B2B - STUDY REPORT

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LIST OF ABBREVIATIONS

BLC	Baisc Learning Competencies
B2B-	Back 2 Basics
AeA	Aide et Action
EFA	Education For All
MDG	Millennium Development Goals
MLL	Minimum Learning Level
DPEP	Distric Primary Education Programme
UT	Union Territary
CCA	Children Competency Assessment
MARI	Modern Architects for Rural India
SCAD	Social Change and Development
SECURE	Socio- Economic and Cultural Upliftment of Rural Environment
RDO	Rural Development Organization
RASS	Rashtriya Seva Samiti
DIP	Directly Implemented Projects
CLIP	Child Learning Improvement Programme
ILIP	Integrated Learning Improvement Programme
GAP	Gujarat Achievement at Primary
LGP	Learning Guarantee Programme
LATS	Learner's Achievement Tracking System
BYPASS	Bhopal Yuva Paryavaran Shikshan and Samajik Sansthan
ASEEFA	Association for Sarva Seva Farms

EXECUTIVE SUMMARY

While quality education is defined severally, one of the key component as an outcome of quality education process is acquisition of basic competencies by children through schooling process. Achievement of children and completion of grades with reasonable quality, is considered as a major indicator of the quality in EFA and so also MDGs.

Present study is an effort to assess the children's basic competencies in language and mathematics. It is undertaken in the field areas of NGOs who are partners of Aide et Action as part of comprehensive quality improvement program viz., Back to Basics (B2B). The attempt is to understand the level of learners in the basic skills and to make teachers and community appreciate the situation and arrive at comprehensive solutions to improve quality of education.

As an accelerated learning program, "Back 2 Basics" (B2B) is targeted to address issues of in-school processes, teaching learning processes and intend to impact on the overall learning environment where in children demonstrate measurable improvements in learning. B2B is a quality enhancement program initiated by AeA to achieve acceptable competency levels among children of primary schools all over India. This is visualized as a campaign, where in children attain age appropriate competencies while they are in schools.

The present study brings out findings of Children's Competency Assessment (CCA) process which has been the first step in B2B. The findings provide a snap shot of the situation and become basis for planning. The report also articulates the follow up plan visualized collectively by AeA and its partner NGOs to take forward the agenda of B2B in the field during the year 2007.

Major Findings

The study was conducted in 388 schools across five states in India with 12 NGO partners covering 26,283 children enrolled in these schools. Out of these 76% children i.e., 19,942 were assessed. Although the percentage of assessed children is varying from 48.2% to 96.2% among the partners but this is only because of the context and conditions of the schools and villages. Among 19,942 children 62.3% were able to read and 52.5% were able to write. The percentage of children able to perform in the mathematical operations like addition, subtraction, multiplication and division is 56.2%, 48.2%, 41% and 19.8% respectively.

More then 50% schools fall under those categories where less then 50% children have these basic competencies, in 4.7% schools not even a single child can read and 7.5% schools where not a single child can write. This percentage is increasing as we are moving towards the higher level of competency in mathematics. The data shows that from the sample there are 7% schools where no child is able to do addition, 8.5% schools, no child is able to do subtraction, 14.2% schools, no child is able to do multiplication and 22.5% schools no child is able to do division.

There are 9.8% schools (38 out of 387), 4.9% schools (19 out of 387) where all children can read and write, and 5.9% (23 out of 387) where all children can do addition, 3.4% (13 out of 388) where all children can do subtraction but that is not satisfactory as the level of question paper was as per the class three course for 3 to 5. It is also alarming that there is only one school where all children can do multiplication and in the sample there is not even a single school where all children have the competency of doing simple division in mathematics.

The class wise performance shows that there is hardly any difference, where 57.6% children are able to read in class two, 59.3%, 61.8% and 70.9% for classes III, IV and V respectively. In all only 52.5% children can write but level of writing competency is higher in the class two students in comparison to class three and class four and they are slightly behind the class five students. Although the writing competency has improved in class 5^{th} but there are still 40% children in class 5^{th} who are not able to write. Like reading and writing, In addition and subtraction there is no relation in the terms of class and competency, although in class 5 this percentage is slightly high in comparison to other classes. Where in all 56.2% children can do addition, this percentage is 53.2, 51.7, 53.3 and 67.2 in grade II, III and IV and V and where in class II 42.2% children can do subtraction, in class three, four and five this figure is 44.9%, 47.2% and 59.1% respectively. In all less then 50 % children from the sample are able to do subtraction.

There is a positive correlation between the competency of children in doing multiplication and division and the grade. As the children move up in the grade their percentage is increasing, where in class three only 29.7% are able to do multiplication, this percentage is 39.8 in class four and 54.1 in class V. In all only 41% children can do simple multiplication and in terms of children's competency in doing division and the grades where only 11.9% children can do division in class three, the no has increased in class 4^{th} to 27.9% and 5^{th} to 40.5%. There are still 60% children left who can not do division.

The findings show that despite of so many efforts for quality education, still children are struggling for the competencies in all the basic operations. In the assessed 19,942 children across the five states only 37.7% children can not read, 47.5% children can not write, 43.8% children can not do addition and 51.8% children can not do subtraction. Out of 14773 children in class 3 to 5, 59% children can not do multiplication and 80.2% children can not do division in mathematics operations.

Following the CCA process the findings (presented above) have been discussed with the partner NGOs. Collectively all the stakeholders have arrived at an action plan which included interventions at the school level with teachers, communities and children. The task of achieving minimum competencies has been viewed through a mission approach so that children would be able to make up for the deficiencies that they have demonstrated in a quickest possible time. The follow-up action points included;

Future Planning

- Sharing of the results with parents, project area teachers, government officials and various committees related to education at the village level
- Development of school based, class based, child centered quality improvement plan
- A team of teacher resource group (mentors) will be formed in the project areas
- Training and capacity building of teachers and development of mentoring system
- Building a teachers resource team in the NGO field area in collaboration with government
- Facilitate development of low cost, innovative and Child centered learning modules for the 6 operations
- Appointing and training of new volunteers (on honorarium basis) where ever necessary
- Development of regular assessment tools such as workbooks
- Regular monitoring and assessment

Recognising that government is a major resource in education and collaboration with government is sine qua non to improve quality, AeA in all the project NGO field areas collaborates with the government to implement B2B interventions. District education officers and SSA project directors would be involved in developing action plans at the field level and they would be provided with necessary complimentary support to facilitate B2B implementation. They would be encouraged to nominate mentors and also master trainers available at the resource centres, for advanced trainings to be provided by AeA as part of B2B.

Similarly other INGOs, NGOs and donors would be encouraged to visit project areas where B2B is being implemented and learn from the experiences so that replication would be possible.

Chapter One

INTRODUCTION

Quality education has diverse connotations in the literature on education and development, especially in the context of developing countries. Millions of children from poor families study in schools which are devoid of any infrastructure, lacks basic learning environment, inadequate number of teachers and their chronic absence, teaching learning material and books. It is not very difficult to visualize in such situations the quality of learning outcomes, which can be aggregated through the term quality education. By learning outcomes one would mean children attaining certain basic competencies and skills commensurate with their age and grade in which they are studying/ completed. The results in several parts of the globe are very depressing, which would mean that while children spend considerable time in schools, due to host of reasons effective learning outcomes are minimum or negligible in terms of their achievement of basic competencies. Large number of dropout and non-enrolment in education system in developing countries is also attributed to this absence of any learning outcomes from the education system. Interventions to address these would essentially entail diagnosing the problem and developing effective strategies that would enable effective teaching learning transactions leading to better learning outcomes. Aide et Action, as an international organization working in the area of education is addressing this through systematic strategy and substantial resources are devoted towards improving quality of education. The program, Back to Basics (B2B) is a move towards this and in the ensuing pages a detailed treatment of the project, processes and outcomes are discussed. As a first step in B2B, competencies of children are assessed and analysed which is the main focus of the report. Apart from that this documentation outlines the steps involved in B2B as well.

Educational quality and competencies at the primary school level – A review

The basic competencies in language and mathematics at the primary level of education are as important as the foundation of any building. The issue of quality is directly linked with these basic competencies. If a child is not able to read write or do some simple arithmetic calculations, how can she/he be able to achieve the goal of quality education? The quality of a school depends on a variety of factors including infrastructure, presence and motivation of teachers, minimum teaching standards and a minimum achievement level of pupils. Since the primary aim of an educational institution is to ensure that all the learners acquire the desired skills and knowledge (Aggarwal 2000), the quality of a school can be estimated by the extent to which students have acquired knowledge, skills, values and attitudes, which refer to the actual learning outcomes.

The review of empirical research on learners' assessment shows that there are two distinct phases. The period up to 1990 is characterized as the first phase and the researches and empirical studies undertaken after 1990 fall into the other category. A main characteristic of the empirical studies in the first phase was that these were mainly academic in nature and the administrators did not use their findings for policy reforms. The focus on learning has its

roots in the world conference on Education For All (EFA) held in Jomtien, Thailand in March 1990 as "focusing on learning" as one of the five components of an "Expanded Vision". This was followed by Dhakar after a decade in 2000 with affirmation that quality is a fundamental determinant of enrolment, retention and achievement.

The level of achievement of children was considered as a major indicator of the quality in EFA and MDGs, so attempts were made to assess the standards actually achieved by learners and tests were developed to measure learner achievement through surveys and empirical studies. In India the government's concern with educational achievement took a concrete shape as late as in the 90s with the formulation of the MLL document, which specified the standards that all children had to achieve at the primary stage. The Minimum Levels of Learning (MLLs) had to be followed by all schools across the country, and were an attempt to bring education of a comparable quality to all children.

Although there are very few studies done in India to assess the achievement level of children in India but the results are very common for all the studies. These studies basically try to assess the children's achievement on the basis of their scores in the subjects, so most of the studies talk about the average or mean score of the students where in this study we are critically trying to reflect upon the ability of the children in the form of can and can not, means weather a child have this competency or not.

DPEP to assess the level of achievement of children as a major component of their intervention and it was conducted in more then 46 districts in 1993/94 as a baseline where a total of 24,504 student of class IV/V, 23,056 student of class II and 5114 teachers were covered. In 1997/98 the tests were conducted in the 42 phase one district as a mid term assessment and 66,831 students, 6,221 teachers and 2068 schools were assessed.

Shukla (1994) conducted another study on about 66,000 students to find out the level of attainment of primary school children in 25 states/UTs. Jangira (1994), while synthesizing the results of Baseline Assessment Studies of the DPEP states found that student's performance in reading and arithmetic was low. There was a marked difference in achievement levels among states and between schools.

In a study conducted in Karnataka, covering 2,598 class IV learners and 442 teachers, it was observed that the learning achievements are not significantly different between rural and urban schools. However, a significant difference was observed among the schools belonging to different management agencies (Aggarwal, 1995a).

Nirupam Bajpai and Sangeeta Goyal (2004) have compiled substantial evidences of poor quality of primary schooling in India, They observed that;

"…The actual quantity of schooling that children experience and the quality of teaching they receive are extremely insufficient to any mastery of basic literacy and numeracy skills. This seems to be true of both the educationally more advanced states as well as the educationally backward states".

"In Maharashtra, community based surveys of twenty eight cities and eight rural districts found that only 30% of boys and girls in the age group 6-14 yrs. could read basic text fluently or do simple arithmetic (Banerji 2003). Grover and Singh (2002) too found in their study of two districts of Tamil Nadu that most students lacked functional literacy and numeracy skills. We note here that Tamil Nadu and Maharashtra are two of the educationally most advanced states in India."

"Similar results are reported by the PROBE team (1999) in their surveys of four North Indian states. Leclercq (2002) in his study of two districts of Madhya Pradesh found that in most schools visited, few children could read their basic texts fluently. The emphasis was on rote learning and there was little attempt in teaching activities to impart understanding or comprehension of the text."

Most comprehensive evidence on the children's learning levels come from ASER report of Pratham. The Annual Status of Education Report (ASER) 2005 presents dismal picture with regard to basic competencies of a substantial percentage of children. If we see at all India level about 40 per cent of children of grade V do not possess competencies commensurate with grade II in reading. Similarly over 53 per cent of children do not have competencies of grade II, in mathematical abilities (division and subtraction).

In a recent survey done by NCERT to assess the achievement of class V students in EVS, mathematics and language showed that the distribution of scores covered the entire range from 0 to 100 percent. However, the overall average performance of students in EVS, mathematics and language was 50.3%, 46.5% and 58.6% respectively. The average achievement in EVS was 50.3% with standard deviation 20.67.

The present study

The present study is an effort to assess the children's basic competencies in language and mathematics. Without using any complicated mathematical formulas, this is an attempt to assess level of learners in these skills and to make the teachers and community understand about the situation and make them to think and act on the present situation and try to help them to improve the quality of education in their village and school through B2B approach. To that extent, this documentation is aimed at field based agencies and NGOs who implement education projects. The aim is to provide them with a road map for improving quality at the primary level. The effort is to arrive at more realistic and concrete action plan based on the results, rather than investing on infrastructure and other areas, which of course are important by themselves.

Chapter Two

Back 2 Basics

CONCEPT AND METHODOLOGY

This chapter brings out the concept of B2B and steps involved in its implementation. It also provides an exposition on the methodology followed for conducting children's competency assessment. It would give an idea for the reader on the approach to address quality in B2B program.

Back 2 Basics – Concept

While India boasts substantial effort in enrolling children into schools, a large number of children are out of school and the drop out rate is very high in certain places. Researchers have identified so many reasons for children's drop out like poverty, care of siblings, work etc. coupled with these, poor quality of education is identified as another major reason for children 'not interested' to go to school. Without going into philosophical debates, if one were to expect the schooling to ensure children attain certain competencies which can be called basic, unfortunately the education system is not providing such an opportunity for vast majority of children in India. And if a child is not able to read and write even after spending number of years in primary schools that in a way would also mean a wastage! S/he will not be able to move beyond and the post primary class room environment would become more alien and hostile, given the nature of teaching learning processes in most of the government schools.

It is in this context, that the concept of B2B is proposed. It is aimed at enabling child to have 'basic' competencies. One way, it is a minimalist approach, where in several educationists advocate for a larger goals for schooling system. However, with a strong commitment to child centred learning processes, B2B aims at creating a learning environment where in teachers and children take up the task of achieving minimum competencies for children with a missionary zeal. With this belief and conviction, AeA identifies improving quality of education as an important strategic goal to enhance overall education development of children.

As an accelerated learning program, "Back 2 Basics" (B2B) is targeted to address issues of in-school processes, teaching learning processes and intend to impact on the overall learning environment where in children demonstrate measurable improvements in learning. B2B is a quality enhancement program initiated by AeA to achieve acceptable competency levels among children of primary schools all over India. This is visualized as a campaign, where in children attain age appropriate competencies while they are in schools.

Objectives of B2B

B2B is just not a programme to assess the children; it is also a time based plan to help these children to achieve the expected level in the basic competencies of language and mathematics with the mission approach. The major objectives of the B2B programme is -

- Assess the basic competency of children in reading and writing
- Assess the children's basic competency in addition, subtraction, multiplication and division in mathematics
- Enable teachers practice competency based teaching methodologies that enhances the basic language and mathematical competencies among learners
- To make sure that all children achieve basic literacy and numeracy skills/ competencies that are expected
- To ensure that no child will be left without reading and writing abilities
- To establish effective and quality mentoring, monitoring and supervision mechanisms within education system to focus on quality classroom transaction and pupil achievement on a continuous basis.

B2B in AeA India

AeA has initiated B2B program to improve quality of education among the children who are studying in the schools where partner NGOs provide support to the education system and communities. While AeA interventions involve providing support to improve the schooling environment, it is first time that a systematic effort to address quality of learning outcomes is attempted. AeA has initiated the process of B2B program among partners as a pilot and it would subsequently be expanded to cover larger educational programs like SSA.

There have been consultations with the partners on the B2B concept and efforts have been made to ensure that field workers and education coordinators of the partner NGOs undertstand the concepts and ensure its implementation. Two workshops were held with partner NGOs in this regard.

As a first step towards B2B, Children's Competency Assessment (CCA) has been conducted in all the schools of project NGO field area and this report brings out salient features of this process, analysis of results and the action plan.

Children Competency Assessment -Methodology and sample

CCA is a test to assess the basic competency of children in 3 R's Reading, Writing and Arithmetic in primary schools. There is a slight difference in the B2B methodology and other studies. This study does not include complicated mathematical calculations and methodology to assess the children's competencies. This study simply assesses the basic competencies of children in language and mathematics and tries to present the finding as simple as the communities and teachers themselves can understand the situation and can make collective plans accordingly. This has been conducted across the partner NGO field area and the details are given in Table 1.

Table -1
Details of the sample size undertaken for the survey

S.No.	Name of Partner	State	No. of schools covered	Total No. of children	No. of children assessed
1	MARI	Andhra Pradesh	21	691	537
2	SECURE	Andhra Pradesh	14	725	579
3	RASS	Orissa	46	2586	1544
4	AVVAI	Tamil Nadu	23	2838	2533
5	RDO	Tamil Nadu	24	2375	2243
6	DIP-KODAI	Tamil Nadu	28	2071	1361
7	SCAD	Tamil Nadu	87	4043	3890
8	DIP-SATHY	Tamil Nadu	13	938	781
9	IBTADA	Rajasthan	19	1668	804
10	ASSEFA	Rajasthan	34	2416	1934
11	BYPASS	Madhya Pradesh	41	2608	1918
12	DIP-HARDA	Madhya Pradesh	38	3324	1818
	Total		388		

Sample Size

To conduct this survey, all the children of classes II to V, studying in Government and government aided schools in the intervention area of Aide et Action partner NGOs in northern and southern India were covered. The total number of schools covered in northern India is 132 and in southern India is 256. Likewise the number of children covered in north and south India is 6474 and 13468_ respectively. The assessment process was conducted by the teachers of the school who were assisted by the staff of the NGOs. The prototype of questions, assessment tools and procedure followed for conducting the test was uniform for all the states keeping in mind a standardized pattern and analyzing the outcome based on the same.

Collection of Data

The collection of quantitative data was done with the help of pre-designed and pre-tested question papers for all six operations administered to children of classes II to V. The pilot testing of question papers was done in a government school in Malyala near Patancheru, Hyderabad and refinements in the tools have been affected based on the feedback.

On the basis of piloting of question papers, Children's Competency Assessment (CCA) field Guide, was prepared in order to maintain uniformity in the assessment tests. The pre-test was conducted in the same manner as the final study.

B2B Question Papers:

The sample test papers for the six operations were prepared individually in consultation with experts on the lines of NCERT and SSA guidelines and other state bodies. Two sets of question papers were prepared as the test was administered on two categories of children. The first category included children of Class II and the second category had children of Classes III, IV and V. The standard of test papers for the above mentioned categories varied according to the competency expected from the respective classes. The test papers meant for Class II was of Class I level while that for Classes III, IV and V was of Class II level. The test papers were translated into the medium of instruction of the schools where the tests were conducted. The following points were kept in mind while designing the test papers:

- There were two sets of question papers for assessment tests- one for Class II and other for Classes III, IV and V
- Class II test papers was based on the competency expected from a Grade I student.
- Classes III, IV and V test papers were based on competency expected from a Grade II student.

- On the basis on scores obtained in assessment tests, children were grouped in CAN and CANNOT categories. CAN includes children who scored 70 or above 70 and the rest fall in CANNOT.

Sample test papers attached in annexure for reference.

Time Frame of the Study

The total time for the study was 5 months, 15 days were for finalization of question papers, preparation of field guide and pilot testing and 60-80 days were allotted for the fieldwork. The days were scheduled according to the work requirement.

Chapter Three

FINDINGS OF CCA
Schools and Basic Competencies amongst Children

In all with 12 NGO field areas across the country 388 schools were covered under CCA. The diagram shows the distribution of schools assessed across NGOs. Maximum number of schools covered by SCAD (87) and the minimum number of school covered by DIP Sathyamangalam (13). The number of schools covered by each NGO depended on their coverage and capacity to conduct the test. All the NGOs have tried to cover all the schools in their project area where they are working (Table 1)

The table 2 depicts the summary of Children's Competency Assessment. Of the 26,283 children enrolled in these schools, 76% children i.e., 19,942 were assessed. The percentage of assessed children is varying from 48.2% to 96.2% across NGOs, but this is only because of the context and conditions of the schools and villages. It was not easy to have the assessment in schools, but with the support of the teachers and village community our partners were able to get this test done. At some places NGOs have to face some resistance from the school teachers or authorities who did not permit to conduct assessment in their schools. In some instances, community took initiative and the assessment test was conducted outside school, as community itself wanted to know the status of education of their wards!.

The table 2 also shows that among 19,942 children 62.3% were able to read and 52.5% were able to write. The percentage of children able to perform in the mathematical operations

Table -2
Partner wise Status of CCA

	Name of Partner	Total No. of Schools	Total No. of Children	No. of Children Assessed	%	Percentage of Children who can					
						R	W	+	-	X	/
1	MARI	21	691	537	77.7	61.8	48.8	84.4	73.6	44.7	30.2
2	SECURE	14	725	579	79.9	46.8	27.1	65.6	54.7	35.2	21.8
3	RASS	46	2586	1544	59.7	33.7	20.9	52.0	24.4	13.0	11.8
4	AVVAI	23	2838	2533	89.3	54.9	40.7	2.1	0.4	0.0	0.3
5	RDO	24	2375	2243	94.4	71.6	70.0	81.9	74.5	52.3	28.6
6	DIP-KODAI	28	2071	1361	65.7	84.2	78.8	74.8	72.2	56.6	46.6
7	SCAD	87	4043	3890	96.2	86.9	81.7	79.9	74.7	47.1	29.7
8	DIP SATHY	13	938	781	83.3	39.8	36.2	34.1	23.6	8.7	3.6
9	IBTADA	19	1668	804	48.2	36.3	19.5	33.5	29.2	17.3	12.9

10	ASSEFA	34	2416	1934	80.0	62.0	55.1	61.4	55.7	34.9	26.5
11	BYPASS	41	2608	1918	73.5	70.6	54.7	63.0	49.0	21.9	12.7
12	DIP Harda	38	3324	1818	54.7	33.6	18.1	34.1	28.1	18.6	7.3
	Total	**388**	**26283**	**19942**	**75.9**	**62.3**	**52.5**	**56.2**	**48.2**	**41.0**	**19.8**

Viz, addition, subtraction, multiplication and division is 56.2%, 48.2%, 41% and 19.8% respectively. The general observation is that as the complexity of various operations increases, the number of children able to perform declines. This general trend can be observed among all the children of NGO field areas.

Table-3
Distribution of Schools on the basis of CCA

Percentage	Read		Write		Add		Subtract		Multiply		Divide	
	No	%	No	%	No	%	No	%	No	%	No	%
No children is Able to	18	4.7	29	7.5	27	7.0	33	8.5	55	14.2	87	22.5
Up to 25% Children Can	61	15.8	81	20.9	33	8.5	66	17.0	86	22.2	148	38.2
25 to 50 percent Children can	70	18.1	79	20.4	86	22.2	92	23.7	133	34.3	103	26.6
50 to 75% Children Can	85	22.0	86	22.2	99	25.6	97	25.0	88	22.7	41	10.6
75 to less then 100 Percent Children Can	115	29.7	93	24.0	119	30.7	87	22.4	25	6.4	8	2.1
100 percent Children can	38	9.8	19	4.9	23	5.9	13	3.4	1	0.3	0	0.0
Total	**387**	**100.0**	**387**	**100.0**	**387**	**100.0**	**388**	**100.0**	**388**	**100.0**	**387**	**100.0**

The table 3 categories the schools on the basis of children's basic competencies in the operations of reading, writing, addition, subtraction, multiplication and division. More then 50% schools fall under those categories where less then 50% children have demonstrated these basic competencies. We can also see that in 4.7% schools not even a single child can read and 7.5% schools where not a single child can write. This percentage is increasing as we are moving towards the higher level of competency in mathematics. The data shows that in 7% schools, no child is able to do addition, 8.5% schools no child is able to do subtraction, 14.2% schools no child is able to do multiplication and 22.5% schools no child is able to do division.

It can be seen from the table that there are 9.8% schools (38 out of 387), 4.9% schools (19 out of 387) where all children can read and write, and 5.9% (23 out of 387) where all children can do addition, 3.4% (13 out of 388) where all children can do subtraction. It is also alarming that there is only one school where all children can do multiplication and in the sample there is not even a single school where all children have the competency of doing simple division in mathematics!

Diagram 1
Status of basic competencies among children

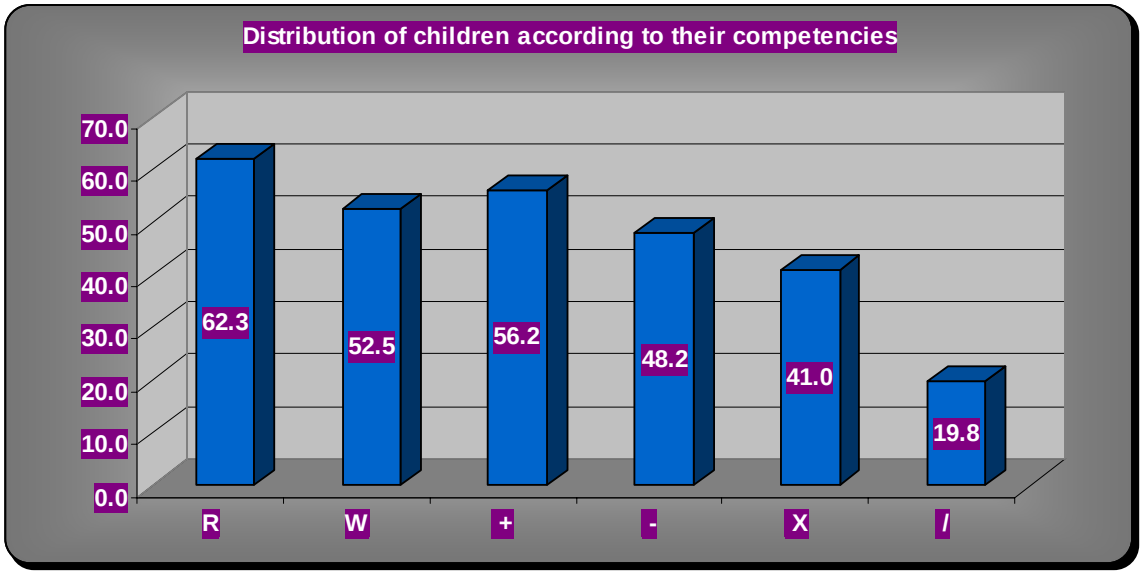


Diagram 1 represents the distribution of children according to their competency in all the six operations carried out for the learning assessment in 19942 children assessed in grade 2nd to 5th. The six operations include reading, writing, addition, subtraction, multiplication and division and the percentage of children able to perform in these operations is 62.3%, 52.5%, 56.2%, 48.2%, 41.0% and 19.8% respectively. The inference is that children perform well in reading and addition in comparison to the other operations. Performance of children is extremely poor in division followed by multiplication.

Chapter Four

CHILDREN'S COMPETENCY IN LANGUAGE
Reading and Writing

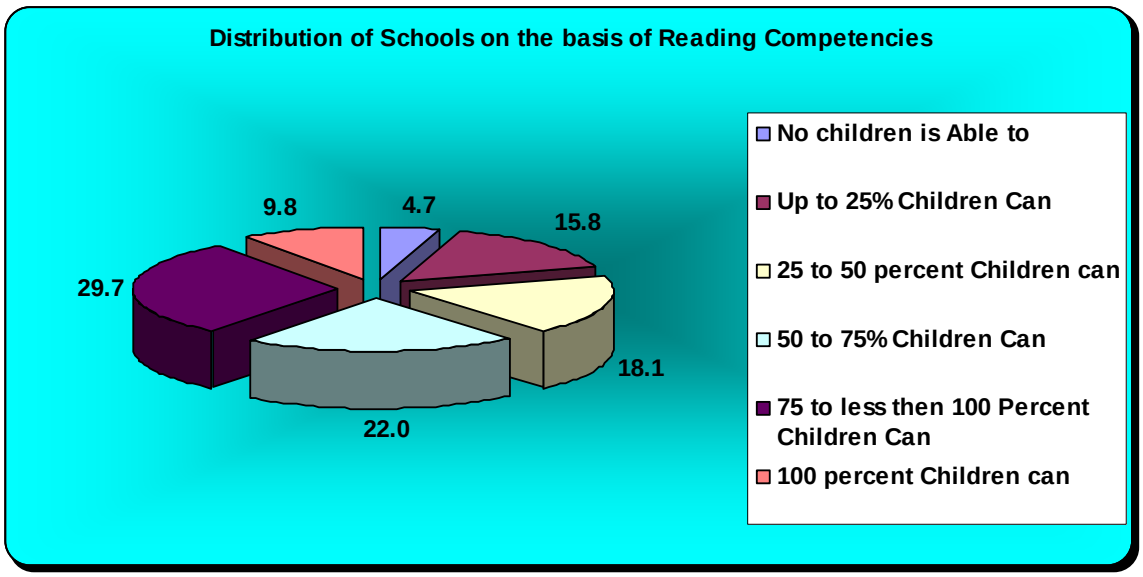
An attempt has been made in this chapter to analyse competencies in various individual basic operations. This helps in understanding in a more precise way how children are performing vis a vis basic competencies.

Reading Competency

CCA attempted to assess reading and writing competencies on a class specific level.
The following criteria's were kept in kept in mind while conducting the reading test:

- The time of reading test for each child had an upper limit of 2 minutes.
- Children were tested on three levels of reading: recognizing letters, recognizing and reading words and reading simple paragraphs.
- Class II children were expected to recognize 10 letters and read aloud 10 simple words of standard I difficulty.
- Classes III, IV and V children were expected to read 10 simple and short sentences of standard II difficulty.
- On the basis on scores obtained in reading test, children were grouped in CAN READ and CANNOT READ categories.

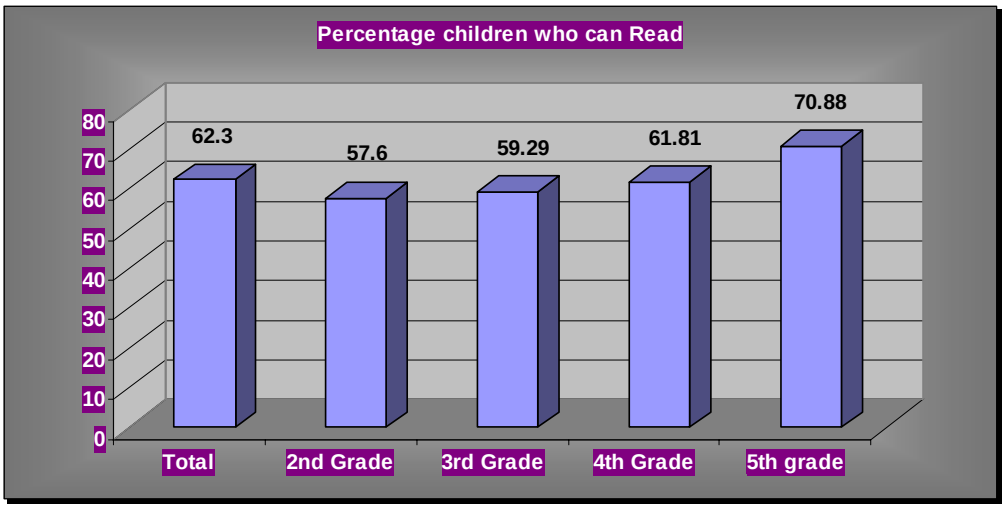
Diagram 2
Status of Reading competencies among the children



The diagram 2 depicts the distribution of schools on the basis of children's reading competencies. Data is available for 387 schools for this. There are 4.7 percent (13 out of 388) schools in the sample where no child is able to read. Maximum no of schools 29.7% (115) falls under the category, where more then 75% children can read. There are 33.9% schools in the sample where less then 50% children are able to read.

Diagram 3 shows that there is hardly any difference in the same. 57.6% children are able to read in class II, 59.3%, 61.8% and 70.9% children were able to read in classes III, IV and V respectively.

Diagram 3
Grade wise Status of Reading Competency of children



It is also evident that the reading ability of children is improved as we move up the classes but for the question paper of standard III level, 29% of children in class V still find it difficult to read.

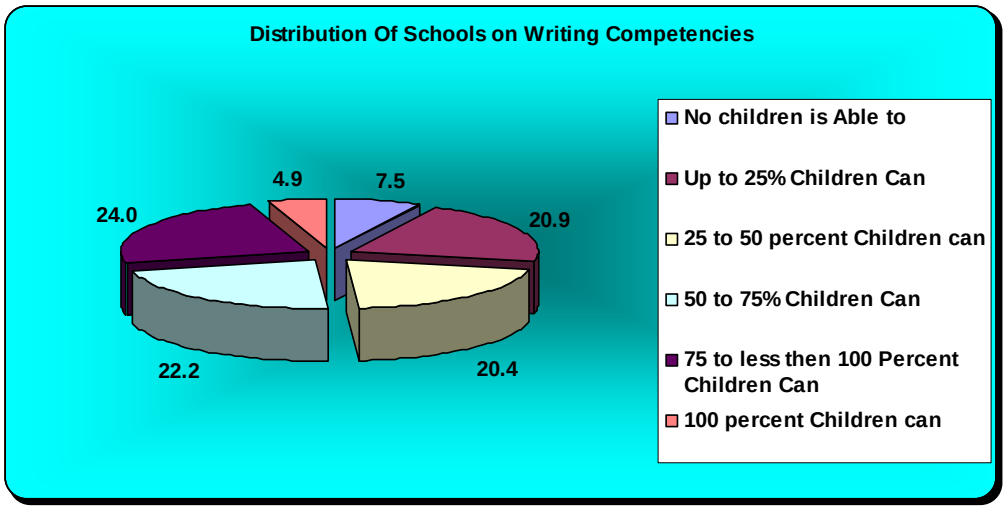
Table 4
NGO wise Distribution of children on the basis of their Reading Competency

Partner	Reading				
	Total	Grade 2	Grade 3	Grade 4	Grade 5
SECURE	46.8	24.8	20.5	42.6	49.6
MARI	61.8	70.0	55.6	52.8	67.0
AVVAI	54.9	48.2	56.0	55.0	60.8
RDO	71.6	68.7	70.7	70.4	75.8
DIP KODAI	84.2	71.0	87.5	89.9	90.0
DIP SATHI	39.8	12.1	41.0	50.0	57.5
RASS	33.7	41.7	21.0	28.3	45.3
SCAD	86.9	85.1	83.5	87.4	91.5
DIP HARDA	33.6	24.8	22.1	35.4	54.1
IBTADA	36.3	32.2	26.6	38.2	51.7
ASSEFA	62.0	59.3	61.8	57.8	69.2

BYPASS	70.6	70.8	67.6	69.6	75.8
All India	**62.3**	**57.6**	**59.29**	**61.81**	**70.88**

Similarly the table 4 represents the NGO wise reading competency of children in classes II, III, IV and V. Schools of DIP-Kodai and SCAD reflect good results whereas the reading competency is extremely poor in case of DIP-Harda and RASS followed by DIP-Sathy. There is a slight improvement in reading ability of children of Class V in comparison to lower standards, may be for so many reasons.

Diagram 4
Distribution of Schools on the basis of Children's Writing Competency



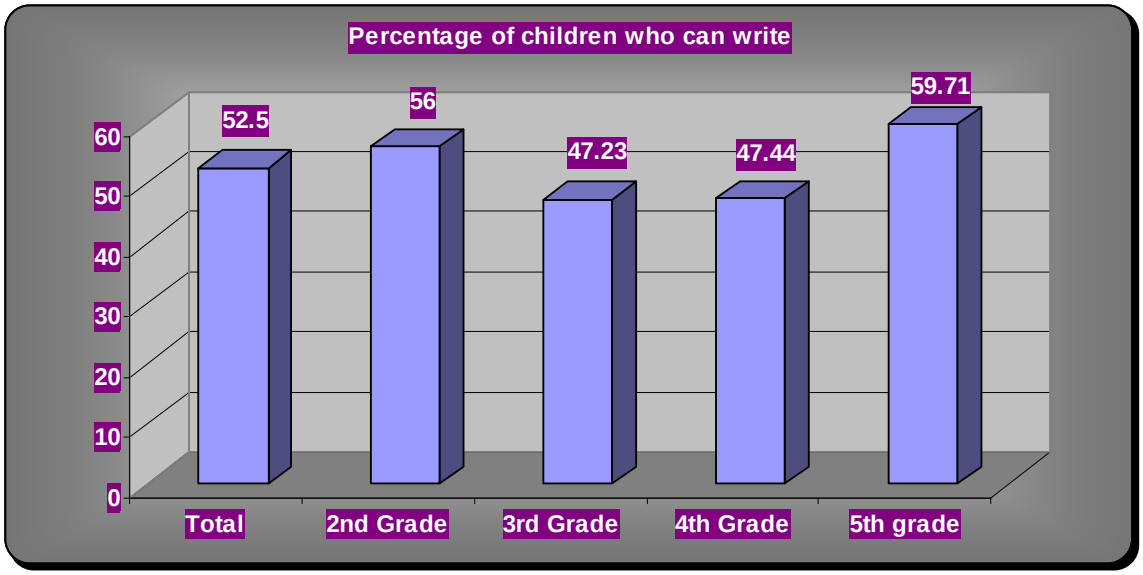
Writing

Writing competency follows reading and is extremely important in order to assess the understanding of children with regard to lessons taught in the classrooms. Writing helps in retaining the concepts taught in class for further reference and hence CCA attempts to test this competency on a class specific level.

The following criteria's were kept in kept in mind while conducting the writing test:

- In contrast to reading test, the writing test was conducted for the entire class and not administered individually.
- Children were tested on three levels of writing: writing letters, writing words and writing simple sentences.
- Class II children were expected to write 10 letters and 10 simple words of standard I difficulty.
- Classes III, IV and V children were expected to write 10 words and 5 short and simple sentences of standard II difficulty.
- On the basis on scores obtained in writing test, children were grouped in CAN WRITE and CANNOT WRITE categories.

Diagram 5
Grade wise Percentage of Children who can write



If we see the distribution of schools on the basis of writing competencies (Diagram 4, see previous page) of children, there are 7.5% (29) schools where no child is able to write. Maximum no of schools 24% (93) are those schools where more then 75% children can write and there are 4.9% schools where all children can write. There are 41.3% schools where less then 50% children have the basic competency of writing.

Table 5
NGO wise Distribution of children on the basis of their Writing Competency

Partner	Writing				
	Total	Grade 2	Grade 3	Grade 4	Grade 5
SECURE	27.1	22.1	10.6	12.8	22.9
MARI	48.8	83.3	43.7	39.2	50.5
AVVAI	40.7	40.3	43.1	32.4	48.3
RDO	70.0	69.9	64.2	66.7	78.3
DIP KODAI	78.8	76.4	73.1	84.1	81.3
DIP SATHI	36.2	34.8	27.0	35.6	48.6
RASS	20.9	46.9	12.8	13.4	10.2
SCAD	81.7	85.8	73.6	75.1	91.7
DIP HARDA	18.1	23.7	7.9	13.3	29.1
IBTADA	19.5	26.7	9.0	15.2	25.6
ASSEFA	55.1	55.8	52.0	49.7	62.5
BYPASS	54.7	58.4	50.9	52.7	57.5
All India	**52.5**	**56**	**47.23**	**47.44**	**59.71**

It can also compare the class wise results of the children. Diagram 5 shows the grade wise writing competencies of the children. We can see from the diagram that in all only 52.5% children can write but level of writing competency is higher in the class two students in comparison to class three and class four and they are slightly behind the class five students. Although the writing competency has improved in class 5th but there are still 40% children who are not able to write.

Interesting fact is that there is not even class wise and nor partner wise is any difference in the results. Table 5 shows that in the schools in the field areas of SCAD and DIP KODAI the writing competency among children is higher then others. In the NGO area of DIP Harda, IBTADA and RASS less then 25% children can write and this trend is worst in the case of higher classes especially in 3rd and 4th where this percentage is less then 15%. Performance in Class 5th is also not satisfactory.

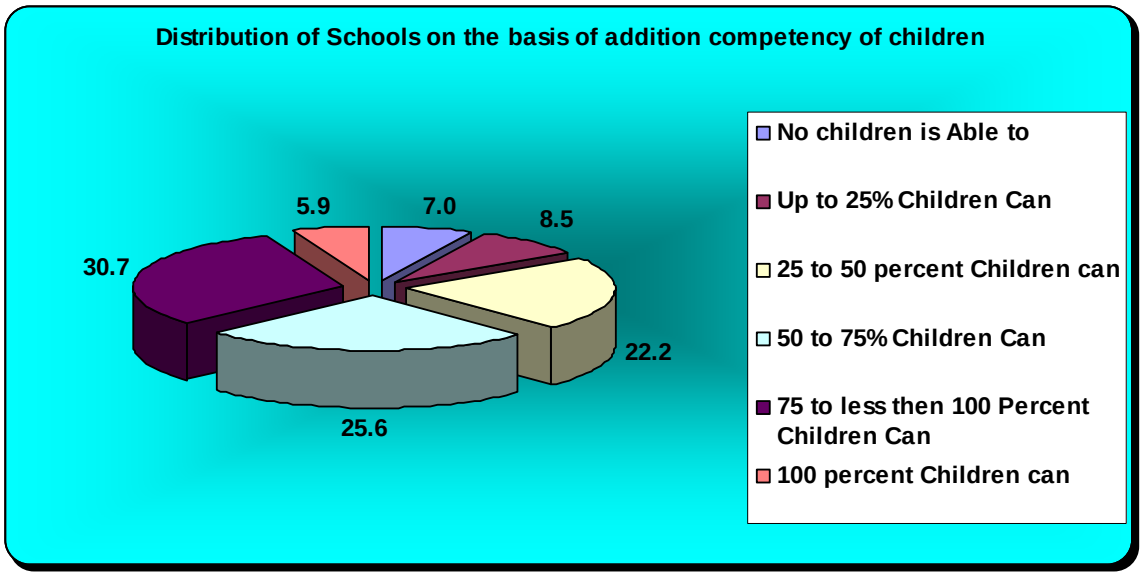
Chapter Five

CHILDREN'S COMPETENCY IN *ARITHMETIC*
Addition, Subtraction, Multiplication and Division

CCA has attempted to assess children for the four basic mathematical operations, i.e., addition, subtraction, multiplication and division. The following process was adopted.

- There were two sets of question papers for assessment tests- one for Class II and other for Classes III, IV and V
- Class II children were tested for two basic operations – addition and subtraction as multiplication and division is taught above this grade. The test paper was of Grade I difficulty and comprised of 10 questions of addition and 10 questions of subtraction (without carry over).
- Classes III, IV and V children were tested for all four operations. The test paper comprised of 5 questions each of addition, subtraction, multiplication and division. The questions included simple calculations as well as carry over in increasing order of complexity.
- On the basis on scores obtained in assessment tests, children were grouped in CAN and CANNOT categories. CAN includes children who scored 70 or above 70 and the rest fall in CANNOT.

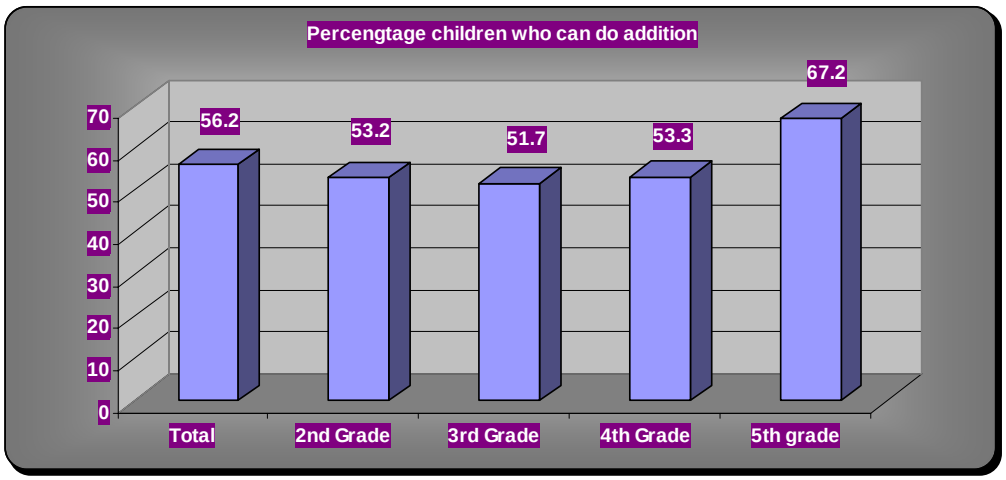
Diagram 6
Distribution of schools on the basis of Addition competency of the children



Distribution of schools on the basis of children's competency of doing addition is shown in the diagram 6. It can be seen that there are 7% (27 out of 387) schools where no child is able to do addition. In 30.7% (119 out of 387) schools more then 75% children are able

to do addition and in 37.7% schools less then 50% children are able to do addition. In the sample 5.9% schools are also there where all the children can do the addition, which is too less.

Diagram 7
Grade wise status of children's Competency in Addition



Grade wise distribution of children to their competencies in addition shows (Diagram 7) that there is no difference in the class wise competencies or we can say that there is no relation in the terms of class and competency, although in class 5 this percentage is slightly high in comparison to other classes. Where in all 56.2% children can do addition, this percentage is 53.2, 51.7, 53.3 and 67.2 in grade II, III and IV and V.

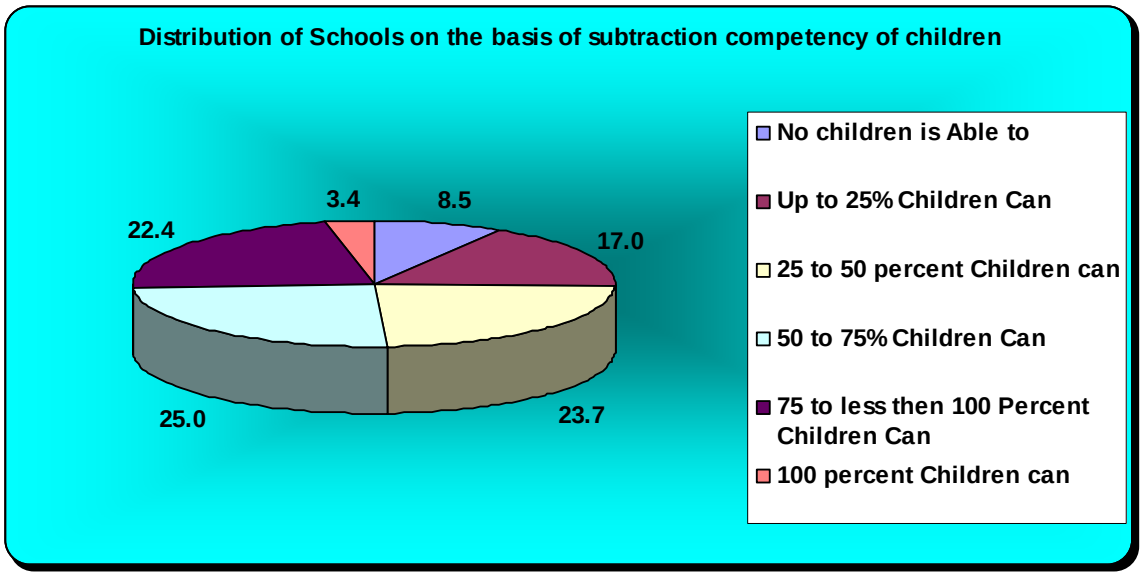
Table 6
NGO wise Distribution of children on the basis of their Competency in Addition

Partner	Addition				
	Total	Grade 2	Grade 3	Grade 4	Grade 5
SECURE	65.6	26.8	33.1	61.5	70.2
MARI	84.4	83.9	79.3	88.0	87.6
AVVAI	2.1	1.4	3.4	0.0	3.8
RDO	81.9	82.9	73.0	82.9	87.7
DIP KODAI	74.8	77.2	73.1	69.7	79.1
DIP SATHI	34.1	27.3	14.5	36.6	60.2
RASS	52.0	61.9	57.0	17.7	73.5
SCAD	79.9	79.6	70.0	79.3	90.2
DIP HARDA	34.1	25.0	18.3	38.5	56.7
IBTADA	33.5	24.7	24.6	36.5	53.5
ASSEFA	61.4	54.7	58.2	63.2	70.4
BYPASS	63.0	60.6	61.0	64.1	67.8
All India	**56.2**	**53.2**	**51.7**	**53.3**	**67.2**

Partner wise distribution shows (table 6) where in the project area of MARI, RDO and SCAD more then 80% children can do addition in the schools, there less then 35% children can do addition. in the project area of DIP Sathy, DIP Harda and IBTADA. In the project area of AVVAI the situation is worst, where only 2.1% children have the basic competency to do addition. Across the partners we can not see any relation in the class and the competency level of the children.

Subtraction

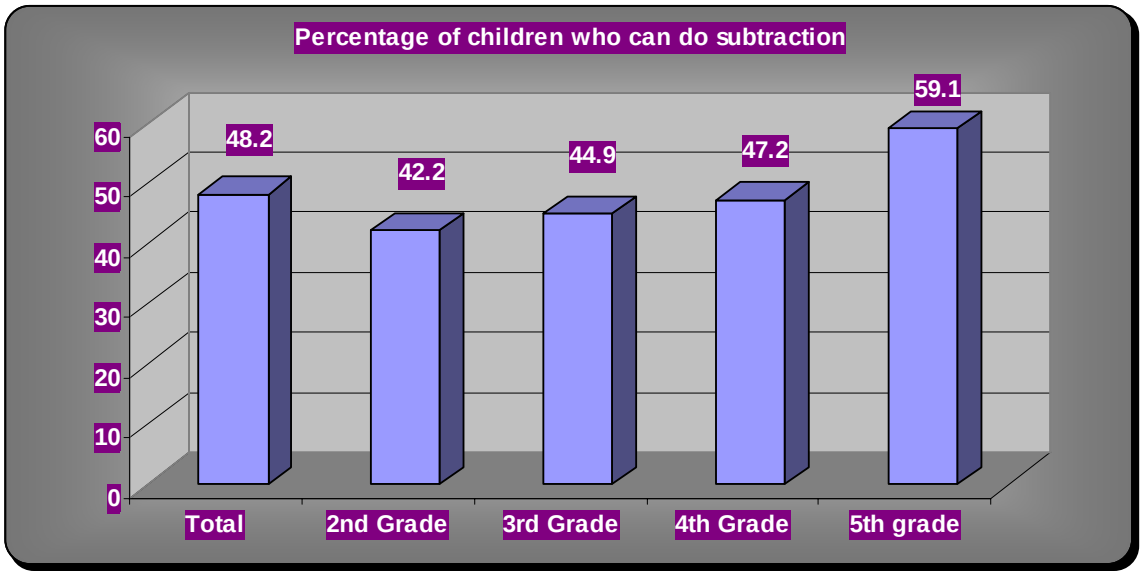
Diagram 8
Distribution of schools on the basis of Subtraction competency of Children



The diagram 8 shows the distribution of schools on the basis of children's subtraction competency. The percentage of schools has increased here to 8.5% (33 out of 388) where no child is able to do subtraction in comparison to children's competency in addition. Only 25% (97 out of 388) schools are there where more then 75% children have the subtraction competency. In the sample of 388 schools only 3.4% (13) schools are there, where all the children can do the simple subtraction. In 40.7% schools less then 50% children can do subtraction

Diagram 9

Grade wise Status of children's Competency in Subtraction



In comparison to reading writing and addition, there is positive degree of correlation here in the grade and competency in subtraction (Diagram 9), as the class is increasing the level of competency of children in doing subtraction is also increasing. Where in class II 42.2% children can do subtraction, in class three, four and five this figure is 44.9%, 47.2% and 59.1% respectively. In all less then 50 % children from the sample are able to do subtraction.

Table 7
NGO wise Distribution of children on the basis of their Competency in Subtraction

Partner	Subtraction				
	Total	Grade 2	Grade 3	Grade 4	Grade 5
SECURE	54.7	14.8	25.8	58.1	57.3
MARI	73.6	68.3	70.4	73.6	87.6
AVVAI	0.4	1.4	0.0	0.0	0.0
RDO	74.5	78.3	66.7	72.0	80.9
DIP KODAI	72.2	67.8	70.9	70.6	80.4
DIP SATHI	23.6	12.6	11.0	27.2	45.3
RASS	24.4	0.0	41.0	13.4	44.2
SCAD	74.7	75.3	61.9	76.5	84.5
DIP HARDA	28.1	18.4	17.2	30.8	47.8
IBTADA	29.2	15.3	24.1	30.9	54.1
ASSEFA	55.7	45.7	54.4	56.9	66.9
BYPASS	49.0	50.6	48.2	46.4	51.0
All India	**48.2**	**42.2**	**44.9**	**47.2**	**59.1**

NGO wise distribution shows (Table 7) that in the project areas of MARI, RDO, SCAD and KODAI more then 70% children can do subtraction but less then 30% children can do subtraction in the project area of IBTADA, DIP Harda, RASS, and DIP Sathy. Across the partners there is same positive relation in the grade and children's competency in subtraction. The status of the children in the project area of AVVAI is not good where only 0.4% children can do the subtraction.

Multiplication

Diagram 10
Distribution of Schools on the basis of Multiplication Competency of Children

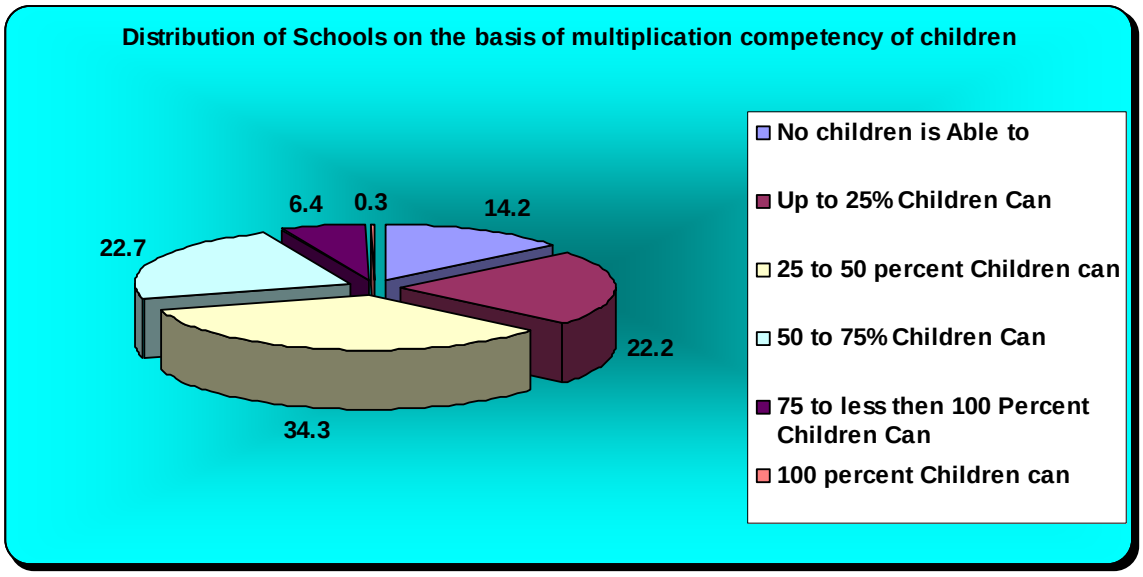
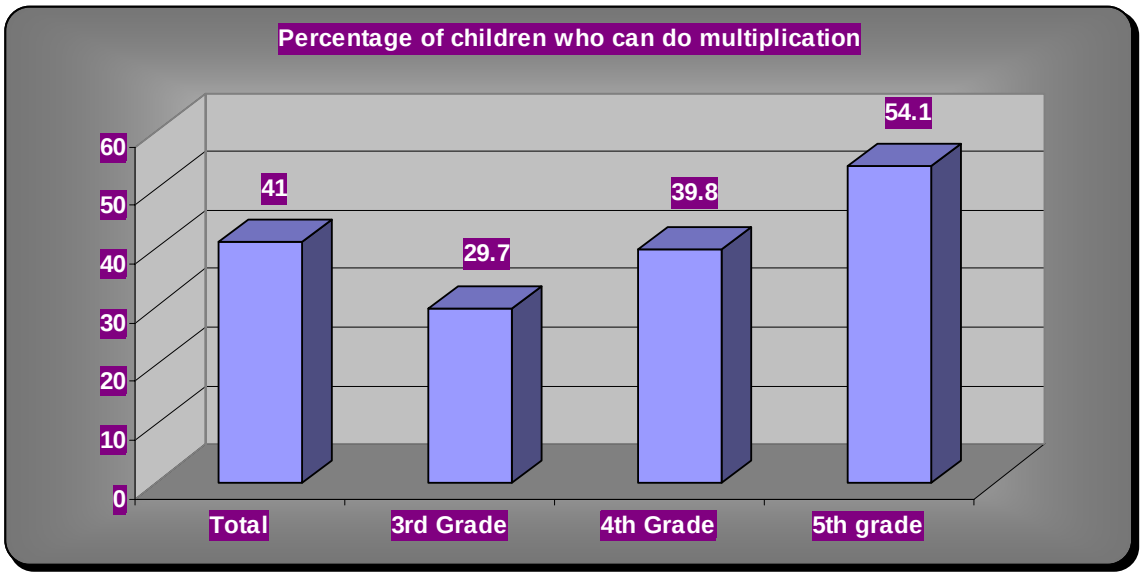


Diagram 10 shows the distribution of sample school on the basis of the children's competency in the multiplication. Here we can see that there are 14.2% schools (55 out of 388) in the project area where no child is able to do multiplication. Only 6.4% schools are there in the sample where more then 75% children can do multiplication and only one single school from the sample of 388 schools where all children have the basic competency in multiplication. In all 56.5% schools are there where less then 50 percent children can do multiplication.

Diagram 11
Grade wise Status of Children's Competency in Multiplication



There is a significant change in the competency of children in doing multiplication as their level increased. The diagram 11 shows the positive correlation between the competency of children and the grade. As the children are moving up in the grade their level of competency in doing multiplication is also increasing. Where in class III only 29.7% are able to do multiplication, this percentage is 39.8 in class IV and 54.1 in class V. In all only 41% children who can do simple multiplication.

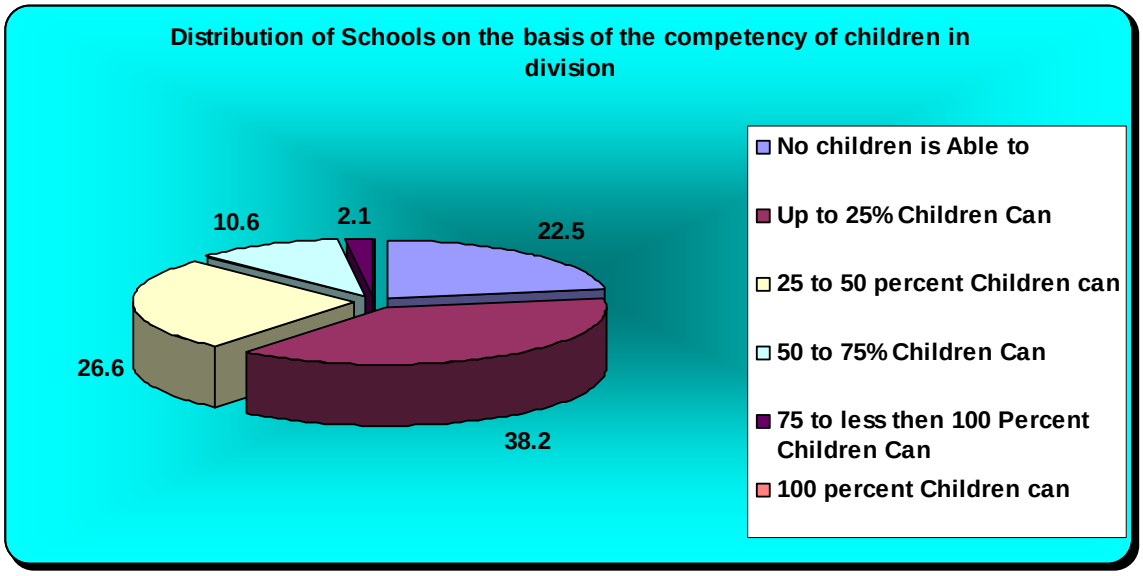
Table 8
NGO wise Distribution of children on the basis of their Competency in Multiplication

Partner	Multiplication			
	Total	Grade 3	Grade 4	Grade 5
SECURE	47.4	13.9	35.1	47.3
MARI	67.2	51.1	72.0	83.5
AVVAI	0.0	0.0	0.0	0.0
RDO	67.0	56.3	63.9	79.4
DIP KODAI	78.0	76.6	75.8	81.9
DIP SATHI	11.7	0.0	8.9	27.6
RASS	17.4	0.0	15.7	38.4
SCAD	62.9	37.6	65.8	83.9
DIP HARDA	24.8	12.3	22.5	41.6
IBTADA	25.3	14.1	23.6	40.1
ASSEFA	47.5	39.4	46.7	56.8
BYPASS	30.5	27.2	29.9	35.8
All India	**41**	**29.7**	**39.8**	**54.1**

The Situation is almost same in all the partners (Table 8) except AVVAI where no child is able to do multiplication in the schools of their project area. Where in the project area of MARI, RDO, DIP Kodai, and SCAD more then 60% children can do multiplication, less then 20 % children have this basic competency of doing multiplication in DIP Sathy and RASS.

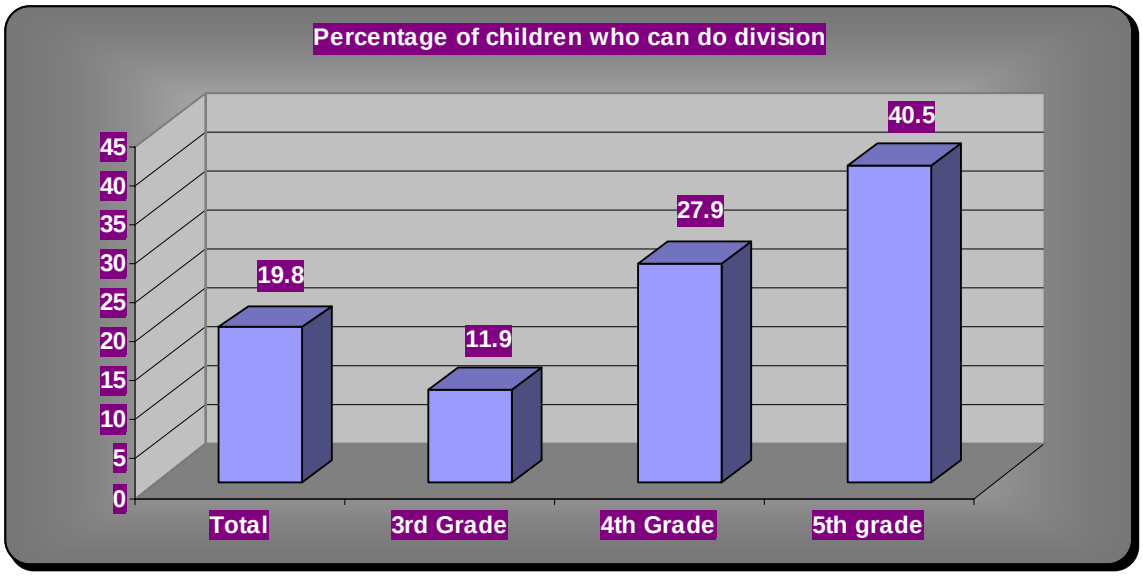
Division

Diagram 12
Distribution of Schools on the basis of the competency of children in Division



The distribution of schools on the basis of children's competency in division shows (Diagram 12) that a large percentage of schools 22.5% (87 out of 387) do not have a single child who can do division. There are only 2.1% (8) schools in the sample where more then 75% children can do division and there is not even a single school where all children can do division. There are 64.8% schools in all where less then 50% children can do division. The percentage of schools where less then 25% children can do division is 38.2 in the sample schools.

Diagram13
Grade wise Status of Children's Competency in Division



The class wise distribution shows (Diagram 15) the high degree of positive correlation in terms of children's competency in doing division and the grades. Where only 11.9% children can do division in class three, the no has increased in class 4th to 27.9% and 5th to 40.5%. There are still 60% children left who can not do division.

Table 9
Partner wise Distribution of children on the basis of their Reading Competency

Partner	Division			
	Total	Grade 3	Grade 4	Grade 5
SECURE	29.3	3.3	22.3	37.4
MARI	45.4	28.9	55.2	55.7
AVVAI	0.4	0.0	0.0	1.2
RDO	36.6	5.0	48.7	51.2
DIP KODAI	64.2	58.1	59.9	74.8
DIP SATHI	4.8	0.0	4.0	11.0
RASS	15.7	0.0	13.4	35.6
SCAD	39.7	5.5	45.3	66.4
DIP HARDA	9.7	4.0	5.8	20.7
IBTADA	18.9	10.6	16.9	30.8
ASSEFA	36.2	26.5	36.3	46.1
BYPASS	17.7	14.0	17.2	23.5
All India	**19.8**	**11.9**	**27.9**	**40.5**

Among the schools of NGO field areas (Table 9) only in the project area of DIP Kodai more the 60% children can do division. In the project area of SCAD and MARI this percentage is in between 40 to 50 and in DIP Harda and DIP Sathy less then 10 percentage children can do division. AVVAI has the worst situation in all operations as children in its project area are too weak in the mathematics.

CONCLUSION

The findings show that despite of so many efforts for quality education, still children are not able to attain minimum competencies in all the basic operations. While the results show a trend which is similar to several other studies conducted earlier in India and else where, what is important to appreciate here is that the purpose of the study is to initiate action that would result in improving the situation. Towards this end, the findings become important to ensure that all stakeholders appreciate the situation and contribute towards identifying solution.

Efforts towards improving competencies – Experiences elsewhere:

Experiences elsewhere show that children's assessment becomes a critical ingredient in addressing quality of education. Under the Sarva Siksha Abhiyan of Government of India, efforts have been made to improve the quality of education. The government of Andhra Pradesh under SSA has initiated Children's Language Improvement Program (CLIP) in 2005 and has been successful in improving the language competencies. Similarly. The goals of CLIP have been the following;

- All children be able to read and write by the end of academic year 2005 - 06
- All children to achieve basic literacy and numeracy skills / competencies that are expected
- Develop reading habit and to make children as independent readers
- Establish effective monitoring system to focus on quality classroom transaction and pupils' achievement on a continuous basis

It can be underscored that while the program has been implemented during 2006, the uneven effort in various districts, administrative bottlenecks, enthusiasm of teachers determines success of such initiatives. Coverage also would often become uneven as many interiors and inaccessible areas face acute problems related to school infrastructure and teachers. Nevertheless such programs demonstrate commitment of the government system to ensure quality of education. AeA aims to collaborate and compliment such interventions with B2B so that a multiplier effect would be created.

Similar efforts can also be seen in other states like Integrated Learning Improvement Programme (ILIP) of West Bengal, 3 R's Guarantee Programme of Maharashtra, Gujarat Achievement at Primary (GAP) in Gujarat, Learning Guarantee Programme (LGP) in Karnataka, Learner's Achievement Tracking System (LATS) in Orissa and School Monitoring System of Uttaranchal etc. The effort of all these have been to enhance the learning competencies among children.

B2B Processes

As discussed in the initial part of the report, B2B is seen as an accelerated learning program under which learning would be improved in a time bound system. Based on the CCA findings an action plan would be developed with school as a unit and measures would be to achieve outcomes set for the school.

AeA has undertaken the process during the later part of 2006 in order to implement further processes based on the CCA. They included partners meetings to enable further analysis and interpretation of results and developing an action plan.

These partners meetings were attended by education coordinators of the partner NGOs who are managing the program at the field level.

These meetings came up with the following set of action points which would be implemented from the academic year 2007. it has been resolved that teacher capacity building inputs would be provided during the early part of 2007, when schools are closed so that teachers would be equipped to take up B2B initiatives earnestly during the first half of the academic year in 2007.

Steps for implementing B2B in academic year 2007-8

- To identify and grade schools based on the competencies and develop grade /school wise plans
- Develop appropriate learning material to ensure accelerated learning and acquisition of basic competencies by children in a period of six months (work books, separate primers etc)
- Development of core group of resource centres (often they are available at block and cluster levels who need to be provided with inputs on B2B approach)
- Teacher sensitization and training, especially by resource teachers (available under SSA at Block and cluster levels)
- Developing mentoring system for teachers

Partner NGOs have come up with strategies which are in tune with the ground reality. They included;

- Sharing of CCA results with parents, project area teachers, PTAs, VEDCs, SHGs etc
- Appointing and training volunteers (on honorarium basis), teacher trainings
- Regular monitoring and assessment of children achievements through systems
- Developing low cost innovative teaching-learning modules for the basic operations
- Formation of teachers networks based on the subject (like language, mathematics etc)

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