie chart showing the age distribution of Class II teachers. The chart is divided into four segments: a large green segment for 35-45 years (47%), a grey segment for 25-35 years (30%), a blue segment for 45 and above (15%), and a small dark blue segment for less than 25 years (8%).</p> <table border="1"> <thead> <tr> <th>Age Group</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>35 - 45 Years</td> <td>47%</td> </tr> <tr> <td>25 - 35 Years</td> <td>30%</td> </tr> <tr> <td>45 and Above</td> <td>15%</td> </tr> <tr> <td>less than 25 Years</td> <td>8%</td> </tr> </tbody> </table>                     | Age Group        | Percentage | 35 - 45 Years | 47% | 25 - 35 Years     | 30% | 45 and Above   | 15% | less than 25 Years | 8%  | <ul style="list-style-type: none"> <li>• Age wise, nearly of the teachers were between 35 and 45 years old</li> <li>• Only 8% teachers were less than 25 years</li> </ul>                              |
| Age Group   | Percentage       |            |               |     |                   |     |  |     |                    |     |  |
| 35 - 45 Years   | 47%              |            |               |     |                   |     |  |     |                    |     |  |
| 25 - 35 Years   | 30%              |            |               |     |                   |     |  |     |                    |     |  |
| 45 and Above  | 15%              |            |               |     |                   |     |  |     |                    |     |  |
| less than 25 Years  | 8%               |            |               |     |                   |     |  |     |                    |     |  |
| <p><b>Experience wise</b></p>  <p>A 3D pie chart showing the experience distribution of Class II teachers. The chart is divided into four segments: a large grey segment for 5-15 years (43%), a dark blue segment for less than 5 years (30%), a green segment for 15-25 years (16%), and a small blue segment for 25 and above (11%).</p> <table border="1"> <thead> <tr> <th>Experience Group</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>5 - 15 Years</td> <td>43%</td> </tr> <tr> <td>less than 5 Years</td> <td>30%</td> </tr> <tr> <td>15 - 25 Years</td> <td>16%</td> </tr> <tr> <td>25 and Above</td> <td>11%</td> </tr> </tbody> </table> | Experience Group | Percentage | 5 - 15 Years  | 43% | less than 5 Years | 30% | 15 - 25 Years  | 16% | 25 and Above       | 11% | <ul style="list-style-type: none"> <li>• Experience-wise, 43% teachers were between 5 and 15 years of experience</li> <li>• Only 11% teachers were having more than 25 years of experiences</li> </ul> |
| Experience Group  | Percentage       |            |               |     |                   |     |  |     |                    |     |  |
| 5 - 15 Years  | 43%              |            |               |     |                   |     |  |     |                    |     |  |
| less than 5 Years   | 30%              |            |               |     |                   |     |  |     |                    |     |  |
| 15 - 25 Years   | 16%              |            |               |     |                   |     |  |     |                    |     |  |
| 25 and Above  | 11%              |            |               |     |                   |     |  |     |                    |     |  |

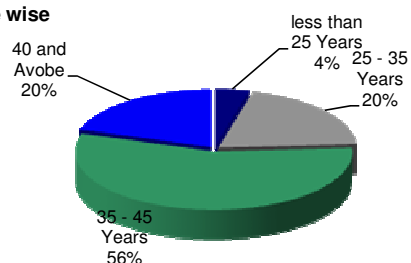
### Distribution of Class IV Teachers by Gender, Age, Experience

**Gender wise**



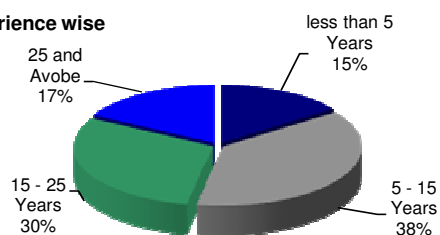
- Out of 892 teachers, 33% were male and 67% were female

**Age wise**



- Age wise, 56% teachers were between 35 and 45 years of age

**Experience wise**



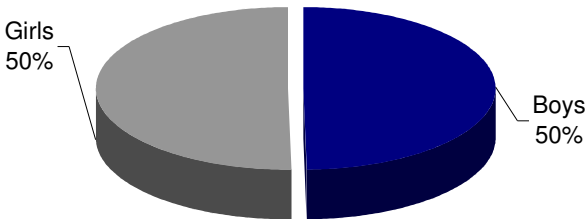
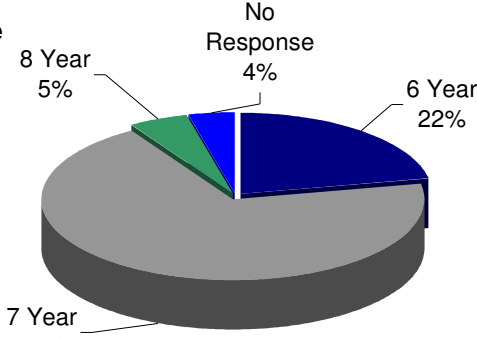
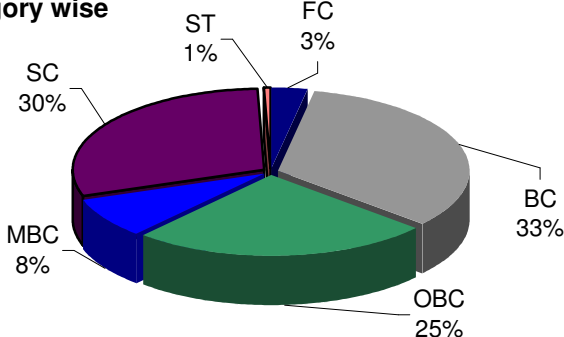
- Experience-wise, 38% teachers were having experience between 5 and 15 years of experiences



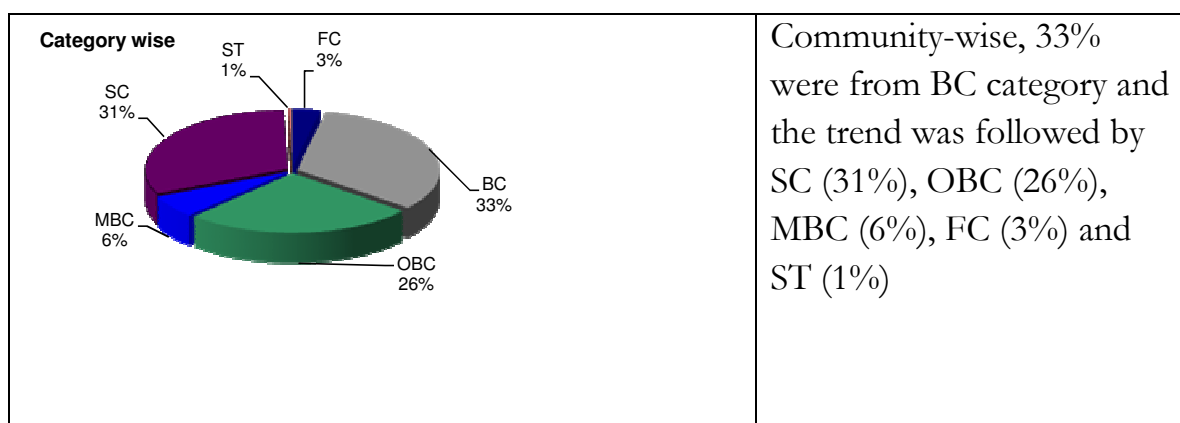
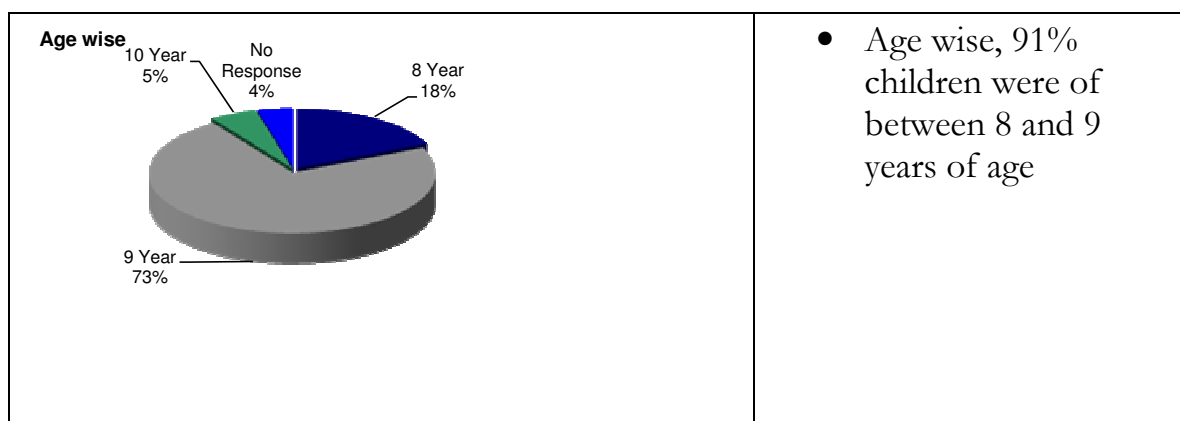
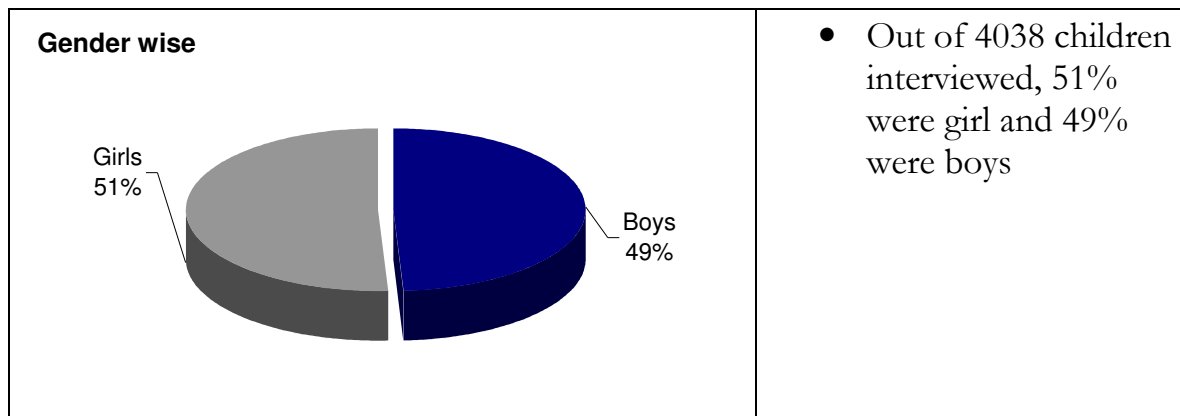
Annexure 7

## Sample Profile of Children Interviewed

### Distribution of Class II Children by Gender, Age and Community

|   |  |
|---|--|
| <p><b>Gender wise</b></p>  <p>A 3D pie chart divided into two equal halves. The left half is grey and labeled 'Girls 50%'. The right half is dark blue and labeled 'Boys 50%'.</p>   | <ul style="list-style-type: none"> <li>Out of 5259 children interviewed, percentage of boys and girls was same</li> </ul>  |
| <p><b>Age wise</b></p>  <p>A 3D pie chart with four segments. The largest segment is grey, labeled '7 Year 69%'. The next largest is dark blue, labeled '6 Year 22%'. A small green segment is labeled '8 Year 5%'. A very small blue segment is labeled 'No Response 4%'.</p>  | <ul style="list-style-type: none"> <li>Age wise, maximum (69%) were of 7 years old and 22% children were of 6 years</li> </ul>   |
| <p><b>Category wise</b></p>  <p>A 3D pie chart with six segments. The largest segment is grey, labeled 'BC 33%'. The next largest is purple, labeled 'SC 30%'. A green segment is labeled 'OBC 25%'. A blue segment is labeled 'MBC 8%'. A small dark blue segment is labeled 'FC 3%'. A very small orange segment is labeled 'ST 1%'.</p> | <ul style="list-style-type: none"> <li>Community-wise, 1/3<sup>rd</sup> children were from BC and 30% were from SC category</li> <li>Only 1% children were from ST category</li> </ul> |

### Distribution of Class IV Children by Gender, Age and Community



## **ABBREVIATION**

- ABL: Activity Based Learning
- ADW: Adi-Dravida Welfare
- BB: Blackboard
- BRC: Block Resource Caste
- BRT: Block Resource Centre
- DISE: District Information System for Education
- EVS: Environmental Science
- FC: Forward Caste
- Govt: Government
- HM: Head Master/Mistress
- MBC: Most Backward Caste
- N: Number
- NA: Not Applicable
- OBC: Other Backward Caste
- OC: Other Caste
- Pvt. Aided: Private Aided
- SC: Scheduled Caste
- SD: Scheduled Deviation
- SEM: Standard Error Mean
- SSA: Sarva Shisha Abhiyan
- ST: Scheduled Tribe
- TN: Tamil Nadu