विद्यया ऽ मृतमश्नुते

एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

PROGRAMME EVALUATION REPORT

CHILDREN'S LEARNING ACCELERATION PROGRAMME FOR SUSTAINABILITY ANDHRA PRADESH

SSA – TECHNICAL COOPERATION FUND

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सब पढ़ें सब बढ़ें

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The reports of all the four evaluation studies are available on request from the Department of Elementary Education:

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Foreword

In 2002 the Government of India launched a nation-wide centrally sponsored scheme, Sarva Shiksha Abhiyan (SSA) with the aim to provide all children in the 6-14 years age group with access to a school/EGS centre, bridging gender and social category gaps with universal retention and providing education of satisfactory quality by 2010. In the second phase of support to SSA, the Ministry of Human Resources Department (MHRD) and the Development Partners (DP), Department for International Development (DFID), the World Bank and the European Commission (EU), agreed to finance a Technical Cooperation Fund (TCF) to support and facilitate strengthening of institutional capacities at the National Council for Educational Research and Training (NCERT) and, through it, the states in the specific areas of:

1. National Assessment Surveys and
2. Programme Evaluation of Quality Initiatives

A Technical Services Agency (TSA) was contracted to support NCERT in the process of capacity building to reach international professional standards in developing and carrying out education evaluation and national assessment.

The methodology for capacity building involved continuous technical inputs through courses, workshops, conferences, exposure to best practices and experimental or "hands on" learning by actually conducting the evaluations with support from experts.

In 2009, the MHRD commissioned the Department of Elementary Education (DEE), NCERT to undertake the following evaluation studies of four quality initiatives:

- **Aadhar, Himachal Pradesh** – a state wide initiative to improve basic literacy and numeracy in primary level students.
- **Activity Based Learning, Tamil Nadu** – a project piloting the principle of learning through activities in Classes one to four.
- **Children's Learning Acceleration Programme (CLAPS), Andhra Pradesh** – an initiative that aims to improve learning levels in all areas of the primary school curriculum.
- **Multilingual Education (MLE) Programme, Orissa** – teaching tribal children in their mother tongue with the aim of improving education equity.

These evaluations were conducted during 2009-2011 with technical support and guidance from TSA. The reports of these studies, developed with mentoring support from an Advisory Panel and peer reviewed by eminent international experts in the field of evaluation are now available.

We hope they will be used and discussed extensively. We also hope the results will lead to further in-depth studies.

Parvin Sinclair
Director
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January 2012

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ACRONYMS

BAAMO	Assistant Academic Monitoring Officer
AMC	Academic Monitoring Committee
AMO	Academic Monitoring Officer
AP	Andhra Pradesh
APO	Assistant Program Officer
APPEP	Andhra Pradesh Primary Education Programme
CBTL	Competency-Based Teaching and Learning
CLAPS	Children's Learning Acceleration Programme for Sustainability
CLIP	Children's Language Improvement Programme
COS	Classroom Observation Schedule
CPS	Central Primary School
CRC	Cluster Resource Centre
DC	District Coordinator
DIET	District Institute of Education and Training
DISE	District Information System for Education
DPEP	District Primary Education programme
DPO	District Project Office
DRG	District Resource Group
EVS	Environmental Studies
FGD	Focus Group Discussion
FI	Field Investigator
FS	Field Supervisor
GOI	Government of India
UNDP	Government of India and United Nations Development Programme
GPS	Government Primary School
ICDS	Integrated Child Development Scheme
ISC	Interview Schedule for Children
ISD	Interview Schedule for District Level Functionaries (DIET/DPO)

ISMEO	Interview Schedule for Mandal Education Officer (MEO)
ISP	Interview Schedule for Parents/ VEC Members
IST	Interview Schedule for Teachers
ITDA	Integrated Tribal Development Agency
KGBV	Kasturba Gandhi Balika Vidyalaya
MEO	Mandal Education Officer
Mpl.ES	Municipal Elementary School
MHRD	Ministry of Human Resource Development
MP	Mandal Parishad
MPPS	Mandal Parishad Primary School
MPUPS	Mandal Parishad Upper Primary School
MRC	Mandal Resource Centre
MRP	Mandal Resource Person
MRPQ	Mandal Resource Person Questionnaire
NCERT	National Council of Educational Research and Training
NGO	Non Governmental Organization
NSPE	Nutritional Support to Primary Education
OBB	Operation Black Board
ODA	Overseas Development Agency
OSLP	Observation of Classroom Library Period
PO	Project Officer
PTA	Parent Teacher Association
TQ	Teacher Questionnaire
QIP	Quality Improvement Programme
RVM	Rajiv Vidya Mission
Sr. Asst	Senior Assistant
SC	Scheduled Castes
SCERT	State Council of Educational Research and Training
SIET	State Institute of Educational Technology
SLP	School Level Performa

SMC	School Management Committee
SPO	State Project Office
SRG	State Resource Group
SS	School Schedule
SSA	Sarva Shiksha Abhiyan
ST	Scheduled Tribe
TLM	Teaching Learning Material
UEE	Universalisation of Elementary Education
UPE	Universalisation of Primary Education
VEC	Village Education Committee

ACKNOWLEDGEMENTS

We would like to thank the members of the Advisory Panel viz., Prof J. Bradley Cousins, Dr Chris Coryn, Dr Darleen Opfer, and Dr Sanjeev Sridharan for providing continued academic support and encouragement to the CLAPS Evaluation Team, throughout the study and Prof Stufflebeam and Prof Owen for peer reviewing the proposals and final evaluation reports. We wish to thank Dr Wendy Ryan, Ms Robyn Sachs and Ms Parul Pandya for providing support during finalization of the report.

Our sincere thanks are due to the State Project Director, Rajiv Vidya Mission, Andhra Pradesh, for providing all possible assistance for the study. This study would not have been possible without their support.

We wish to thank District Project Coordinators of eight selected districts under the study, all Field Investigators, Field Supervisors and District Coordinators engaged for the study for their sincerity, hard work and support during data collection.

We would like to thank all children, teachers, head teachers, parents, community members, and BRC and CRC Coordinators for their full co-operation during data collection.

We wish to thank Dr Jayshree Oza, Team leader, SSA – Technical Cooperation Fund – Technical Services Agency and her entire team, and the Head, Department of Elementary Education, National Council of Educational Research and Training (NCERT) for being a constant source of support and encouragement throughout the study.

EXECUTIVE SUMMARY

Children's Learning Acceleration Programme for Sustainability (CLAPS) was a quality initiative undertaken by the State of Andhra Pradesh. The programme was launched in December 2006 across all the districts simultaneously for primary stage in the government schools. The programme was implemented for about three years and in April 2009 it was subsumed into a new programme called Learning Enhancement Programme (LEP) covering up to the elementary stage under SSA. The prime goal of CLAPS was to improve the Learning levels of children in all curricular areas.

The specific objectives of CLAPS were to:

- enhance the core competencies of all the curricular areas
- improve the classroom transaction by adopting CBTL
- improve the reading habits of children
- strengthen home school links

Based on the need of the programme and the expected outcomes, a programme logic model (PLM) and evaluation framework was developed by the evaluation team with the stakeholders in a participatory mode. The PLM facilitated formulation of the following evaluation questions:

Major components of CLAPS:

- Training of the teachers and educational functionaries
- Creating awareness about CLAPS
- Competency based teaching learning
- Innovative activities
- Performance and process grading of schools
- Monitoring and review
- Community mobilization and home school links

1. Has CLAPS been implemented as intended? If not, why not?
2. To what extent did the following programme components facilitate or impede the improvement of learning levels of children?
   - Teacher Training
   - Awareness about CLAPS
   - Competency Based Teaching Learning
   - Innovative Activities
   - Process Grading and Performance Grading
   - Monitoring Mechanisms
   - Home-School Link
3. Is there any differential impact of process and performance grading of schools on the learning levels of children?
4. Has CLAPS achieved its objectives?
5. What unintended outcomes might be attributable to CLAPS? Are these positive or negative?

Methods

The evaluation study adopted a non-experimental hybrid design following mixed methods by covering quantitative and qualitative approaches. To assess impact, a pre-post design with independent sample cohorts was used, as no control group was available to assess the impact of the interventions. Time series data with varied temporal interval was also used to get more evidence about the programme impact.

A stratified multi-stage random sampling was followed. The sample of the study included a wide range of respondents who were involved at various levels. A total of 375 schools were randomly selected from three regions covering 8 districts out of 40 mandals. Children studying in Class III and V were selected for the study. Qualitative data were collected from 46 schools (at least one school from each selected mandal) through interviews (children, parents and teachers), classroom observations of subject and library period. A variety of instruments were developed to collect relevant information. Focus group discussions were also organized to collect data from community members. All the instruments and achievement tests were piloted before the finalization.

Instruments

- School Schedule
- Questionnaires
- Interview Schedules
- Focus Group Discussions
- Classroom Observation Schedules
- Achievement Tests
- Field Notes

Major findings

All the major intervention components of CLAPS; namely teacher training, awareness generation, innovative activities, CBTL and home-school links were implemented as intended in the programme with marginal variations across the districts. However, the programme was not implemented as intended, as far as monitoring was concerned.

With regard to the total achievement (i.e. across all curricular areas), teacher training, innovative activities and awareness were found to be key predictors at the state level. While teacher training emerged as a key predictor for enhancing learning achievement in all curricular areas at the state level, it was a key predictor in only two districts (D2 and D6). With regard to enhancing competencies, teacher training was found to be a key predictor for at least one competency in each of the curricular areas at the state level and in five out of the eight districts (D1, D2, D3, D6 and D7).

Innovative activities were found to be a key predictor at the state level for achievement in Telugu only, and for competency attainment for only two curricular areas (Telugu C2 and EVS1 C1). At the district level, innovative activities predicted achievement in only two of the districts (D2 and D6) and competency attainment in only three districts (D2, D6 and D8).

The programme components of school grading, home-school links and monitoring were not found to contribute significantly to learning achievement or competency attainment of children at the state level and were also not key predictors for most of the districts. CBTL was not found to be a key predictor at the state or district level in any of the curricular areas for either learning achievement or competency attainment.

While analyzing the outcome findings of CLAPS it was found that the competency level of children (Percent of 'A' group children) in both the grades did not increase over a period of time as was assumed. Similarly, examination of the progress of children competency-wise at different points of time showed progress in attainment of competency but this progress was not continuous; percentage of A group children increased in the first 6 months, then decreased in 2007-08, then increased slightly again in 2008-09). Evidence suggested that over a period of time CLAPS might have impacted the achievement of children in class V (i.e., mean achievement scores increased between December 2006 and April 2009). However, scores did not increase among class III children at the state level. Impact of CLAPS was evident in the improvements in the achievement levels of children of class V in all the curricular areas in all the districts except Vizianagaram and West Godavari, where it was evident only in two curricular areas. In class III, improvement was evident in four districts only. There was also an improvement in the reading habits of children because of the availability of classroom library periods. The organisation of educational melas, Parents-Teacher Meetings and regular visits of teachers to children's homes led to improvements in home-school linkages.

Recommendations

A. Policy Planners

A number of recommendations emerging from the study for policy planners are presented below:

- Development of district-specific strategies should be considered for any learning enhancement programmes undertaken in Andhra Pradesh, as uniform strategies for all districts has not proved to be successful in the CLAPS programme.
- Strengthen existing monitoring and feedback mechanisms at the mandal and district levels:
  - Ensure adequate positioning of mandal resource persons to provide academic inputs and feedback to teachers about their classroom practices.
  - Feedback to teachers should include more on-site academic support rather than being purely supervisory, and feedback should be regular and timely.
  - Ensure schools receive regular feedback regarding how children and teachers are performing.
- Incorporate effective and useful components of CLAPS such as innovative activities, and the strategies of teacher training in future quality initiatives for elementary education. Do not include strategies not found to be effective in enhancing achievement, including competency based teaching learning and process and performance grading of schools.
- Limit the amount of non-academic/record keeping work done by teachers.
- Incorporate programme evaluation as an inbuilt and integral component in the state's plans pertaining to the quality initiatives in elementary education.
  - Ensure that authentic baseline studies are conducted at the start of innovative projects and regular monitoring data are maintained to ensure the robust evaluation of the projects.

B. For Implementers

A number of recommendations also emerged for implementers, and are presented below:

- Teachers should classify children into several different groups based on their learning levels (rather than only 'A' versus 'B' group children). However, ensure:
  - That teachers are given training about how to effectively engage these groups of children in remedial periods both for all curricular areas (rather than only Telugu and Mathematics).
  - That self-learning material is developed and available for children in order to meaningfully engage them in learning when teachers are involved with other groups.
  - That teachers provide timely formative feedback to children of all groups on a regular basis in order to improve their learning achievement.
- Develop training material and ensure sufficient training is provided to master trainers and mandal resource persons keeping in view their roles in issues of providing academic support to teachers.
- Delineate clear cut roles and responsibilities for mandal resource persons, MEOs and DIET faculty members to enable them to contribute effectively to the Learning Enhancement Programme.
- Evolve strategies to record implementation fidelity of various components.

Section 1

Introduction

SECTION 1: INTRODUCTION

1.1 Background

The Programme Evaluation study of Children's Learning Acceleration Programme for Sustainability (CLAPS) was undertaken as a participatory evaluation by the Department of Elementary Education (DEE), National Council of Educational Research and Training (NCERT), as a part of the Capacity Development Programme of SSA – Technical Cooperation Fund in collaboration with Rajiv Vidya Mission (RVM), Andhra Pradesh, a major stakeholder in the CLAPS quality initiative. Participatory evaluation for this project involved consulting with state level functionaries in identifying relevant questions, planning the evaluation design, selecting appropriate measures and data collection methods and gathering and analyzing data. This consultation with state functionaries was undertaken so that evaluation results would be useful at the state level.

The objective of the study was twofold: (i) to build capacity of NCERT faculty in the area of Programme Evaluation; and (ii) to evaluate the Children's Learning Acceleration Programme for Sustainability (CLAPS), a quality initiative of Andhra Pradesh. The study was assigned by the Ministry of Human Resource Development, Government of India (GoI) within the context of Sarva Shiksha Abhiyan.

1.1.1 The Context

Since independence, India has encountered many perplexing problems, particularly in providing free and compulsory quality education to all children of 6 to 14 years, a constitutional obligation. Keeping in view the major issues and concerns in achieving this goal, the Government of India launched a massive flagship programme, *Sarva Shiksha Abhiyan* (SSA) in a mission mode across the country. The States have implemented various measures to address areas that contribute to enhancement of the quality of elementary education. It has also been recommended in the report of 10th Joint Review Mission (JRM) by Government of India for SSA that there is a need to ensure that the various measures taken by the respective state governments are linked up together in a coherent framework to provide clear and sustained guidance to state level practitioners to achieve measurable improvement in the quality of the classroom processes and children's achievement levels. A special component of 'Learning Enhancement Programme' has been incorporated under the Elementary Education Annual Work Plans by the states and different types of interventions have been initiated based on the need and the context. In view of the growing phenomenon of state-led quality enhancement programmes, it was recommended by the JRM that the success and impact of these initiatives needed to be assessed. Since most of the interventions in India do not have an inbuilt component of programme evaluation, the extent of their success, reasons for failure and/or underachievement, sometimes may not be clear. It was also thought that programme evaluations of such initiatives would help stakeholders to strengthen future quality initiatives across the country.

1.1.2 Rationale for the Study

In Andhra Pradesh, several quality initiatives have been implemented to improve learning levels of children. Prior to CLAPS, other initiatives such as Learning Guarantee Scheme, Children's Assessment Reforms and Children's Language Improvement Programme (CLIP) were undertaken with the aim to improve the quality of primary education. All the programmes were implemented on a large scale and rolled out throughout the state across all the districts simultaneously.

The CLIP programme was implemented in the entire state from June 2005 to December 2006. In CLIP, literacy meant specific competencies of language (Telugu) including 'Reading Sentences' and Writing Words' from the lessons (dictation). For numeracy, competencies identified were addition and subtraction (2 to 5 digit numbers), multiplication and division (2 to 4 digit numbers). The number of children performing at 80% or higher level in literacy and numeracy increased from 38 % at baseline to 62% at the end of the programme. This significant improvement was attributed to the CLIP initiative. However, quality was still not addressed, since the CLIP programme focused primarily on basic competencies related to literacy and numeracy. As a response to the need for improving learning levels of children in all the curricular areas at the primary level, a comprehensive programme entitled Children's Learning Acceleration Programme for Sustainability (CLAPS) was conceptualized by the state. The programme was launched in December 2006 across the entire state at the primary level in all the government schools with its well-defined components and identified competencies (See Appendix Tables A1 & A2) in all curricular areas.

Under CLAPS, certain pedagogic components were evolved to improve children's learning levels and for effective implementation of these components certain systemic changes were made at the school level. The programme aimed to develop the professional competency of teachers, which is expected to lead to improvement in quality of primary education in the state. Over time, CLAPS evolved into a comprehensive effort towards improving the quality of elementary education. The programme was implemented in the state for almost three years, so it was thought necessary to know its effectiveness in achieving the intended outcomes.

1.1.3 Objectives of Programme Evaluation

The Children's Learning Acceleration Programme for Sustainability is being evaluated to:

- understand the CLAPS implementation in the state of Andhra Pradesh; identify specific components of CLAPS that facilitated or impeded learning levels of children;
- ascertain the impact of CLAPS as a quality improvement initiative especially on learning levels of children;
- assess the extent of achievement of the objectives of CLAPS and if there are other unplanned outcomes of the programme.

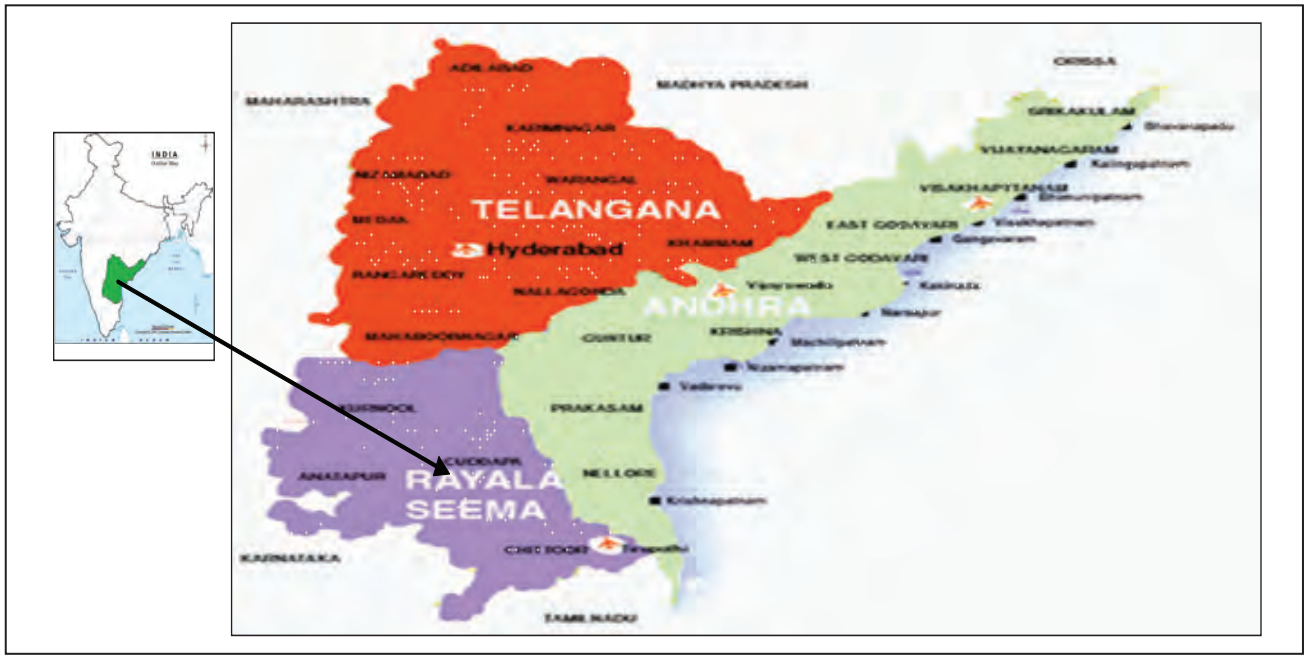
1.2 The Programme Context

The CLAPS programme is intended to be a quality improvement initiative in Andhra Pradesh under the nation-wide goal of improving the quality of elementary education.

1.2.1 Andhra Pradesh: An Overview

Andhra Pradesh is the fifth largest state in India both in terms of area and population (see Figure 1).

Figure 1: Political map of Andhra Pradesh



The state is situated in the southern part of India. Godavari and Krishna are two major rivers that pass through the state. As per the 2001 Census, it is spread over an area of 275,045 sq. km with a population of 76,210,007 (27.08 % urban; 72.92 % rural). Major languages spoken in the state are Telugu and Urdu. The state is divided into three regions (Coastal Andhra, Telangana and Rayalaseema), covering 23 districts. Coastal Andhra, Telangana and Rayalaseema cover nine, ten and four districts respectively.

Under the *Mandal Praja Parishad* System, all 23 districts are divided into 1125 mandals[1] with 31,552 villages, 22,000 Gram Panchayats[2] and 72,154 habitations[3]. The average literacy rate of the State (2001 census) was 60.47% with the literacy rate among males at 70.32% and females at 50.43%. The literacy rate of the State is lower than the national average (65.38%). Out of 23 districts, nine districts (i.e., Hyderabad, Ranga Reddy, East Godavari, West Godavari, Krishna, Guntur, Nellore, Kadapa and Chittoor) recorded a higher literacy rate than the state average. Eight out of these nine districts, barring Kadapa, also recorded a higher female literacy rate in comparison to the state's average female literacy rate.

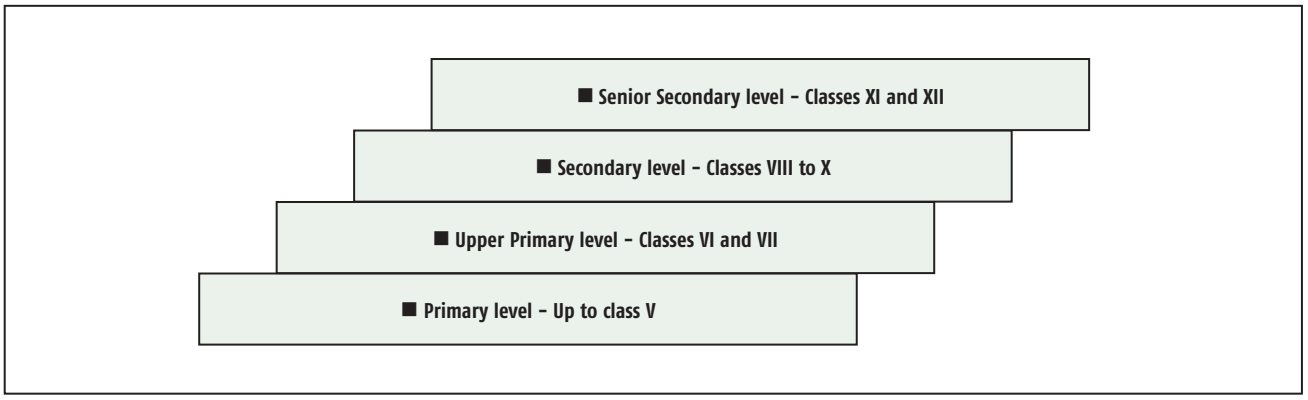
1.2.2 Elementary Education Profile

In India, 'Education' is on the concurrent list of both; the Government of India as well as the respective state governments. In partnership both the governments are expected to address the educational needs of the children between the ages of 6 to 14 years. Further, local self-governments viz., Panchayat Raj[4] Institutions in rural areas, Municipalities[5] in urban areas are entrusted with the responsibilities related to the administration of school education.

Out of a total of 74,946 habitations in the State, 71,885 habitations have access to primary level schooling within a radius of 1 km. In the 2,892 habitations, which do not have adequate numbers of children of school- age, Education Guarantee Scheme (EGS) centers have been in operation to provide access to primary level of schooling. The structure of school education[6] system in the state is as follows:

1 Administrative sub unit of a district
2 Local administrative body at the village level
3 Place of residence or settlement
4 Government by the village council
5 A political unit for local self-government
6 http://ssa.ap.nic.in/index.html

Figure 2: Structure of School Education



The total population of the children (aged 6-14 years) in Andhra Pradesh is 10,769,276, comprising of 51% boys and 49% girls. The total population of children in the age group of 6-11 years is 6,862,407, comprising of 51% boys and 49% girls. The population of children in schools in the age group of 6-11 years is 6,814,489 and the number of children out of schools is 47,918 at the state level. The number of children in schools in the age group of 11-14 years is 3,827,644, and the number of children out-of-school in this age group at the state level is 79,175. The total number of out-of-school children in the state in the age group of years 6-14 years is 127,093. The total number of children in schools in the age group 6-14 years at the state level is 10,642,183. It has been found that more girls than boys are out-of-school in the state (Source: District Profiles, APSSA, Hyderabad, 2009- 10).

The Gross Enrollment Ratio (GER) in the 6 to 11 age group is 110.56 and the Net Enrollment Ratio (NER) is 93.02. The GER indicated that children are admitted in schools and grades irrespective of their age. Repetition rates in the age groups 6-11 and 11-14 are 1.01 and 0.55 respectively. With respect to the dropout rates, a difference of 2.22 points is observed between the age groups 6-11 and 11-14. The completion rate at the State level is 84.70 and the Transition rate is 93.46 (Source: District Profiles, APSSA, Hyderabad, 2009- 10).

As per the information provided by the State Project Office for SSA, Andhra Pradesh, the total number of schools covered under CLAPS during the year 2009-10 was 66,128 out of which 27,298 were in Coastal Andhra region, 24,952 in Telangana region and 13,878 in Rayalaseema region. Data on teachers (DISE 2009-10) revealed that out of sanctioned posts of 169,159 teachers at the primary level of education, the number of posts filled is 144,429 leaving a huge gap of 24,630 unfilled teacher posts. At the upper primary level, out of the sanctioned posts of 90,077 for teachers, the number of filled posts was 79,050 leaving a gap of 11,027 teachers, which were yet to be recruited. However, during the year 2009-10 this gap was filled by employing temporary teachers, called *Vidya Volunteers*. The Vidya Volunteers are less qualified and less experienced than regular teachers. Therefore, one would expect there to be some potential differences in the teaching processes undertaken in CLAPS classrooms that are taught by trained teachers as compared to Vidya Volunteers.

The educational initiatives in the state have a long history of educational reforms especially at the elementary level. The state has continuously strived to build upon the weaknesses or shortcomings of existing programmes or schemes. The Integrated Tribal Development Agency (ITDA) was established in 1976 by the government with a mandate to plan, implement, and monitor various schemes for the overall development of tribes. From 1984 to 1995 Andhra Pradesh Primary Education Programme (APPEP) was undertaken with the assistance of Overseas Development Agency (ODA) to improve the quality of primary education. Mid-day meal scheme for nutritional support to primary education was launched in 1995 to give a boost to Universalization of Elementary Education (UEE). Nutritional Support to Primary Education (NSPE) funded by the Government of India was initiated in the state to improve enrolment and retention in primary schools.

In 1998, the Government of Andhra Pradesh enacted the Community Participation Act and formed committees for the improvement of education at various levels. In 2006, the Act was amended to enable the School Management Committees to participate in the micro planning exercise and the development of habitation based educational plans. District Primary Education Programme (DPEP) was undertaken in a phased manner in low female literary districts in 1998 onwards to provide resource support and improve primary education. A community based primary education programme (Joint GoI-UNDP) was implemented in six mandals in 1999-2003 towards the Universalization of Elementary Education (UEE) and making primary education more accessible especially to the girls and children from deprived communities and disadvantaged social groups. During the implementation of Sarva Shiksha Abhiyan (SSA), the state undertook several initiatives to improve the quality of primary education. Children's Language Improvement Programme (CLIP) and Children's Learning Acceleration Programme for Sustainability (CLAPS) were the recent initiatives intended to improve the learning levels of children at the primary level.

1.3 Description of the Programme: (CLAPS)

1.3.1 Genesis of the programme

CLAPS was a quality initiative launched in December, 2006 by the state of Andhra Pradesh in all government schools in all the districts simultaneously at the primary level (Grade I-V) to improve children's academic achievement[7] in all curricular areas (i.e., Telugu, Mathematics, EVS I and II and English as a second language). The programme was built upon the strengths and experiences gained from Children's Language Improvement Programme (CLIP). At the end of the CLIP initiative, it was expected that primary children would have acquired basic skills in literacy and numeracy. However, a more comprehensive programme was needed to accelerate children's learning levels in all curricular areas. Hence, the focus of CLAPS was on achieving higher order competencies in all curricular areas for class I to V (Appendix Tables A1 and A2). The conceptualization of the programme and capacity building of practitioners took place from September-November 2006, and the programme was launched in December 2006 in all districts simultaneously.

The objectives of the CLAPS programme were to:

- improve learning levels of children in all curricular areas viz., Telugu, Mathematics, Environmental Studies and English (second language);
- improve classroom teaching learning processes, focusing on Competency Based Teaching-Learning (CBTL), at the primary level;
- develop reading habits amongst children;
- strengthen home-school links.

1.3.2 Major Components of CLAPS

In order to launch this programme, various components were identified covering all aspects of primary education, i.e., planning, implementation and monitoring to achieve the objectives of CLAPS. The specific components of the CLAPS programme are as described below.

7 Expected achievement level means 80% and above

1.3.2.1 In Service Teacher Training

Under the CLAPS programme, there were four main training modules.

- Module I for Teaching Subjects (Telugu, EVS, Mathematics);
- Module II for Innovative activities-A
- Module III for Innovative activities-B
- Module IV as Teacher Handbook.

An on-going training programme for all the teachers in government schools was planned so as to develop subject-specific core competencies amongst children. Training of the teachers was perceived to be an important input under CLAPS and arrangements were made for regular training of teachers at the mandal and district level across all the districts in the State. The training was imparted in a cascade mode with participatory approach. Under cascade model, members of the District Resource Groups (DRGs) and district level officials, were trained by the State Core group who in turn trained the mandal level officials including Mandal Resource Persons (MRPs) and Mandal Education Officers (MEOs). Training of teachers was primarily provided by the mandal level personnel. The training methodology was kept largely participatory by providing opportunities to the trainees to interact with the trainers.

Creating awareness about CLAPS was another major component of CLAPS training intervention and numerous training sessions were organized to develop broad understanding about CLAPS implementation amongst teachers and field functionaries working at the field level. Training materials for the above inputs were developed in advance in order to ensure that the training focus remains uniform throughout the state. This material was developed with the help of state pedagogy unit of SSA, SCERT, DIETs and members of the District Resource Groups. All the training modules were prepared in Telugu.

According to the programme strategy, Mandal level officers, including mandal resource persons (MRPs) and mandal education officers (MEOs) were responsible for providing regular training to teachers including hands-on-experience, on-site support and follow-up.

1.3.2.2 Competency Based Teaching Learning (CBTL)

In CLAPS subject-wise specific core competencies were identified for assessing at the end of each class. In each curricular area, two core competencies were identified called competency-1 and competency-2. The details of competencies have been given in the Appendix Tables A1 and A2. One extra period each for curricular area, i.e., Telugu and Mathematics, was allocated in the daily timetable along with regular periods to provide remedial measures to those children who could not attain competencies up to 80% levels.

1.3.2.3 Innovative Activities

In order to improve the learning environment in the classrooms and schools, certain innovative activities were introduced under CLAPS. The purpose was to generate interest amongst children and teachers, which were expected to lead to the enhancement of children's participation in the learning processes within the classrooms.

- Classroom Libraries were set up in all classrooms from classes I- V with the aim of developing reading habits amongst children and make them independent motivated readers. Weeklong library festivals were organized in all the habitations. Age appropriate reading materials and books were collected from the community and classroom libraries were established. One extra period daily was provided in the school time table for library reading for all the primary classes.
- Another innovative activity called the Wall magazine was established to develop literary skills amongst school children. Children were encouraged to write stories, poems, self-experience and collect important information

from various sources which were then displayed on the walls of the classrooms. These pieces of work were later bound together in the form of a magazine called the 'Children's Magazine' and used as a library reference.

- School post-box was introduced as a medium for the children to express freely their feelings/complaints/ suggestions, etc. in order to reduce the gap between school and children. The post-box was opened once in a week and children's voices were heard and issues were addressed at the school level.
- Several organizations, or educational melas,[8] like Vigyan Mela, Language Mela, TLM Mela and Metric Mela were also incorporated in this programme to provide hands-on experience to children and develop home-school links. These melas were organized at village, mandal, district and state level on a regular basis.

1.3.2.4 Performance and Process Grading of Schools

All CLAPS schools were given performance and process grades to help develop motivation amongst teachers and to improve school functioning. The performance grades (i.e., A, B, C or D) were assigned to schools by the supervisor/ monitoring officer during their monthly visits on the basis of the number of children securing 80% or above in total competencies (defined under CLAPS). Process grades (i.e., 0, 1, 2 or 3 stars) were supposed to be assigned by the monitoring officers quarterly on the basis of school process indicators (see Appendix Table A3 for indicators of school functioning). However, during school visits by the evaluation team members, field investigators, field supervisors and district coordinators, head teachers of sampled schools indicated that they were authorised by respective monitoring officers to decide the process grade for their schools as the purpose of assigning the grade was improvement by the school itself. It is possible that this created a bias in the assignment of process grades.

- The schools were given performance grades as A, B, C and D based on the learning performance of children in different curricular areas in the school. The performance grades were assigned to the schools by multiplying the total number of 'A' group children studying in the school with 100 and number of competencies to be attained in all the curricular areas and then dividing the product by total number of children enrolled in the school. If the calculated value was 80% and above, the school was assigned grade A, for 60-79%, grade B, grade C for 50-59% and if it was less than 49% then the schools were graded as grade D.
- For assigning process grades to the school, twenty six process indicators[9] were identified, which were thought to be an essential to make schools functional and effective over a period of time. These indicators were grouped into three categories called A, B and C. The category 'A' consisted of 12 indicators, category 'B', 8 indicators and category 'C' covered 6 indicators. A school received one star on implementation of all 12 indicators of category A, two stars if a school accomplished all the indicators of Category A and B (total 20 indicators) and three stars were given when school successfully implemented all 26 indicators of categories A, B and C.

1.3.2.5 Establishing and Strengthening the Monitoring Mechanism

An important component under CLAPS was establishment of an effective mechanism for monitoring of CLAPS activities from school level to the district level. The major aspects covered were competency attainment level of children, learning achievement in each curricular area and other activities of CLAPS particularly innovative ones and difficulties faced if any. At the school level, all the teachers, head teacher, and CRCCs discussed the progress in monthly meetings organized by the Head Teacher. Block resource persons and Block Education Officers also monitored the school activities. The progress and feedback of monitoring by the BRCCs was also shared in monthly meetings organized at the cluster level. These meetings were attended by the Head teachers, CRCCs and BRCCs. The prime purposes of these monitoring meetings were to:

8 Mela means a fair, in this instance there is a reference to "educational fair" organized for students to demonstrate for the parents and community members to create awareness and show case activities of schools

9 Appendix Table A3

1. Identify the learning gaps/problems in attaining competencies.
2. Share success stories, innovations and administrative problems.

For close monitoring and smooth administration, mandals were distributed amongst various District Institutes of Education and Training (DIETs). Members of the State Resource Groups and officials of the State Project Office (SPO) were responsible for monitoring at the district level. The focus was primarily to monitor the children's learning levels in all curricular areas in addition to other dimensions related to the administration and educational issues. DIET level monitoring was undertaken quarterly by visiting schools and discussing children's achievement and attainment of competencies with block level coordinators.

1.3.2.6 Community Mobilization and Home- School Links

Several initiatives were undertaken to involve the community in the educational processes of children. School Management Committee (SMC)/Village Education Committee (VEC), Academic Monitoring Committee (AMC) were formed and members of these committees were orientated through specially developed manuals. Monthly Review Meetings were organised in the schools to share concerns related to children's performance.

1.4 Programme Logic Model

The Programme Logic Model (PLM) provided the overall logic for the CLAPS initiative (Appendix Table A4). Assumptions of the CLAPS programme and links to program theory include:

- Well implemented teacher training, including appropriate training modules and materials and training design, will churn out more competent and skilled teachers. These teachers will exhibit improved pedagogical practices in the classroom transaction in different curricular areas. Improved pedagogical practices undertaken by well trained teachers will contribute to improvements in children's core competencies and achievement in all curricular areas (i.e., Telugu, Mathematics and EVS).
- If teachers are aware of CLAPS objectives and procedures, then they are more likely to implement the CLAPS programme the way it was intended.
- Classroom processes which are driven by competency based teaching learning practices will increase the number of 'A' graders/ high achievers in classes. Implementation of competency based teaching learning processes is, therefore, likely to lead to improvement in attainment of competencies by children in all curricular areas (Telugu, Mathematics, EVS).
- Innovative activities such as post box, wall magazines and classroom libraries will provide more opportunities for children to read in the classroom. Having interesting reading materials readily available to children will motivate them to read more and share with the peer group. When children have more practice reading, they have a greater chance of improving the reading abilities and thus in turn improve their language competencies.
- Allocation of one period each of remedial teaching for language and mathematics in the school time table will help those children who are lagging behind in attaining competencies through peer learning and teachers' inputs. This would help the teachers to provide timely remedial teaching. Motivated by increased level of attainment of competencies these children are likely to display greater participation, enthusiasm, self-confidence, self-esteem and engagement in classroom activities which, in turn, is expected to lead to improvements in these children's competencies in all the curricular areas (Telugu, Mathematics, and EVS).
- The introduction of school performance grading is expected to encourage schools to take measures to improve children's learning achievement in all curricular areas (Telugu, Mathematics, and EVS) in all classes at the primary level. A facilitating factor for improving children's academic performance is to improve school processes.

Therefore, the introduction of school process grading is expected to encourage schools to improve their performance on these indicators.

- An improvement in monitoring and review activities with the use of well-designed monitoring formats, formation of monitoring teams and execution of monitoring plans at various levels, is expected to motivate schools to improve the overall functioning and learning achievement of children. Therefore, it can be expected that two star schools will aspire to become three star schools and B grade schools will want to become 'A' grade schools.
- Strategies such as forming school management and academic monitoring committees, orienting community members, organization of monthly review meetings by community in schools and demonstration of children's performance to parents are more likely to increase parents' participation in school functioning. In situations where the school community partnership is strong, parents are expected to not just willingly send their children to the schools in which CLAPS has been initiated but also provide the support necessary for their children to succeed in classrooms. Teachers and stakeholders are also likely to root for a programme which they believe has caught the general public's attention and garnered support from the community.

Before developing the PLM, two field visits were organized by the team members to get a feel of the actual field implementation of CLAPS activities. The PLM was developed after a series of meetings, informal interactions with the stakeholders working at various levels. Meetings with stakeholders helped in:

- developing broad understanding of the programme, its need, objectives, components and strategies;
- understanding how the programme was perceived by different educational functionaries;
- collecting relevant information –baseline data, time series data, training materials, etc.;
- getting an opportunity to interact with various stakeholders involved in the programme.

Interactions with the state partners helped the team to sequence and detail out various components of each, clarifying the short term and long-term outputs and outcomes of the programme. This interactive exercise helped the team to evolve a more credible, transparent, responsive and need-based evaluation plan. The PLM was developed using a 'participatory approach'. It outlines the inputs, outputs and outcomes of the CLAPS interventions.The major stakeholders in evaluation included MHRD and State government of Andhra Pradesh. It is expected that this evaluation will be useful for the MHRD, Government of India and the respective state government to derive lessons to improve dimensions and implementation of such programmes in future.

1.5 Evaluation Questions

Through discussions between the primary stakeholders, planners and implementers, and the members of the evaluation team, the evaluation questions were developed and organised logically. The evaluation study aims to understand the quality of the implementation as well as the effectiveness of the programme. The evaluation questions were as follows:

1. Has CLAPS been implemented as intended? If not, why not?
2. To what extent the following programme components facilitated or impeded the learning levels of children?
    - Teacher Training
    - Awareness about 'CLAPS'
    - Competency Based Teaching Learning
    - Innovative Activities

- Process Grading and Performance Grading
- Monitoring Mechanism
- Home-School Link

3. Is there any differential impact of process and performance grading of schools on the learning levels of children?
4. Has CLAPS achieved the following objectives?
   - Improvement in the learning levels of children in all curricular areas.
   - Improvement in the classroom teaching learning processes, focusing on Competency Based Teaching-Learning (CBTL), at the primary level
   - Development of reading habits amongst children
   - Strengthening of home-school links
5. What unintended outcomes might be attributable to CLAPS? Are these positive or negative?

1.6 Organization of the Report

This report contains four sections and three sections of appendices. The contents of each section are briefly described below:

Section one – The section one outlines the context, background and rationale of the study. It also presents the description of CLAPS, its components, programme logic model, and evaluation questions.

Section two – This section describes the specific methodological features of the programme evaluation study, i.e., the evaluation framework, research design, sample, description of instruments and achievement tests, data collection procedures, methods of data analysis and statistical procedures and interpretation.

Section three – This section presents the results of the study and has five sub-sections. Each sub-section presents the results of a specific evaluation question. Each sub-section begins by presenting an overview of the data used. Results are presented first at the state level followed by district level analysis at certain places. The section ends with a summary of key findings, which have been organized evaluation question wise.

Section four – This section presents a summary of the findings and limitations of the study. Discussion on each evaluation question is presented which is followed by a thematic discussion on the programme components. Policy implications and recommendations are presented along with major issues and challenges.

Section 2

Methods

SECTION 2: METHODS

This section outlines the evaluation design, evaluation framework, sample, instrumentation and data sources, data collection procedures, approaches for data processing and analysis and various steps for ensuring data quality.

2.1 Evaluation Design

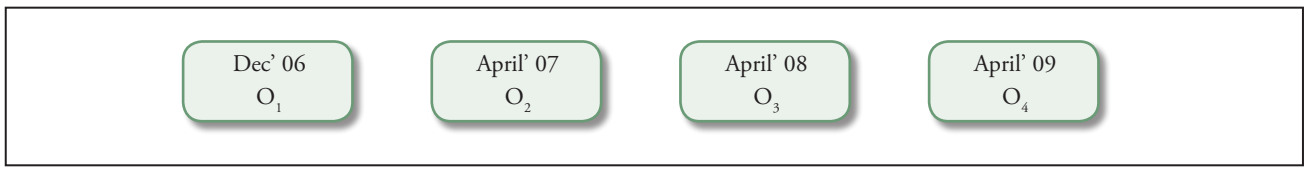
The evaluation study is centered on the five evaluation questions pertaining to implementation (process), relationship (process – outcome) and impact (outcome) of CLAPS on the learning achievements of the children. A non-experimental hybrid evaluation design was followed using mixed methods (both quantitative and qualitative) to explore the impact of CLAPS.

2.1.1 Baseline (Cohort I) - End point (Cohort II) Comparison

Since CLAPS was implemented simultaneously in all the districts covering government schools and there was no control group, ***a pre-post design with independent sample cohorts*** was used to assess the impact of CLAPS. For children in Class III and V at the time of data collection, baseline data from December 2006 on learning achievement were available in the state and were compared to data obtained through achievement tests (end point) administered by the evaluation team in February-March, 2010.

2.1.2 Time Series Design

In CLAPS, children were continuously assessed and their performance/progress was recorded in the school records. The data on monthly progress of children in three curricular areas; Mathematics, Telugu and EVS were also available in the schools. The outcomes with respect to the learning achievement were assessed through the children's achievement data over the years. For children in Class V at the time of data collection for this study, time series data with varied intervals were available and used for examining the improvement in the learning achievements of the children. Variation during first six months of programme implementation and further at one year interval were determined in order to understand the progress of learning achievements of children and the sustainability of gains as CLAPS intended to accelerate learning for sustainability. The time series design is depicted below:



In the above time series design O_1 to O_4 are observations of learning achievement of children in a temporal sequence where O_1 was baseline data, and X represents introduction of the CLAPS program.

2.2 Evaluation Framework

The evaluation design and methods used in this programme evaluation emerged through a collaborative process with the involvement of team members and national and international experts. A broad outline of the evaluation framework was evolved based on the programme logic model and the discussion with the stakeholders and members

of the team. Discussion was held with the stakeholders and other interest groups on reliable data sources and methods for collecting data for each evaluation question. Based on the suggestions and comments, a draft proposal was developed by the evaluation team, which was modified and revised based on the observations and suggestions of the national and international experts. The evaluation framework (Appendix Table B1) outlines each evaluation question with the indicators, data sources and methods. The instruments for data collection were developed based on the evaluation framework.

2.3 Sample

CLAPS was implemented by the state in all government schools (66,128), covering 23 districts of three regions. In order to evaluate the programme objectively, it was essential to draw an appropriate sample which was representative of the population and on the basis of which some generalizations could be made about the implementation and impact of the programme.

A stratified multi-stage random sampling procedure was followed to select the districts, mandals and schools. The basic criterion for drawing the sample at the district level was the female literacy rate as per the Census Report 2001 (Appendix Table B2).

In order to have a representative sample from the state, districts from all three regions were selected. Since Coastal Andhra and Telangana regions have more districts, three districts each from Coastal Andhra and Telangana and two districts from Rayalaseema were randomly selected for the sample. In the 8 selected districts, there were a total of 477 mandals, which included 417 rural and 60 urban mandals. In order to have optimal representation, 40 mandals (8 to 10 percent of the total) were selected for the sample. Since the number of urban mandals was quite low as compared to rural mandals, one mandal each was randomly selected from the list of urban mandals of the selected districts. The rural mandals were proportionately selected from each of the district. Finally, 32 rural and 8 urban mandals were selected. (Appendix Table B3). School was considered as the 'unit of analyses for the evaluation study. 375 schools were proportionately selected from all the three regions, 153 from Coastal Andhra, 141 from Telangana and 81 from Rayalaseema regions. Schools were selected proportionately based on their process grades; 'One star', 'Two star', 'Three star' and 'No star'. The final sample for the study has been given below in Table 1.

Table 1: Sample for the Study

Name of the Region	Name of the district	Total number of mandals in the district		Number of selected mandals		Number of selected schools	
		Rural	Urban	Rural	Urban	Rural	Urban
Rayalaseema	Anantapur	63	8	5	1	38	3
	Chittoor	66	11	5	1	37	3
Total	2	129	19	10	2	75	6
Telangana	Karimnagar	57	5	4	1	45	6
	Khammam	46	7	3	1	35	5
	Nalgonda	59	9	4	1	46	4
Total	3	162	21	11	3	126	15
Coastal Andhra	Nellore	46	3	4	1	51	4
	Vizianagaram	34	9	3	1	39	4
	West Godavari	46	8	4	1	51	4
Total	3	126	20	11	3	141	12
		417	**60**	**32**	**8**	**342**	**33**
Grand Total	8	**477**		**40**		**375**	

A region wise distribution of sample schools is provided in Appendix Table B4. Out of the total sample, a sub-sample of 46 schools was chosen for the collection of qualitative data. In the present study, initially 40 schools were selected for detailed in-depth study. The rationale of identifying 40 schools was to select at least one school from each of the selected mandal (40 mandals). Due to political disturbances in the state during the data collection period, in some schools only a few teachers and children were present. In such mandals some new schools of similar categories were added to the sub sample.

2.4 Instrumentation and Procedures

In order to find out the answers of evaluation questions, various sources were used by using different kinds of instruments. Primary and secondary data sources were used. A variety of instruments such as questionnaires, interview schedules, observation schedules, focus group discussions and achievement tests were developed to collect the relevant data. The primary data were collected from teachers, parents, children, MEOs, MRPs and state and district personnel. The secondary data sources were school records, achievement records of children of classes III and V (Baseline data), important documents and training modules. The process of development and details of each instrument are described in the following pages.

2.4.1 Process of Development of Instruments

Data-collection instruments used in this study have been given in Table 2.

Table 2: Instruments used in the Study

Nature of Instrument	Category of respondents
School Schedule	• Head Teacher and school records
Questionnaires	• Teachers • Mandal Resource Persons (MRPs)
Interview Schedules	• Teachers • Parents • Children. • Mandal Education Officer (MEOs) • DIET faculty • State level SSA functionaries
Observation schedule	• Classroom observation (Telugu, Mathematics, EVS) for classes III & V • Classroom library period (class III and class V)
Focus Group Discussion	• Community
Achievement Tests (Written)	• Mathematics Class III children • Mathematics Class V children • Telugu Class III children • Telugu Class V children • EVS Class III children • EVS Class V children
Achievement Tests (Oral)	• Oral Test Mathematics Class III children • Oral Test Mathematics Class V children • Oral Test Telugu Class III children • Oral Test Telugu Class V children

The instruments were developed by the evaluation team along with the state representatives and experts in this area.

All the instruments were developed in a workshop mode. The Telugu versions of instruments were prepared with the involvement of local teachers and language experts from the state. Instruments were reviewed for translation by experts who had good knowledge of Telugu and English language. Initially all the instruments were developed in English and then translated into Telugu language. The items, structure and content of each instrument was reviewed by the experts, who had rich experience in educational research and programme evaluation. The instruments were further reviewed for coherence and comprehensiveness by the national and international experts on the following aspects:

- Content of the items – terminology used across the items, etc.
- Language of the items – vocabulary, punctuation, structure, etc.
- Format – font size, layout, font name, etc.

All the suggestions were incorporated in the final version of the instruments. The achievement tests were developed for three curricular areas namely Telugu, Mathematics and Environmental Studies I and II. Although it was envisaged that CLAPS would cover both primary (I to V) and upper primary stage (VI-VII), it was actually implemented only at the primary level because of certain administrative reasons in the state. For this study data were collected from class III and V children. At first, blue prints for all the achievement tests for classes III and V were prepared keeping in view the nature of baseline tests in all the curricular areas. The test items were developed with the involvement of subject experts and teachers from the state who were involved in the development of baseline tests. The tests were constructed in English for Mathematics and EVS and later translated into Telugu. The tests were developed by the same team for the Telugu language.

2.4.2 Description and Administration of Achievement Tests and Instruments

The items in the instruments were organized into different themes and sub themes according to the programme components. The cover page of each instrument had clear instructions for the field investigators to maintain uniformity in data collection procedures. Each instrument also included a general section outlining the purpose of the instrument and allowing space for the filling up of different code numbers, date(s) and timings, name of field investigator, etc. The instruments developed for collection of primary data and corresponding data are described below:

2.4.2.1 Achievement Tests

The achievement tests in core curricular areas were developed for classes III and V to address the outcome related question, focusing on the impact of the CLAPS intervention. The structure and nature of the tests were based on CLAPS competencies identified for each curricular area and were comparable to the baseline tests conducted by the state. The tests were developed by the subject specialists who were involved in the development of baseline tests of CLAPS in the state. In Mathematics and Telugu achievement tests, there were two sections-section A and B. Items of section A were based on CLAPS competencies while test items of section B were syllabus based for respective classes. The rationale for keeping section B was to ascertain the overall improvement in achievement of children in concerned curricular areas as one of the expectations from CLAPS was to improve subject core competencies so as to improve the overall achievement levels of children. The analysis of achievement tests was carried out separately both for competencies and overall achievement of children.

The tests were administered to all children (up to 30) present in Classes III and V. Whenever there were more than 30 children in a class, a random selection[10] of 30 children occurred. Oral tests were administered in Telugu

10 Randomization occurred by using a random number table by Field Supervisors (FSs) during data collection.

and Mathematic subjects on five randomly selected children from the selected classes. Achievement tests were administered on 3823 class III children and 4415 class V children of selected districts.

2.4.2.2 School Schedule

This instrument was used to capture critical school-based information from the head-teacher and the school records covering primary and secondary data sources. The school schedule had seven sections covering information/data related to positioning of teachers, enrolment of children, teaching learning time and systemic reforms under CLAPS; innovative activities; remedial teaching; Academic Monitoring Committee Meeting and other specific information related to the school. Field investigators collected information/data from all the 375 sample schools.

2.4.2.3 Questionnaires

Separate questionnaires were developed for the teachers and the mandal resource persons (MRPs).The teacher-questionnaire was divided into six sections covering the broad areas of teacher-training, awareness, teacher competence, school level activities, programme components that facilitated or impeded the programme outcomes and unintended outcomes. All items except two questions were closed-ended with a 3 to 5 point rating scale. This instrument was administered by field investigators to teachers in all 375 schools. Two teachers each from classes III and V from each selected school were chosen. In total, 715 teachers responded to the Teacher Questionnaire. The reliability of teacher questionnaire was computed using Cronbach's alpha as shown in Table 3.

Table 3: Reliability of Teacher Questionnaire (TQ)

Scale (number of items)	Alpha Reliability (Number of teachers= 715)
Teacher Training (12)	0.97
Competency Based Teaching Learning (8)	0.94
Awareness about programme (12)	0.94
Innovations (4)	0.92
School Grading (3)	0.91
Monitoring Mechanism (2)	0.88

Data were also collected from 81 MRPs through questionnaire on their involvement in implementing CLAPS. The questionnaire contained 29 items, out of which all were closed items except one. The items were mainly related to teachers/MRPs trainings and impact of the CLAPS.

2.4.2.4 Interviews

Six interview schedules were developed, one each for teachers, children, parents Mandal Education Officers, DIET and state level officials.

A. Teachers

The purpose of the teacher's interview schedule was to collect qualitative in-depth information on the implementation of CLAPS from class III and V teachers of the sub-sample of 46 schools. The broad themes were CLAPS implementation in classrooms and teacher trainings. Clinical approach was followed and about one hour was required for each interview. In all 168 teachers were interviewed after taking their consent.

B. Children

The interview schedule for children contained two sections and total of 33 items. Section A included 13 items covering general information related to school and personal details of the child, while section B covered 20 items seeking opinions of children on issues related to school activities such as arrangement of two periods for Mathematics and Telugu, relationship between teachers and parents, teachers' behavior, etc. Information was collected from two children each from class III and class V of the sub sample schools. A total of 346 children were interviewed by the Field Investigators. The children were selected randomly with the help of table of random numbers to ensure objectivity in the selection. It was also ensured that children were not under pressure and they were comfortable while interviewing. Individual approach was followed to take the interview of a child. In all, 40 minutes per child was required.

C. Parents/VEC Members

An interview schedule was developed to collect in-depth information from parents/VEC members on various issues related to CLAPS. The instrument was divided into two sections, section A included 15 items related to general information and section B comprised of 22 items related to specific information about CLAPS. A total of 347 parents responded to this schedule. They were interviewed once their consent had been taken from.

D. MEO

The MEO interview schedule was divided into three sections, Section A on general information; Section B on perceptions of MEOs about CLAPS; and Section C on the implementation of CLAPS at Mandal level. This instrument was administered by field supervisors on 38 Mandal Education Officers and one hour was devoted for each interview once their consent was taken.

E. DIET faculty /District Project Officials

Lastly an interview schedule was prepared for the DIET faculty /District Project Officials. This schedule contained 29 items and was administered by the district coordinators and evaluation team members on 28 district level officials.

F. State Level Officials

Six officials at the state level were also interviewed by the evaluation team members, covering State Project Director, Ex-State Project Director, Pedagogy Coordinator and other state officials working in this area. In all, fourteen items were prepared covering various aspects of CLAPS related to planning, implementation and monitoring of CLAPS.

2.4.2.5 Observation Schedules

Two types of classroom observation schedules were developed. The first kind of schedule was developed for observation of classroom processes in three subjects in classes III and V. The observation time for this schedule was 60 minutes and observation was conducted during teaching learning time as provided in the school time table for the concerned subjects. The aspects to be observed included classroom environment, innovative activities, classroom processes/ transactions and remedial teaching. The second schedule was used for observation of library period in the same classes. Both the instruments were administered in the sub-sample schools and the field investigators collected the information. The observation time was 30 minutes.

2.4.2.6 Focus Group Discussion

The Focus Group Discussions (FGD) were conducted by the District Coordinators along with the Field supervisors. Two focus group discussions were held per district with a total of 18 FGDs in all. A cross section of people including women from the community, parents and a few members of AMC were invited to participate in the FGDs. In order to encourage participants to express their honest opinions, it was ensured that school staff members were not present during the Focus Group Discussions. The language used during the FGDS was Telugu to facilitate free expressions by the members. Members were informed in advance about the FGD and their consent was obtained. The views expressed were noted down by the field staff in Telugu in the field notes and later on transcribed in English.

2.4.2.7 Rating Scale

The modules developed by the state for teacher training programmes were reviewed in a workshop by experts on a five point rating scale, ranging from 'below average' to 'excellent' on physical features and contents of the modules. Apart from this, the materials were also analysed by the team members and experts keeping in view the objectives of the CLAPS programme.

2.5 Data Collection Procedures

This section briefly describes the process of selection of field staff, development of material for field staff, orientation programme for master trainers, training of field staff, process of data collection, monitoring of data collection, instrument distribution and collection procedures and data management in the field. The details of each component are given below:

2.5.1 Process of selection of field staff

Given the sample size of the study, 156 persons, including field investigators, field supervisors and District Coordinators were appointed for data collection. Selection criteria for each post was framed and advertised in the State newspapers. The selection of field staff was done at the respective sample district. Finally, 132 field investigators, 16 field supervisors (two per district) and 8 district coordinators (one per district) were appointed. An experienced team of qualified professionals was recruited as field staff through a transparent selection and recruitment process. The selected field investigators had at least an undergraduate degree and the field supervisors, district coordinators; state research officer and state research coordinator were post-graduates with experience in educational research.

2.5.2 Development of Material for Field Staff

The following training materials were developed for the field staff:

A. Training manual for master trainers

The training manual was prepared to develop a broad understanding amongst the master trainers on the major components of CLAPS, specific methodology related to the study and major issues and guidelines for administration of instruments and achievement tests. The training manual also included mock exercises for field functionaries and the role of functionaries during data collection.

B. Field Handbook for field staff

The field handbook contained detailed guidelines for the field staff on the administration of different instruments and achievement tests. It comprised of ten sections covering all the aspects of data collection process.

C. Field Notes for field staff

The field notes were divided into four sections containing information on the different types and methods for data collection from the field. It also had provision of tables to fill in secondary data viz. baseline, time series data, school based results, etc. and space for writing field summaries.

2.5.3 Orientation Programme for Master Trainers and Training of Field Staff

A training manual was prepared for the master trainers to provide eight days of rigorous and uniform training to all field staff. The training sessions were participatory in nature and included hands-on-experiences, discussion and interactions between trainers and trainees to thrash out the apparent issues and challenges in administering the instruments.

A 3-day orientation programme was organized for master trainers to discuss the data collection procedures and administration of different instruments in the field. Training of field staff was held at Khammam, Visakhapatnam and Tirupathi. The training programme was a mix of theoretical inputs and hands-on-experience of using the instruments in the field. Technical sessions were followed by three days of field training. Visits were made by the field staff to previously identified schools in groups of three for actual data collection. The schools for pilot study were selected from the district which was not part of the sample for the main survey, and the results from the pilot study were not factored in the main survey results. Resource persons guided this activity and at the end, two days were devoted to discuss the experiences of field investigators and the areas where they faced difficulty in using the instruments. The data collection plans were revised based on the reflection of the investigators' field experiences and critical inputs followed by discussions on instrument distribution plans with the field staff.

2.5.4 Process of Data Collection

Data were collected from the sample and sub-sample schools in two cycles of data collection. In the first cycle, in-depth data were collected from the sub-sample schools and subsequently from the rest of the sampled schools. School-level data were collected by the field investigators (FIs) under the supervision of field supervisors (FS). Mandal-level data from MRPs and MEOs was collected by field supervisors, which was observed and monitored by district coordinators. State coordinators collected the district-level data, and state-level interviews were conducted by the team members. The details of data, as collected, have been provided in Appendix Table B6.

2.5.5 Monitoring of Data Collection

Monitoring occurred at different stages of data collection in order to:

- facilitate the field staff in collecting authentic, reliable data from the field. This was done in the beginning phase of monitoring.
- ensure quality of data by conducting sample checks (up to 5% of the total data) in all the sample districts.
- provide support to deal with the difficulties and manage the work if any unforeseen problems were encountered in the field.

A team was constituted at the national level to monitor each phase of data collection. The team members were oriented on how to monitor through some mock exercises. Members of the national team along with the Research Coordinator and the Research Officer, appointed at the state level visited all the selected districts and mandals to observe the data collection. In addition, district coordinators and field supervisors also monitored the data collection.

2.6 Data Processing and Analysis

Before the data processing and analysis, collected data were manually checked by the field investigators and then by field supervisors at the school level. The mandal and district-level data were checked by the field supervisors.

In order to ensure correct handling and identification of data, unique identification codes were stamped on each of the instruments and achievement tests. After data collection, all instruments and achievement tests were classified in various bundled categories and manually checked in order to ensure systematic organisation of data. Primary data were then entered into excel sheets by the field investigators and later on these sheets were converted to SPSS sheets for further analysis by the specialists. During the data processing, data were checked and cleaned for accuracy and improved data quality. Wherever necessary, the data were compared with the manual entries and missing entries were also resolved.

Data were analyzed state and district-wise. In some cases, results were also scrutinized keeping in mind the urban – rural divide. However, while answering the research questions only state and district-level data were used. State-level data were used as it was expected that it would help to depict the overall improvement and impact of CLAPS. As the districts are the functional unit of governance in the state, the data collected from these selected districts was expected to play an instrumental role in taking timely corrective measures.

A. Qualitative Data Analysis

Qualitative data from interviews, focus groups, and observations were collected in Telugu. Evaluation Team Members who were proficient in Telugu and English translated this data into English. Then, during a 4-day workshop, evaluation team members and state stakeholders read these transcripts and highlighted recurring themes assigning them a “code”. A coding manual was developed and distributed to district coordinators, field supervisors, and field investigators at three places in the state. Under the supervision of evaluation team members, district coordinators, field supervisors, and field investigators used the coding manual to code all qualitative responses for the districts assigned to them. The codes were then entered on the hard copies of the instruments to facilitate the data entry process. Subsequently, the codes were analysed using quantitative techniques. Some verbatim quotes were used to support the quantitative data in answering the evaluation questions.

B. Quantitative Data Analysis

All results were analyzed at the state and district level. State level results were important to depict the overall impact of CLAPS. The district-level results were intended to help the state identify where to take corrective measures in a timely manner as districts are the functional unit and have governance in the state. In some cases, rural and urban analyses were undertaken because state stakeholders were interested in this.

The questionnaires consisted of various variables for which composite variables were calculated. Each composite variable was in the form of a scale consisting of several items. In order to determine the internal consistency,

Cronbach's coefficient alpha was calculated for the composite variables. The composite variables and their values were acceptable in all cases.

Achievement tests were scored manually at the district level with the help of a scoring key. To ensure accuracy, answer scripts of achievement tests were evaluated again by a different district team. Marks were first entered into manual scoring sheets and then entered electronically. Computerised entries were in turn verified with the manual scoring sheets. Computerized baseline and time series data were similarly compared with manual sheets.

The data for evaluation question 1 regarding programme implementation was analysed using descriptive statistics. Means, standard deviations, frequencies and percentages were computed to understand the nature of the different distributions using different data sets.

A linear regression analysis was carried out to determine the programme components that facilitated the learning achievement of children (relational research question 2). The dependent variables in linear regression analysis were the achievement scores and the accomplishment levels for specific competencies in different curricular areas. Programme components were the independent variables.

In order to know the relationship between process and performance grading of schools (research question 3), deviation scores for process and performance grades were computed for each school by subtracting their respective scores of 2008-09 from that of scores of 2007-08. Differential impact of process and performance grading of schools on learning achievement of children in Language, Mathematics and EVS I and II for class V was computed by using Pearson's correlation.

In order to understand whether CLAPS had any impact on the improvement of achievement levels (research question 4) in Telugu (language), Mathematics and EVS, significance of difference of means between baseline and endpoint achievement scores were computed. In order to find out the impact of CLAPS on the improvement of competencies, Chi-Square test was employed between baseline and endpoint data on CLAPS competencies. Multivariate ANOVA was carried out to ascertain the main and interaction effects of group and locale on criterion variables achievement in Telugu, Mathematics, EVS I and EVS II. Further, to investigate the performance of children over time, repeated measures ANOVA was carried out on achievement scores of time series data.

2.7 Data Quality

All efforts were made in the present study to maintain a high level of data quality. The evaluation team involved different stakeholders of the programme at the relevant stages throughout the study period. The evaluation itself was conducted in a participatory manner with an engaged involvement of members from the State Project Office of SSA and Institute of Advanced Studies in Education (IASE) State Council of Educational Research and Training (SCERT). At the preparatory and planning stage, various meetings were organised with the State officials to understand the programme and for developing the programme logic model, evaluation framework, evaluation questions, sampling procedures etc.

Quantitative and qualitative methods were used to respond to the evaluation questions in a meaningful manner. Data were collected from a cross section of sources and the respondents included teachers, head teachers, children, parents, community members, mandal, district and state level functionaries. Prior to collection of the data from respondents, consent was taken from them. Assurance of confidentiality was given to the participants.

A wide range of instruments were developed to elicit the rich and comprehensive data. A variety of instruments were used to collect qualitative and quantitative data. On each instrument, specific details were given for collecting general information. Likewise, specific details were focused upon while developing the instruments. The items of these instruments covered a wide range of content matching with the evaluation questions. All the instruments were reviewed by national and international experts. Therefore, instruments were first prepared in English and later translated into Telugu by local experts.

2.8 Pilot Testing

The instruments and achievement tests were pilot-tested on a sample in different districts following similar criteria for selection as the main sample. A team of four members visited two districts (i.e., Ranga Reddy and Mahabubnagar), which were not in the main sample for the study. As part of the field tryout, it was decided that the team would visit the sample schools for the first two days and the instruments would be revised on the third day based on these experiences. The items which did not function well in the field trial were removed from the instruments. The revised instruments were reviewed by the subject and measurement specialists.

In order to ensure data quality during the data collection process, comprehensive training materials were developed for the field staff. Field handbook and field notes with clear and valid instructions were prepared in Telugu and in English for field staff. During the data collection phase, a rigorous monitoring mechanism was put in place to maintain objectivity in the process.

The coverage of the sample was one hundred percent. The 'difficult to access' rural schools were visited by the field investigators. In four Urdu language schools from the sample, data were collected with the help of an interpreter. Out of the total selected sample schools, 2% of the schools were found to be zero schools (no children and teachers were available) during the data collection. Such schools were replaced by similar schools kept on the waiting list of sampled schools. A thorough data compilation plan was drawn up and shared with all field staff through videoconferencing to avoid inconsistency. All the collected data were checked and cleaned in workshops organised at the three centres in the state.

Table 4: Cronbach's Alpha, Variable Construction and Descriptive Statistics

Variable	Description of Composite Scores	Alpha	Mean	SD	N
Teacher Training	Teachers' opinions about teacher training: Composite score of 12 items that include different aspects of training programme.3 point scale: not adequate to quite adequate	0.97	2.83	0.69	715
Competency Based Teaching Learning	Teachers' opinions about Competency Based Teaching Learning: Composite score of 8 items that include training modules, TLM, special strategies and teacher manual. 5 point scale: impeded to a great extent to facilitated to a great extent	0.94	3.60	0.68	715
Awareness about programme	Teachers' Awareness about CLAPS: Composite of 12 items that include purpose of classroom library, core competencies, special strategies, review meetings, assessment, grading. 3 point scale: disagree to agree	0.94	2.12	0.43	715
Innovations	Teachers' opinions about innovations: Composite score of 4 items that include classroom library. Opinions of MRPs: Composite score of 3 items that include contribution of innovative activities in improving learning attainments. 3 point scale: facilitated learning not at all to a great extent	0.92	1.52	0.30	715

School Grading	Teachers' opinions about school grading: Composite score of 3 items that include impact of school grading on improving learning attainments and implementation of special strategies. 5 point scale: impeded to a great extent to facilitated to a great extent	0.91	4.42	0.88	715
Monitoring Mechanism	Teachers' opinions about monitoring mechanism: Composite score of 2 items that include impact of monitoring on resolving classroom related matters and on increasing home school link. 5 point scale: impeded to a great extent to facilitated to a great extent	0.88	4.18	0.93	715
Home School Link`	Opinions of MEOs on home school link: Composite score of 4 items that include strategies employed to improve home school link. 5 point scale: impeded to a great extent to facilitated to a great extent	0.60	3.57	0.89	38

Section 3

Results

SECTION 3: RESULTS

This section presents the quantitative and qualitative analysis of data and the findings/results drawn for each of the evaluation question in the study. The analysis has been discussed under five sub-sections, each dealing with a specific evaluation question. Data from different sources were triangulated to present the findings in a consolidated manner.

3.1 Evaluation Question 1: Has CLAPS been implemented as intended? If not, why not?

This sub-section of the report presents the extent to which different components of CLAPS were implemented as intended under the programme. The programme components of CLAPS included: teacher-training, creating awareness about CLAPS amongst teachers, Competency-based Teaching Learning (CBTL), innovative activities including classroom library, monitoring and review and home school links. For the convenience of answering this evaluation question, this sub-section has been divided into the following five parts:

- Was training of teachers and mandal level officers undertaken as intended?
- Were teachers aware of CLAPS as intended?
- Were Classroom processes focused on CBTL?
- Were innovative activities implemented as intended?
- Were monitoring and review executed as envisaged?
- Were home-school links improved as expected?

3.1.1 Was training of teachers and mandal level officers undertaken as intended?

Training of teachers was one of the important components of CLAPS. It was introduced within CLAPS with an intention to build the capacities of all teachers working at the primary level as well as to enable them to optimally accelerate and sustain the learning achievements of children in all curricular areas. There were several indications that training of teachers and mandal-level officers was undertaken as intended:

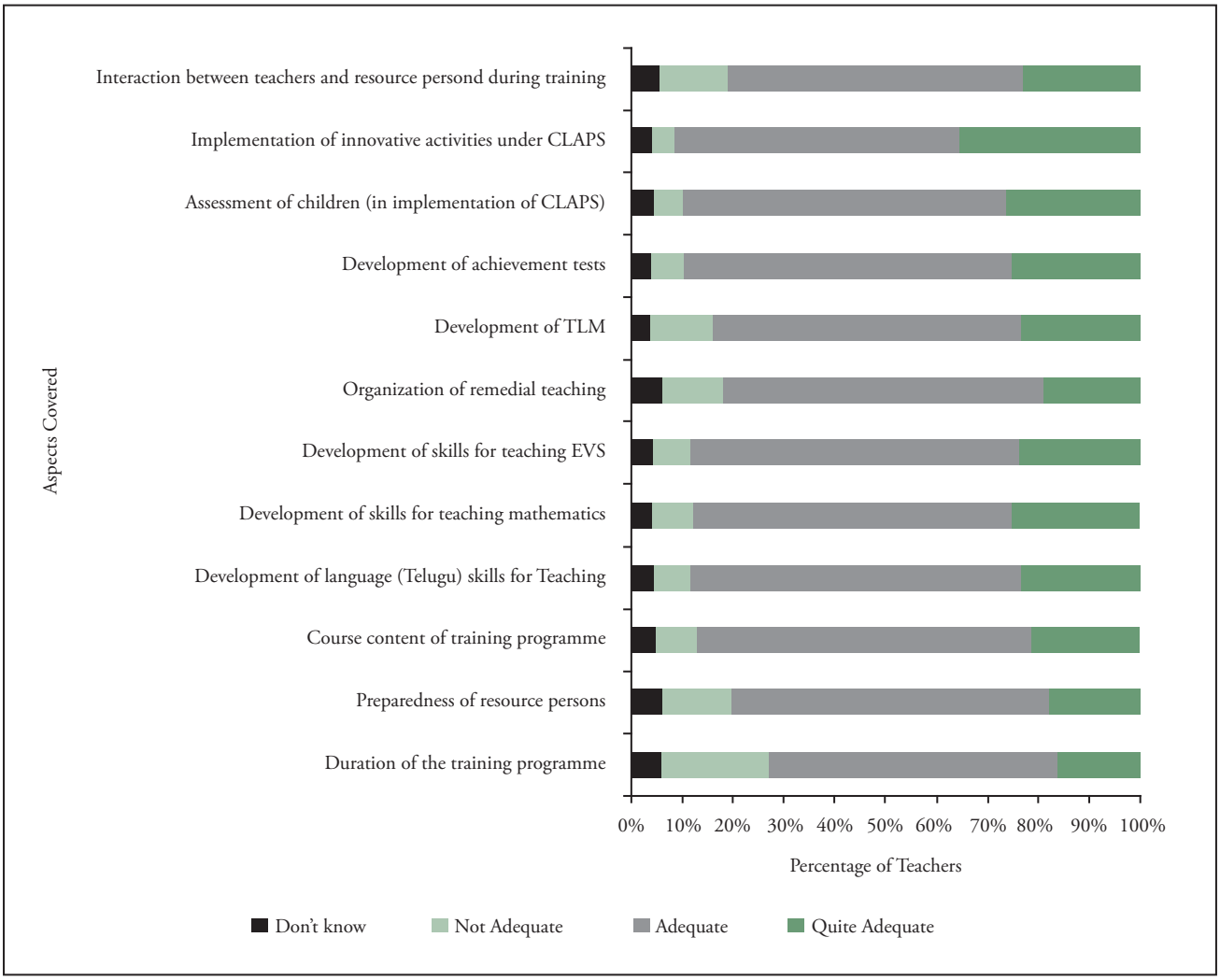
- Over 90% of teachers surveyed reported that they received training and training materials during the CLAPS training.
- Majority of teachers surveyed received materials before or during the training programme.
- A majority of teachers surveyed expressed satisfaction with training materials in terms of its presentation, adequacy content and relevance.
- Both teachers and mandal level officers (MEOs and MRPs) reported that teachers used training materials to 'a great extent' for improving the classroom processes.
- During informal interactions with field investigators and mandal level officers, it was learned that the 7.4% of untrained teachers were perhaps those who were recruited after April 2009 when CLAPS got over/ no longer being implemented.

The training materials were also evaluated by a group of experts who were not involved in the development of the training materials but were familiar with the objectives, and components of CLAPS and its implementation. Most of the experts appreciated the contents of the training modules. According to them the strengths of the modules

were: adequate number of appropriate and relevant examples, detailed list of TLM which could be used by teachers while teaching different subjects, directions for organizing group activities and details about 'CLAPS' programme. Further, they rated all the training modules between 'average' to 'good' on the physical aspects and suggested a need to improve the quality of paper and printing. The experts also commented that some of the modules do not provide adequate directions on pedagogic aspects particularly with regard to multi-grade classrooms when remedial programme have to go along with. During the interviews, teachers expressed that the training modules helped them to understand the desired subject competencies, plan lessons, organize remedial teaching, and to resolve problems related to teaching learning.

Most teachers who were surveyed reported that aspects related to 'development of teaching skills', 'course content', 'development of TLM', 'development of achievement tests', 'assessment' and 'implementation of innovative activities' were adequately covered in the training programmes (see Figure 3 below, Appendix Table C1).

Figure 3: Opinions of teachers on Organization of Teacher Training



A. Involvement of Mandal Resource Persons in Teacher Training

Mandal Education Officers (MEOs) and Mandal Resource Persons (MRPs) were responsible for training and for providing continuous on-site support to the teachers. On their role in the training of teachers, eighty nine percent (89%) of the MRPs surveyed, stated that they were involved to 'a great extent' as resource persons while 73% indicated that they were primarily involved in material development. 68% had played a major role in selecting the

resource persons. However, few of them were not involved in material development (3.7%), selection of resource persons (10%), involvement as a resource person (3.7%), and in administration activities (10%). Mandal resource persons have confirmed that the directions regarding schedule of teachers training, duration of trainings, objectives and content of the trainings as provided by the State were largely adhered to (89%).

According to MEOs, training to mandal level resource persons helped them to provide academic guidance and support to the teachers, to assess their activities and the progress of the children. District level officials, faculty from District Institutes of Educational Training (DIETs) and District Resource Groups (DRGs) provided training to mandal level educational functionaries. In some instances the faculty from SCERT and State Resource Groups and retired educational officers also trained the mandal level persons. According to district level officials, they had a key role to play in the training of the MRPs and MEOs, monitoring of teacher training programmes and providing suggestions and support to MEOs, MRPs, and class teachers on the basis of feedback received.

Almost all MRPs (80 out of 81) and MEOs (38 out of 38) have stated that modules developed for training of teachers were primarily used for the training of mandal level officials. With respect to the methods of training, largely face-to-face method was used. This was followed by the method of teleconferencing. Video conferencing and radio broadcast were rarely used.

Teacher training was implemented as intended. Teachers were involved in the planning stage of the teacher training programmes, 95% of the teachers received the material on time and they appreciated the training modules for the presentation, relevance and adequacy of content. They also used training materials in the schools to a great extent. The directions provided by the State for organizing training programmes were largely adhered to.

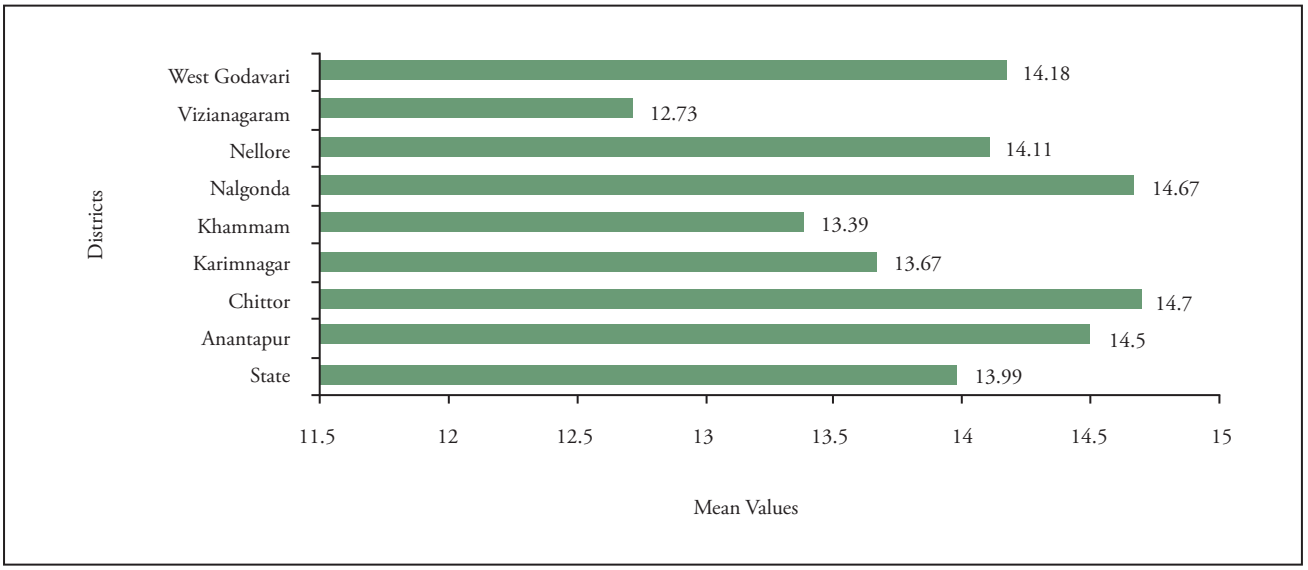
3.1.2 Were teachers aware of the CLAPS as intended?

Effective implementation of any programme largely depends on the extent to which the implementation partners understand the spirit behind the intended programme components. Since teachers were the most important implementers of the programme, the evaluation team felt that their awareness about CLAPS would impact the quality of implementation on the ground. Therefore, the awareness level of teachers was assessed through a questionnaire. However, the awareness level of teachers at the state level was just above average (Mean=13.99) which meant that their awareness about CLAPS was not very high. The evaluation team decided to probe into the district variations (figure 4, Appendix Table C2) and it was found that the teachers in Chittoor district.

A composite awareness score was calculated to assess the level of awareness amongst the teachers who were directly involved in the implementation of the programme in the classrooms. The value of the composite score was computed by adding the scores of 12 items pertaining to awareness on a three-point scale. The items in the teacher questionnaire from which the composite score was calculated included purpose of classroom library, core competencies, special strategies, review meetings, assessment and grading, with a possible theoretical range of composite score 0 to 24. The maximum achievable score for ascertaining the extent of awareness about CLAPS amongst the teachers was computed to be 36.

(mean =14.7) were more aware about CLAPS compared to their counterparts in other districts. The awareness of teachers belonging to Vizianagaram district (mean=12.73) was the least. The magnitude of dispersion was negligible in Chittoor district (SD=0.89) whereas it was substantial in Vizianagaram (SD=2.96).

Figure 4: Awareness among Teachers in Various Districts



3.1.3 Were Classroom processes focused on CBTL?

Under CLAPS, core competencies were identified for each of the curricular subjects with the aim that all the children would be able to master those up to 80% or above. The schools conducted a monthly periodic assessment of children. Children who achieved 80% or above competency level were placed under *group 'A'* and the rest of the children were placed under *group 'B'.*

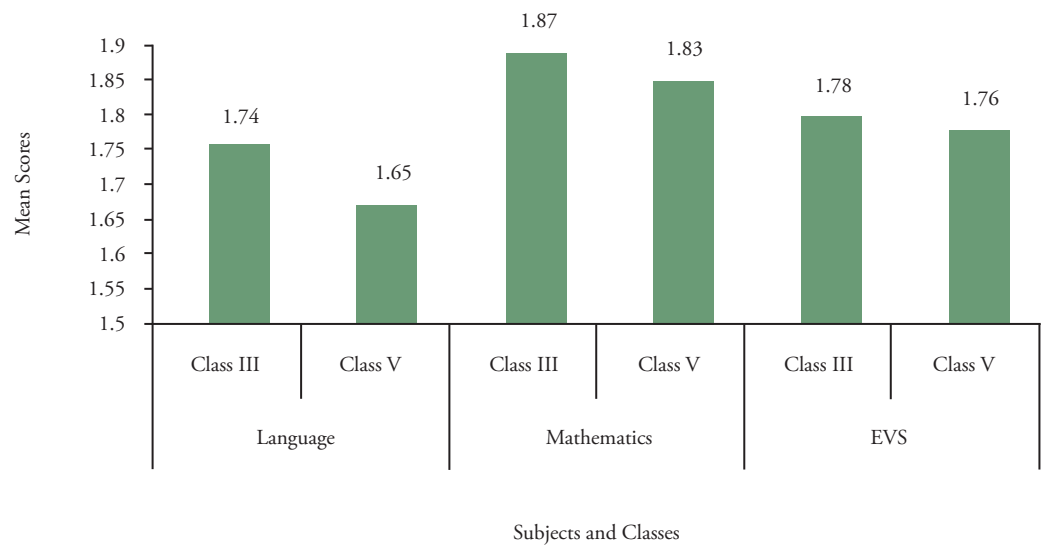
The intent was to provide regular remediation to group B children in the relevant curricular areas till they reached *group 'A'* competency level. In order to achieve this one extra period each for Telugu and Mathematics (daily) was created in the school time table.

- During the interviews 82% of teachers stated that those two periods each for Telugu and Mathematics were quite useful and convenient for remedial teaching. Children during their interviews also stated that they liked the arrangement of two periods each for Telugu (97%) and Mathematics (94%) as it provided them with the opportunities to learn, practice and clarify their doubts in learning. They also felt that two continuous periods of Mathematics helped them to do daily life mathematical calculations and develop a liking towards the subject. Most of the teachers expressed that achievement levels in EVS too could have been enhanced if like Telugu and Mathematics two periods were allocated daily for Environmental Studies (I & II) as well.
- According to 85% of the head teachers, surveyed, remedial teaching was provided on a continuous basis in language and Mathematics. Eighty three percent (83%) of head teachers indicated that there was an orientation on transacting remedial teaching during teacher training programmes. Sixty two percent (62%) of teachers indicated that adequate orientation for remedial teaching was imparted during the teacher training programmes. Ninety six percent (96%) of children stated that they received regular remediation in mathematics whereas 97% in Telugu. This indicated that due emphasis was given to Telugu and Mathematics as stated in CLAPS. Majority of the DIET officials stated that they provided guidelines and suggested strategies to handle 'B' group children to teachers during their visits to schools.
- In order to sustain higher learning achievements, it was essential to find out how 'A' group children were engaged during the remedial teaching time. Observations revealed that 'A' group children were engaged with textbook exercises during the remedial teaching in all the subjects instead of work sheets or other especially developed material. Another observation during remedial teaching was the basis for grouping of children during

the remedial period. Classroom observation of class III revealed that homogeneous groups (same ability) were formed in all the subjects in most of the classes. However in class V, the groups were neither homogeneous nor any specific pattern of grouping was observed.

- During classroom observations, children's participation during classroom transactions in different curricular areas was recorded on a three point scale, 1 for low, 2 for moderate and 3 for high. 'Participation' in this context means meaningful interactions in the classroom transaction between teacher and children and amongst children. As shown in Figure 5 (Appendix Table C3), participation of children during remedial classes, both in class III and V was at best moderate in all the curricular areas. Children of class III participated in classroom processes relatively more than children of class V. In class III, the classroom teachings were more through activity based methods. This might have been a reason for more active participation by the pupils of class III. The rate of participation was relatively more in Mathematics followed by EVS and then in Telugu across the curricular areas. This was surprising as there was more emphasis on Telugu learning than EVS in the programme. This indicates an area of improvement since CLAPS was aimed at making children active learners and in order to achieve this objective it is important that all children should participate actively during classroom teaching-learning processes.

Figure. 5: Pupil Participation in Remedial Classes



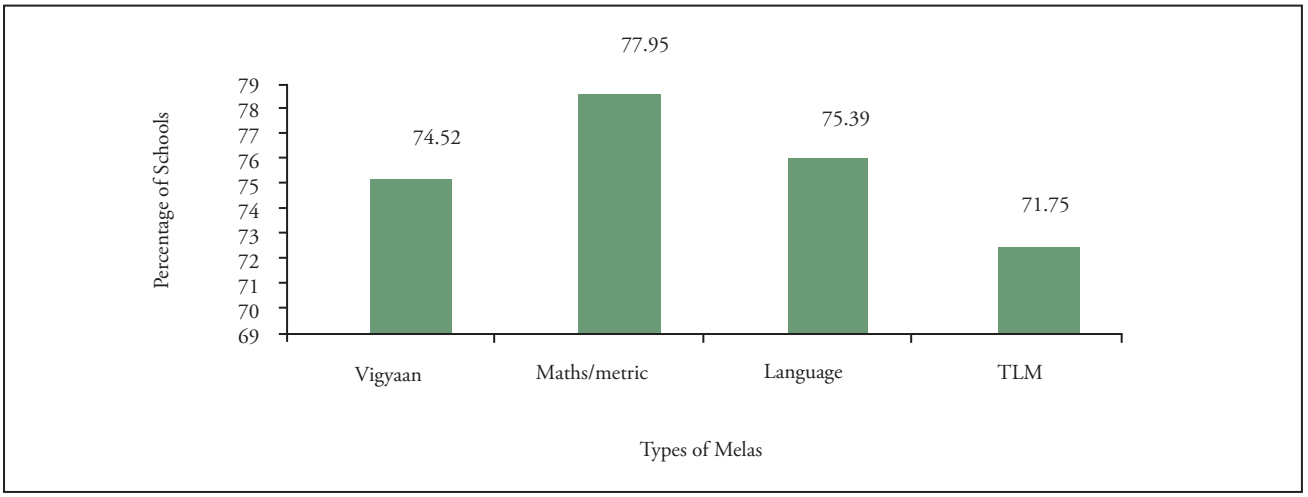
The overall findings indicated that there was an emphasis on competency-based teaching in classroom transactions. Remedial teaching was a regular component of the school time table for Mathematics and Telugu. In most cases observed during the remedial periods, it was found that children were being directly helped by the peers. Rate of children's participation was more in Mathematics followed by EVS and Telugu. Children of class III participated in classroom processes relatively more than children of class V.

3.1.4 Were innovative activities implemented as intended?

The innovative activities under CLAPS included honesty boxes, post boxes, wall magazines, classroom libraries, school cabinets and organization of educational melas. The analysis of the data pertaining to these aspects has revealed that the above mentioned have been introduced in almost in all the selected schools.

- Ninety four percent (94%) of the teachers surveyed, confirmed the establishment of classroom libraries, eighty six percent (86%) confirmed about the organisation of educational melas, and 79% confirmed about the wall magazine in classrooms. 86% children, in their interviews, confirmed that they actually used the honesty boxes, wall magazines and post-boxes in schools.
- It was the intention of the planners and implementers that all schools would participate in the educational melas. However, it was found that about 72 to 78% of the schools participated in different types of melas at the Mandal level. According to the head teachers, maximum number of schools participated in Metric (Mathematics) Mela followed by the participation in the Language and Vigyaan Mela. The number of schools participating in 'TLM' Mela was the lowest (see Figure 6, Appendix Table C4).

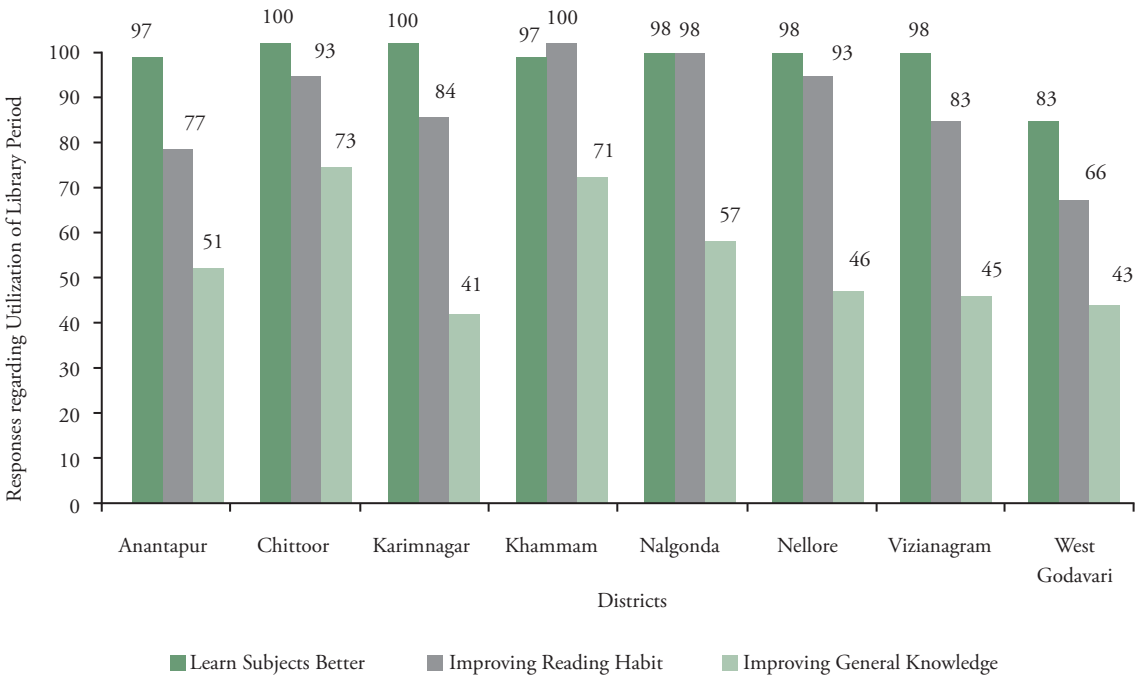
Figure 6: Participation of Schools in Educational Melas



Establishment of classroom libraries was a major component under CLAPS. It was introduced with an aim to develop reading habits amongst children and make them independent readers. It was intended that every classroom would be given a variety of reading material which would be accessible to children. One period would be allocated for reading books from the classroom library and the teacher would be available to help the children. As indicated by the head teachers surveyed, 373 out of 375 schools have established classroom libraries, 98% teachers also confirmed setting up of classroom libraries. According to the library period observation data, in most of the classrooms, library books were kept in cloth bags both in classes III and V while in some of the classes cabinets were placed for keeping the books. In a few classrooms, books were kept in racks and hung on a string for easy access. Books were kept in boxes in very few schools and this clearly indicated that books were accessible to children in almost all the classroom libraries. Regarding the variety of reading material, it was observed that there were story books, picture books, comics and books of songs in the classroom libraries. Besides these, some libraries also had books on proverbs, children literature, magazines, story cards and moral education. According to the implementers of CLAPS, the reading material in these libraries was according to the level of the children and main purpose was to create an interest amongst them towards reading. Ninety six percent (96%) of the head teachers indicated that the schools maintained an 'issue register' to keep a record of books issued to the children for reading. Sixty eight (68%) percent of the children stated during the interviews that they were issued books besides the library period whereas 31% children informed that they were not issued books besides library hours. These results clearly indicated that children were provided with lots of opportunities for reading.

Children, in all the districts indicated that they mostly used the library period to learn curricular subjects better. They also expressed that this period helped them in improving their reading abilities and general knowledge (see figure 7, Appendix Table C5).

Figure 7: Utilization of Library Period by Children



In addition to these responses, according to some children: "We use this period to know more about unknown things, to read good stories, folk tales and know about current affairs." As the intention of the programme was to develop reading habits among children, perhaps this revelation also confirmed implementation of classroom libraries as intended.

- On the basis of classroom library period observations, teachers were found to be present in the classes in almost all the sample schools across all the districts. In one district, namely Vizianagaram, teacher presence was observed in about 75% of schools during the classroom library period.
- It was further observed that teachers were helping the children in the selection of books and also guided them. According to the teachers, children were quite regular in reading books from the library. It was found during the library period that teachers mostly helped the children in reading and clarifying doubts; however, at some places they were found to be helping them in selecting and searching the books from the classroom library. Teacher's assistance during the library period was observed to be as intended under the CLAPS programme.

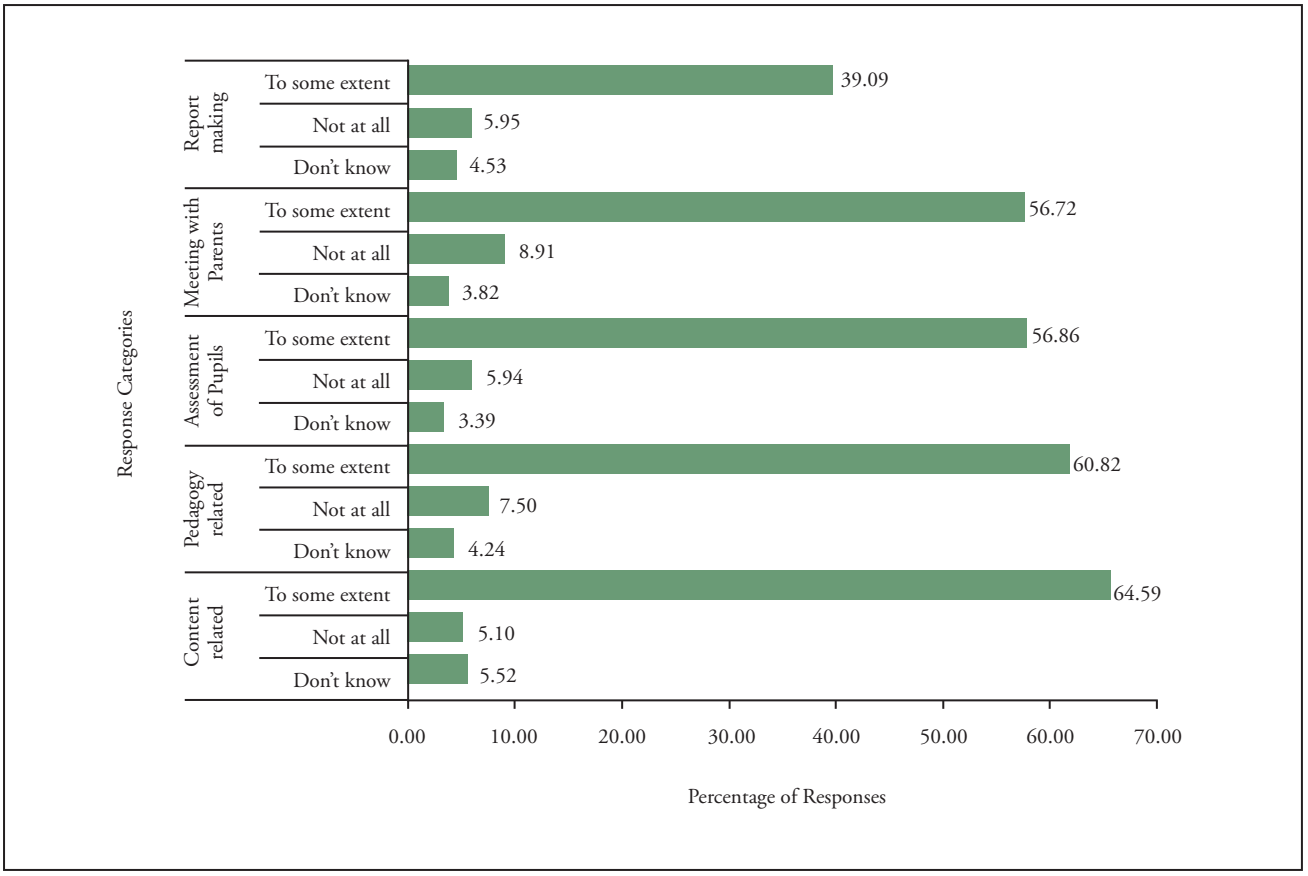
Evidences suggest that the implementation of innovative activities under CLAPS was implemented as intended. Honesty boxes, post boxes, wall magazines, classroom libraries, and school cabinets existed in almost all of the schools; schools maintained issue registers to keep a record of books issued to the children and children were issued books for reading besides the library period. The books were accessible to all the children. Teachers were present in the classes during the library period and they helped children to read and clarified their doubts. In some schools they were also found to be helping children in selecting and searching the books from the classroom library. Children used classroom libraries for improving understanding/ comprehension of curricular subjects, their reading abilities and general knowledge. The number of schools participating in the Educational Melas including 'Metric (Mathematics)', 'Language', 'TLM' and 'Vigyaan' Mela, was found to be less than what was expected.

3.1.5 Were monitoring and review executed as envisaged?

A well-defined monitoring mechanism for different levels-school level to the state level was established under CLAPS. Monitoring schedules for different levels were prepared by the state in order to provide regular feedback and support. Schools were frequently monitored by the mandal-level officers and mandals were distributed amongst concerned DIETs for close monitoring. State level resource groups, members and officials of State Project Office also periodically visited schools and were also responsible for reviewing the performance of the district level officials. The emphasis of the monitoring process was on assessing children's performances and regular reviews on this dimension were carried out at various levels viz, school, mandal, district and state.

- The vast majority of the head teachers surveyed (97%) indicated that they conducted teachers' review meetings; 78% of the head teachers indicated that it was held fortnightly whereas 22% indicated that it was held on a monthly basis. Likewise, head-teachers indicated that meetings of academic monitoring committee (AMC) were held regularly on a monthly basis and there was a large participation by parents, teachers, head teachers and community members. The issues discussed during these meetings included children's attendance,mid-day meals, performance of children, and maintenance of basic facilities in the school and health status of children. Teachers' attendance and punctuality were discussed occasionally.
- As per the provisions under the programme, mandal level officials were expected to provide training and on-site support to teachers for the curricular areas as well as any other support which was needed. Teacher's opinions were collected on a three point scale on five major areas of support.
- As depicted in figure 8 (Appendix Table C6), a majority of the teachers, surveyed, indicated that the support from monitoring officials was not adequate for the problems related to content, pedagogy and assessment of children. They provided greater support in preparation of reports and formats which had to be submitted to the higher authorities on a regular basis.

Figure 8: Support provided by Monitoring Officials to Teachers



- Mandal resource persons were asked to rate certain issues: academic performance of children, regularity of children, regularity of teachers, classroom processes, appointment of Vidya volunteers and star grading indicators considered in the review meetings at mandal level on a three point scale. According to them, the most important issues during meetings were: regularity of children and teachers (86.4%) and appointment of Vidya volunteers (80.2%). Surprisingly some MRPs did not consider classroom processes (38.3%) and academic performance of children (29.6%) to be of any importanceduring discussion in the review meetings.
- District level officials indicated that they inspected school registers and monitored academic progress of children. They also gave guidelines for improving the student attendance and suggested strategies to handle B group children. According to the State level officials, "MRPs were not available for almost a year. As a result of which, secondary school teachers were involved in monitoring. This affected monitoring as well as the provision of continuous on-site support to teachers." This is an indication that monitoring was not implemented as intended under CLAPS.

The programme was short of being implemented as intended as far as monitoring and review were concerned. A vast majority of schools informed that that they regularly conducted teachers' review meetings and the meetings of academic monitoring committee too were held regularly on a monthly basis. A majority of the teachers indicated that support from MRPs was not adequate for content, pedagogy and assessment related issues and problems. The state level officials have clearly acknowledged that due to non-availability of MRPs for almost a year, the academic support to the teachers could not be provided as envisaged.

3.1.6 Were home-school links improved as expected?

Under the broad CLAPS strategies, it was envisaged that healthy home-school links would have a positive influence on the attendance of the children, which would lead to the improvement in their achievement levels. In order to develop healthy home-school links, some new activities were encouraged such as regular parent-teacher meetings, and home visits, especially in cases where children were irregular in attending the schools, the parents were not attending the parent-teacher meetings or there were other specific serious issues that needed attention of the teachers and the parents.

- In the teacher questionnaire, teachers were asked to indicate the frequency of their visits to children's homes and interactions with their parents on a five point scale ranging from 'always' to 'never'. The teachers' opinion on their visits to the homes of children and their interactions with the parents is indicated in Tables 5 and 6 below.

Table 5: Teachers' Opinion on their visits to the homes of children

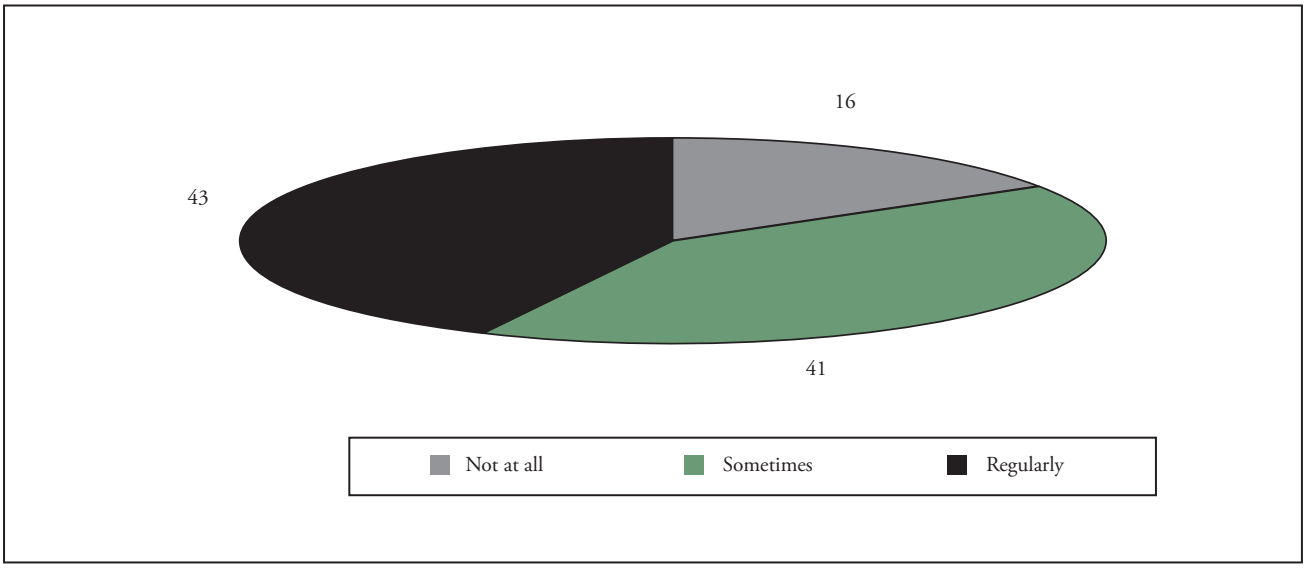
District	Always	Frequently	Often	Rarely	Never
Anantpur	21.79	57.69	20.51	0.00	0.00
Chittoor	41.25	38.75	20.00	0.00	0.00
Karimnagar	27.72	38.61	30.69	2.97	0.00
4Khammam	22.54	45.07	29.58	2.82	0.00
Nalgonda	27.96	51.61	20.43	0.00	0.00
Nellore	18.63	38.24	40.20	1.96	0.98
7Vijaynagarm	13.70	43.84	41.10	1.37	0.00
West Godavari	29.13	48.54	18.45	1.94	1.94

Table 6: Frequency of teachers' interaction with parents

District	always	frequently	often	rarely
Anantpur	34.62	43.59	20.51	1.28
Chittoor	48.75	38.75	12.50	0.00
Karimnagar	29.70	43.56	23.76	2.97
4Khammam	28.17	47.89	22.54	1.41
Nalgonda	33.33	46.24	18.28	2.15
Nellore	29.41	50.00	20.59	0.00
7Vijaynagarm	17.81	47.95	34.25	0.00
West Godavari	35.92	48.54	13.59	1.94

Majority of the teachers surveyed, informed that they were visited the homes of children quite often and spoke to their parents. However, with regards to the parents-teacher meetings, teachers reported that parents' participation in meetings was not regular. About 41% of the parents indicated that they sometimes attended parent-teacher meetings. About 16% of the parents interviewed expressed that they never attended the meetings (see Figure 9, Appendix Table C7). During interviews parents informed that the major issues of discussion during parents-teacher meetings were children's attendance, their academic performance, mid-day meals followed by children's behaviour, attendance of teachers and the academic problems in the school.

Figure 9: Parents' Participation in Meetings



Of the 17 focus group discussions (FGDs) conducted with parents and community members, a majority of the participants in 16 FGDs responded that the teachers had become more effective as a result of the programme. Regarding home-school links, the majority of the participants in 9 FGDs mentioned that home school links improved children's performance. While participants of four FGDs specifically noted that parents had begun to take greater interest in their children's schooling, participants from the other four groups stated that parents were now joining school assemblies. Two focus groups suggested that the program had reduced student absenteeism and increased their interest in coming to the school.

According to one member in one focus group, *"The village school never had such good teachers. The teachers take personal interest in children. When children are absent from the school, the teachers visit their homes."*

3.2 Evaluation Question 2: To what extent have different programme components of CLAPS facilitated or impeded the learning levels of children?

There were seven components of CLAPS (Teacher Training; Awareness about 'CLAPS'; Competency Based Teaching Learning; Innovative Activities; Process and Performance Grading; Monitoring and Home-School Links) that aimed to improve the competency and achievement levels of children in all the curricular areas. This sub-section describes to what extent different components of CLAPS facilitated or impeded the attainment of CLAPS competencies identified for each curricular area as well as overall learning achievement of children in the selected curricular areas (i.e., Telugu, Mathematics and Environmental Studies).

3.2.1 Programme Components and Curricular Competencies

Under CLAPS, two core competencies were identified for each curricular area, referred to as C1 (Competency 1) and C2 (Competency 2). Subject-wise C1 and C2 were as follows:

Table 7: List of competencies under CLAPS

Classes	Curricular area	Competencies*
III-V	Telugu	C1. Reading fluently, comprehension and express in their own words
		C2. Self-writing
III-V	Math	C1. Addition, Subtraction, multiplication, division
		C2. Oral/Written problems
III-V	EVS I	C1. Conceptual Understanding on Environmental Science
		C2. Mapping Skills
III-V	EVS II	C1. Conceptual Understanding on Social Science
		C2. Drawing& Labeling/ Experimentation skills/processes

*the competencies were same for classes III, IV and V but the level of proficiency and difficulty level progressed with the progression in class. See Appendix Table A2 for details.

Children were grouped into 'A' and 'B' based on the accomplishment of competencies; 'A' group children were those who achieved 80% and above while 'B' group children achieved 79% or lower. In order to carry out linear regression analysis, 'A' and 'B' level were converted to '1' and '0' respectively. There were two competencies in each curricular area (C1 and C2). Test items were grouped into these competencies for analysis. Scores on these two competencies were added separately to get composite scores for each curricular area and then these composite scores were added to get the total composite score on competencies. Attainment of competencies in different curricular areas was the dependent/criterion variable in the regression analysis. Regression analysis was carried out to ascertain the contribution of various independent variables (programme components) in predicting the attainment of the competencies in different curricular areas.

Table 8: Programme Components facilitating different Core Competencies

S. No	Programme Components	Telugu		Mathematics		EVS I		EVS II	
		C1	C2	C1	C2	C1	C2	C1	C2
1.	CBTL								
2.	Teacher Training		✓	✓		✓	✓	✓	
3.	Monitoring Mechanism						✓		
4.	School Grading								

5.	Innovative Activities		✓			✓			
6.	Home School Links								
7.	Awareness about CLAPS	✓	✓	✓	✓	✓		✓	

Check marks in the above table indicate which programme components facilitated attainment of specific competencies. On the whole it was observed that teacher training and teacher awareness of CLAPS facilitated achievement of one or both of the competencies in all the curricular areas except C-2 of EVS II. Innovative activities also facilitated the attainment of competencies in Telugu (C1) and EVSI (C1). Monitoring mechanism contributed only to EVS I (C2) and EVS II (C2). Competency based teaching-learning (CBTL), school grading and home-school linkage did not facilitate achievement at all (Appendix Tables C8 to C15). Regional analyses can be found in Appendix Tables C16 to C18.

In order to find out whether these components were also operating at the district level, district-wise and competency-wise key predictors for different curricular areas were also computed. These are given below in Table 9.

Table 9: District-wise and Competency-wise Predictors

Name of the district code	Telugu		Mathematics		EVS- I		EVS-II	
	C1	C2	C1	C2	C1	C2	C1	C2
Ananthpur (D1)	-------	-------	-------	-------	-------	Tr. Trg	-------	S. grading
Chittoor (D2)	I. Activities	I. Activities	-------	S. grading, I. Activities	-------	Tr. Trg	S. grading	Tr. Trg
Karimnagar (D3)	-------	-------	-------	-------	-------	Tr. Trg, monitoring	-------	-------
Khammam (D4)	-------	-------	H.S.link	-------	-------	CBTL, School grading	-------	-------
Nalgonda (D5)	-------	-------	-------	-------	-------	-------	Awareness about CLAPS	-------
Nellore (D6)	-------	Tr. Trg, I. Activities	Tr. Trg, I. Activities	I. Activities	Tr. Trg, I. Activities	Monitoring	-------	Tr. Trg, I. Activities
Vizianagaram (D7)	-------	Tr. Trg	H.S.link	-------	-------	-------	-------	H.S.link
West Godavari (D8)	-------	I. Activities	-------	I. Activities	I. Activities	-------	I. Activities	Monitoring, School grading

(Tr. Trg = Teacher training, S. Grading = School grading, I. Activities = Innovative Activities, H.S.link = Home-school link)

- For Competency 1 (C1) of Telugu, innovative activities appeared to be the only predictor for Chittoor (D2) district of Rayalseema region while for competency 2 (C2) of Telugu teacher training emerged as a predictor for Nellore (D6) and Vizianagaram (D7) districts. Innovative activities werefound to be facilitating competency attainment in the case of Vizianagaram (D7) and West Godavari (D8)districts of Coastal Andhra.
- In case of Mathematics competency 1, home-school links appeared to be the predictor for Khammam (D4) and Vizianagaram (D7). Teacher-training and Innovative activities emerged as predictors for competency attainment in Nellore (D6). For Mathematics, competency 2, innovative activities were found facilitating in three districts (D2, D6 and D8).School grading was found to a predictor of competency attainment in only one district, Chittoor (D2).
- For EVS I, no component emerged as predictor for C-1 in case of all the districts (D1 to D5) of the Rayalseema

and Telengana region, while innovations were found facilitating in both Nellore (D6) and West Godavari (D8). Teacher-training was another predictor for Nellore (D6). In case of C2, teacher-training emerged as the only potential predictor in both the districts (D1 and D2) of Rayalaseema whereas monitoring mechanism was acting as potential predictor in case of D-3 and D-6.

- In case of EVS II, for competency 1, school grading, Awareness and Innovative activities appeared to be the predictors for D2, D5 and D8 respectively. For C2 in EVS II, teacher-training was a potential predictor for D-2 and D-6 while school grading was a potential predictor for D-1 and D-8. Innovative activities, home-school link and monitoring facilitated competency attainment in D6, D7 and D8 respectively (Appendix Tables C19 to C26).

Teacher-training was found to be a key predictor for almost all the core competencies at the state level. The above findings were confirmed by the teachers. More than 50% of teachers were of the view that teacher-training facilitated them to 'a great extent' in improving their classroom teaching (61.4%), in enhancing attainment levels of children in core competencies (62.1%) and in providing remedial teaching to 'B' group children (51.2%). Percentage of teachers rating the component of teacher-training as facilitating them to 'some extent' ranged from 30 to 40 (Classroom teaching = 32.6; attainment of core competencies = 30.9 and remediation = 40.7). An overwhelming majority of teachers (putting together the criterion/ categories of facilitating to some and great extent) endorsed that teacher-training had facilitated them in improving their classroom teaching (94%), in enhancing attainment levels of children in core competencies (93%) and in organizing special strategies as remediation for 'B' group children (91.9%). Opinions of teachers indicated that teacher-training had facilitated in improving their classroom teaching to the most followed by remediation and improving attainment levels of children in core competencies (Appendix Table C27).

State level data showed that teacher training and teachers' awareness about CLAPS were facilitating the attainment of one or both the competencies in all subjects except C–2 of EVS II. In conclusion, at the district level, with regard to competencies, teacher training and innovative activities were found to be facilitating in improving majority of competencies among children,. monitoring mechanism, school grading and home school linkage were found as potential predictors in few districts while CBTL and awareness were not found facilitating in improving competencies of children in a significant way.

3.2.2 Programme Components and Learning Achievement

The data obtained from teachers, MRPs, and MEOs, helped in arriving at a composite score on each of the components considered as 'independent variables' in the linear regression analysis. Children's achievement was used as the 'dependent variable' in the analysis. Among the three major sources of data for this purpose, the data obtained from teachers was most potential and the reliability indices were found quite good to depend upon (vide Table – 3 of section 2).

Before carrying out multiple regression analysis, all the composite scores of dependent and independent variables were transformed into Z scores[20]. The standard error of estimate was less than one and hence regression could be interpreted. The error was not larger than the explained variance and hence these results were considered to be significant. In order to identify multi-co linearity, in the first phase inter-correlations between all the predictor variables were computed. These correlation matrices were examined and it was found that coefficients of correlation were not high enough and therefore there was no threat of multi-collinearity. Therefore, the statistical assumptions

20 Z scores were calculated because the scores from different instruments were on different scales.

of regression were not violated. The ranges of coefficients of correlations were -0.42 to 0.613 for total state, -0.199 to 0.667 for Rayalaseema, -0.026 to 0.674 for Telangana and -0.125 to 0.631 for Coastal Andhra. In the second phase, co-linearity diagnosis was carried out by computing Condition Index, Tolerance and Variance Inflation Factor (VIF). It is normally considered that if condition number is less than 15, Tolerance is not less than 0.1 and the VIF is not greater than 10, there is no threat of multi-co linearity. It was found that in all the regression analyses, Condition Index was less than 15, Tolerance was not less than 0.1 and VIF was not greater than 10. Hence, it was evident that there were no such threats of multi-collinearity and the predictor variables were not similar. Further, Linear, Quadratic and Cubic curve estimations were computed for all the predictor variables. Data were transformed into respective curve fit and then regression analyses were carried out. Among linear, quadratic and cubic, it was found that linear regression was best in explaining the variance in dependent variable.

Achievement of children in different curricular areas was the dependent/criterion variable in the regression analysis. For prediction of total achievement and achievements in Telugu, Mathematics, EVS I and EVS II, the contribution of various independent variables was seen through regression analysis.

Table 10: Programme Components facilitating Achievement of children

Programme Components	Telugu	Mathematics	EVS I	EVS II	Total
CBTL					
Teacher Training	✓	✓	✓	✓	✓
Monitoring Mechanism			✓	✓	
School Grade					
Innovative Activities	✓				✓
Home School Link					
Awareness about CLAPS	✓	✓	✓	✓	✓
West Godavari	29.13	48.54	18.45	1.94	1.94

The overall results of regression analysis at the state level presented in Table 10 revealed that teacher-training; innovative activities and awareness of teachers about CLAPS were potential predictors of total achievement of children. Teacher-training (5.1%) has emerged as the most important predictor followed by awareness (4.5%) and innovative activities (2.6%) in case of total achievement (Appendix Table C28). Monitoring mechanism was also acting as a predictor of achievement in EVS I and EVS II. Contribution of innovative activities was evident in case of achievement in Telugu and total achievement. While analyzing subject-wise contribution of different components, teacher-training was found as key predictor in case of Telugu (5.8%), EVS I & II (4.6%) and awareness was the key predictor for mathematics (3.5%). Further, competency based teaching learning (CBTL), school grading and home school linkage did not appear as predictors in facilitating learning attainments of children in a significant manner for all the curricular areas. The values of each predictor and their contribution in each curricular area have been given in the tables (Appendix Tables C29 to C32).

With regard to the total achievement of children, teacher training, innovative activities and awareness and awareness about CLAPS were acting as predictors for total achievement at the state level. Contribution of teacher training, innovative activities and awareness about CLAPS were evident in improving Telugu achievement whereas teacher-training and awareness were contributing towards achievement in Mathematics. With regard to EVS I and EVS II, there were three programme components that were found to be contributing, namely, teacher training, monitoring mechanism and awareness. On the whole CBTL, school grading and home school link did not emerge as key predictors of children's achievement in any curricular subject.

In order to ascertain whether the Programme Components of CLAPS facilitated in enhancing total and subject-wise achievements of children belonging to different regions and districts, multiple regression analysis was further carried out. See Appendix Table C33 to C35 for regional analyses. Table 11 below summarizes the findings by district. District-wise analysis was carried out because districts are the administratively functional unit in the State.

Table 11: District-wise Programme Components Facilitating Achievement

Subject	Component	D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8
Telugu	CBTL								
	Tr. Trg						√		
	M.Mech.								
	Blank col.								
	S.Grading								
	I. Activities		√						
	H.S.Link								
	Awareness								
Mathematics	CBTL								
	Tr. Trg								
	M.Mech.								
	S.Grading								
	I. Activities		√				√		
	H.S.Link							√	√
	Awareness								
EVS-I	CBTL								
	Tr. Trg		√				√		
	M.Mech.			√					
	S.Grading			√					
	I. Activities						√		
	H.S.Link							√	√
	Awareness								
EVS -II									
	CBTL								
	Tr. Trg		√				√		
	M.Mech.								
	S.Grading	√							
	I. Activities	√					√		
	H.S.Link					√		√	√
	Awareness								
Total achievement	CBTL								
	Tr. Trg		√				√		
	M.Mech.								
	S.Grading								
	I. Activities						√		
	H.S.Link								
	Awareness								

(D1=Anantpur, D2=Chittoor, D3= Karimnagar, D4=Khammam, D5=Nalgonda, D6= Nellore, D7= Vizianagaram, D8= West Godavari)

- In Chittoor (D-2) district of Rayalseema region, teacher training was a potential predictor of total achievement and achievement in EVS I and II, innovative activities in case of Telugu and Mathematics. In Anantpur (D-1) school grading and innovative activities emerged as predictors only for EVS II. Though for the region as a whole, teacher-training was found to be the predictor for total achievement as well as for all the curricular subjects but in Anantpur district it did not emerge as a predictor.

- School grading and monitoring mechanism were found predictors for EVS I in D-3 and Home school link in case of D-5. No component seemed to be facilitating for D-4. But regression analysis showed that monitoring and innovations were the key predictors at the region level (Telangana). It showed that these components were operating to some extent but not functioning as key predictor at the district level.
- In Nellore district (D-6) of Coastal Andhra region, teacher-training and innovative activates emerged as key predictors for total achievement. Looking at subject-wise facilitation, teacher training facilitated in all curricular areas except mathematics while Innovative activities seemed to be predictor for achievement in all curricular areas except Telugu. For Vizianagaram (D-7) and West Godavari (D-8) districts of the same region, Home-School link was found to be the only predictor for achievement in mathematics and EVS I and II. Monitoring and innovative activities were operating as key predictors at the region level but these were not evident in case of D-7 and D-8.

In order to triangulate the findings of regression analysis with the qualitative data, opinion of different stakeholders were analysed. Innovative activities were found to be key predictor for different curricular areas in some way or the other. These findings were also confirmed by the Mandal Resource Persons (MRPs) who expressed that among the innovative activities, classroom library (91.4%) had helped children to improve their learning levels to 'a great extent' followed by educational melas (74.1%), wall magazine (69.1%) and school post box (58%). A majority of Mandal Education Officers (MEOs) interviewed indicated that classroom libraries were most effective in improving the learning levels of children. Most MRPs also indicated that home school link helped in improving learning levels of children to a great extent. This finding was confirmed only in case of D-7 and D-8 districts, where home school link was found to be a key predictor of achievement in various curricular areas.

The planners and state officials had mentioned in their interviews "performance and process grading of schools as the strengths of the programme." The results of regression analysis indicated that school grading was not functioning as a key predictor in any of the districts. Half of the teachers interviewed indicated that process grading facilitated improvements in learning achievement of children to 'a great extent' while 61.8% teachers held the same belief regarding performance grading. Few teachers expressed that there was no contribution of either process grading (9.2%) or performance grading (5.3%) in improving the learning achievements of children.

About 90% of teachers were of the opinion that academic support and monitoring by MRPs helped them in solving classroom related problems particularly in the improvement of the learning levels of children. However, a few teachers (9.7%) expressed that monitoring did not help them in solving their classroom related problems or for improving achievement levels of children. Planners and State level officials in their interviews expressed that "for almost a year, MRPs were not available. This might have affected monitoring as continuous on-site support to teachers."

At the district level teacher training was found to be a single key predictor in all curricular areas except Telugu as well as for the total achievement of children. Monitoring did not emerge as a key predictor in any district except in Karimnagar (D3). Home-school link was found to be a key predictor in D-7 and D-8 in all curricular area except Telugu. Competency based teaching learning (CBTL) did not appear to be facilitating improvement of the overall learning levels of children as well as in any of the specific curricular subjects (Appendix Tables C36 to C40). The planners, in their interviews expressed that trainers were not properly prepared and need-based training could not be imparted which was perhaps essential for the effective implementation of CBTL.

3.3 Evaluation Question 3: Is there any differential impact of process and performance grading of schools on the learning achievement of children?

Performance grading and process grading of schools were implemented to facilitate student achievement. During the implementation of CLAPS, efforts were made to implement these styles of grading as per the programme objectives (see Introduction section for more information). School process and performance grading were thought to be enabling factors to improve the achievement levels of the children.

The discussion for this evaluation question has been organized in the following two parts:

- Is there any relationship between process and performance grading?
- Is there any impact of process and performance grading on children's achievement levels?

The first question is not of substantive interest but an answer is required to adequately answer the second.

3.3.1 Is There Any Relationship between Process and Performance Grading?

In order to understand the relationship between process and performance grading of schools, school grades of two consecutive years, 2007-08 and 2008-09, were taken into consideration. Process and performance grades of schools during these two academic years under consideration were scored in order to arrive at deviations in school grades. *School process grades of zero, one, two and three stars were assigned a score of '1', '2', '3' and '4' respectively. School performance grades of 'A', 'B', 'C' and 'D' were assigned a score of '4', '3', '2' and '1' respectively.* The difference in scores for process and performance grades was computed for each school over two years i.e. 2008-09 and 2007-08. The deviation scores of process and performance grading of schools were within the range of ± 3. Further, school grade scores of 2008-09 were subtracted from corresponding grade scores of 2007-08. Negative scores indicated improvement in grades whereas positive score indicated deterioration in grades. This means -3, -2 and -1 were indicative of three, two and one grade improvement whereas 3, 2, and 1 indicated three, two and one grade point deterioration. The frequencies of schools on a 7x7 matrix reveal the relationship between process and performance grading of schools (See Table 12).

Table 12: Relationship between Process Grading and Performance Grading of Schools

Deviation in Performance Grade ↓	Deviation in Process Grade →							
	-3.00	- 2.00	- 1.00	0.00	1.00	2.00	3.00	Total of No. of Schools (Performance Grading)
-3.00	0	0	0	0	0	0	0	-
-2.00	0	0	1	3	0	0	0	4
-1.00	1	3	4	32	3	0	1	44
0.00	5	17	26	162	50	14	5	279
1.00	2	4	0	15	1	0	1	23
2.00	0	0	0	2	0	0	1	3
3.00	0	0	0	0	0	0	0	-
Total No. of Schools (Process Grading)	8	24	31	214	54	14	8	353

With respect to the performance grades of schools, most schools maintained status quo and any improvement or deterioration was within the range of ± 2 grades in some schools. There was no change in the performance grade in

279 schools out of the 353 sample schools (79%). In 44 (12.5%) schools there was an improvement of one grade in performance grading and only 4 (11.3%) schools improved two grades over a period of one year. No school indicated an improvement of three grade points. On the contrary, there was a deterioration of one grade in performance grading in 23 (6.5%) schools and two grades in 3 (less than 1%) schools. There were no schools where performance grades had deteriorated three grades.

Similarly with respect to the process grades of schools, the majority of the schools showed no change, and if there was any improvement or deterioration, it was within the range of ± 3 grades in very few schools. There was no change in the process grading of schools in 214 schools out of the 353 schools (60.6%). In 31 schools (8.78%) there was an improvement of one grade in process grading and only 24 schools (6.79%) improved to two grades and 8 schools (2.3%) improved to three grades over a period of one year. On the contrary, there was a deterioration of one grade in 54 schools (15.3%), two grades in 14 schools (4.0%) and three grades in 8 schools (2.3%). For the majority of schools (162; 58.1%), neither the process nor performance grade changed from between 2007-08 and 2008-09.

For those schools that did show changes, there was very little relationship seen between process grading and performance grading; for example, there were only nine schools with improvement for both process grade and performance grade (2.5%), and only 3 schools with decreasing scores for both process grade and performance grade (<1%). Though this correlation was not tested with a statistical test, these results suggest that process grading had no impact on performance grading and the vice versa.

3.3.2 Is There Any Impact of Process and Performance Grading on Children's Learning Achievement?

In order to answer this question, we also looked at the relationship between process and performance grading. We found that most schools saw no change in process or performance. In order to understand the impact of process and performance grading of schools on learning achievement of children, school grades during 2008-09 and achievement scores of class V children during April, 2009 were taken into consideration. Pearson's correlation was computed to assess the correlation between process grading and performance grading of schools and the learning achievement of children in Telugu, Mathematics, EVS-I and EVS-II. In other words, this test was done to assess whether schools given higher process or performance grades also had higher achievement scores of children, and whether schools given lower process or performance grades also had lower achievement scores of children.

The correlation values in Table 13 indicate that there were only very weak correlations between process and performance grading of schools and the achievement of children in any of the subjects, and that the majority of the correlations were not significant. Process grading and achievement of children were almost independent of each other as no significant relationship was evident. It may be assumed that the process grades were assigned to schools based on quality indicators that were not directly related to academic aspects and hence its contribution to the achievement levels of children was negligible. There was no significant relationship between performance grading of schools and learning achievement of children in all the subjects except in Telugu, where a weak, but a significant relationship was found. Though significant, the magnitude of correlation was not sufficient to explain whether the improvements in learning achievement in Telugu could be attributable to the performance grade of schools or not. However, the policy makers had visualized during the planning of CLAPS that, "performance grading would be a diagnostic tool that would help both children and teachers to identify and improve the grey areas." Though process grading of schools was an important component of CLAPS, variations in achievement levels of children during 2008-09 could not be attributed to process and performance grading of schools between the two academic years (2007-08 and 2008-09).

Table 13: Correlation of Process Grading and Performance Grading with Achievement of Children

Grade Deviation	Achievement in April 2009 of Class V Children				
	N	Pearson's R for Telugu	Pearson's R for Mathematics	Pearson's R for EVS-I	Pearson's R for EVS-II
Process Grade (2008-09)	211	0.13	0.08	0.09	0.09
Performance Grade (2008-09)	208	0.15*	0.05	0.07	0.09

* Significant at 0.05 level

3.3.3 Perceptions of teachers on grading of schools

In order to triangulate the quantitative findings with the qualitative ones, teachers' perception on this aspect was obtained through a questionnaire and analyzed. Out of a total of 715 sample teachers, 700 teachers responded on this aspect. As depicted in Figure 10 (Appendix Table C41), 63.14% of teachers indicated that performance grading 'facilitated most' in enhancing learning levels whereas 51.15% of teachers expressed that process grading 'facilitated most'. On the other hand, the figure also reveals that very few teachers felt that performance grading or process grading impeded in raising the learning levels of children. There were some variations in these results among the responses from teachers in different districts, see Figure 11 (Appendix Table C42) and Figure 12 (Appendix Table C43).

Figure 10: Comparison between Teachers who Perceived Performance Grading and Process Grading to be Facilitating Children's Learning Achievement

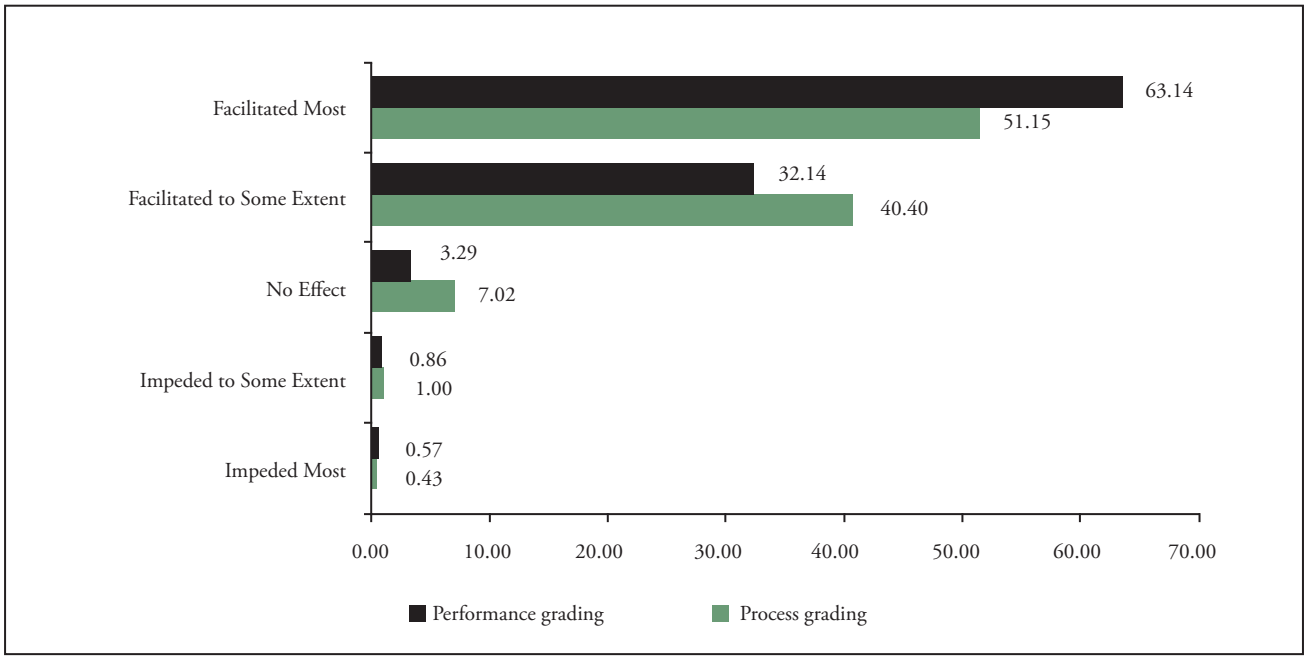


Figure 11: Percentage of Teachers who perceived that Performance Grading facilitated Children's Learning Achievement

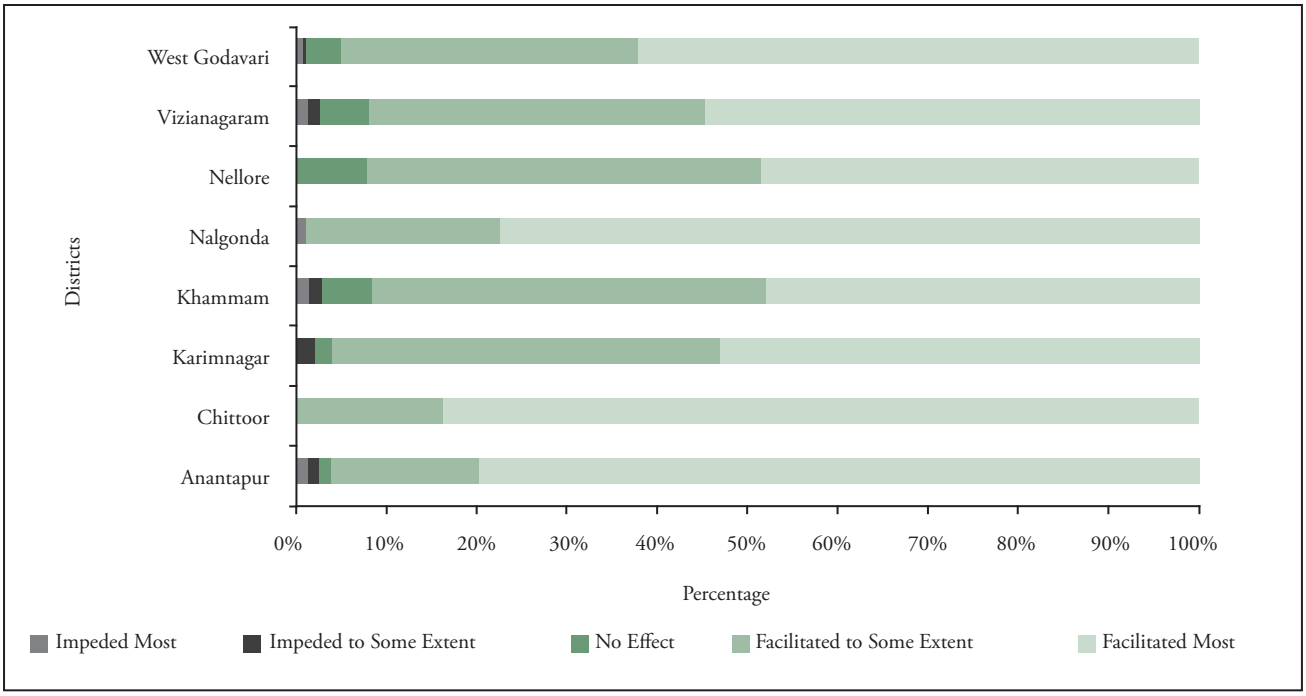
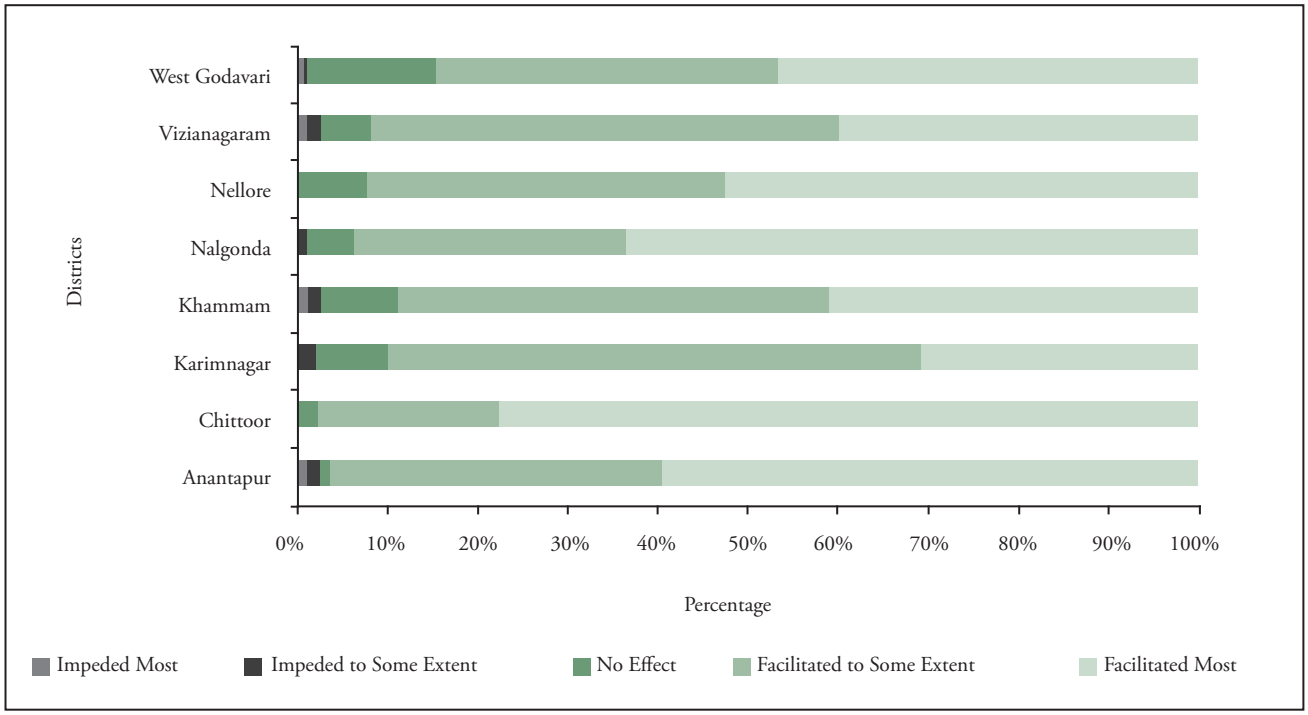


Figure 12: Percentage of Teachers who perceived that Performance Grading facilitated Children's Learning Achievement



Process grading of schools had no impact on performance grading in improving the school grades and vice versa. There was no correlation between process grading or performance grading of schools and learning achievement of children of class V in any of the subjects. However, teachers were of the opinion that both process and performance grading of schools positively impacted the learning achievement of children.

3.4 Evaluation Question 4: Has CLAPS achieved its objectives?

The objectives of CLAPS as mentioned in the programme document are: enhancement in learning levels of children for identified competencies in different curricular areas; improvement in classroom teaching learning processes by focusing on Competency Based Teaching Learning (CBTL); development of reading habits amongst children and strengthening of home school links.

The results are presented by providing an overall picture of the state, following which district level analysis has been given. Keeping in view the objectives of CLAPS, this sub-section has been divided into the following five parts.

3.4.1 Has CLAPS enhanced learning levels of children in specific programme-defined competencies identified for different curricular areas?

3.4.2 Has CLAPS enhanced school achievement levels of children in curricular areas?

3.4.3 Has CLAPS improved classroom teaching learning processes by focusing on Competency Based Teaching Learning (CBTL)?

3.4.4 Has CLAPS developed reading habits amongst children?

3.4.5 Has CLAPS strengthened home-school Links?

The first two questions are considered primary, because they deal with learning and achievement among children as ultimate impact or outcome that CLAPS is trying to achieve. Section 3.4.1 will assess changes in the competencies as defined by CLAPS among Class III and Class V children. Secondly, section 3.4.2 will assess changes in school achievement scores of Class III and Class V children. Both sections include:

1. A comparison of the baseline point at the beginning of the CLAPS program (cohort I, data collected from December 2006 school records) to a different group of children at the endpoint for this evaluation study (cohort II, data collected as part of this evaluation study in February/March 2010); and
2. A comparison of scores over time during the CLAPS program (time series data, at approximately one year intervals between December 2006 and April 2009).

A variety of statistical tests, including chi-square and ANOVA, were used to make these comparisons. Comparisons were made both between mean scores for competencies or school achievement, or proportions of children falling into Group 'A' (achieving 80% or more). It must be noted, however, that all of these comparisons should be interpreted with caution, because the design of the study does not allow one to attribute any differences in scores to the CLAPS program. In other words, children's scores are likely to naturally improve over time, and it was not possible in this study to make comparisons with a group that did not receive CLAPS. Because these alternative explanations for changes in scores cannot be ruled out, it may not be possible to attribute changes to the CLAPS program.

In addition, data on perceptions from a variety of stakeholders was used to triangulate quantitative data related to enhancement of learning and achievement levels. Perceptions from a variety of stakeholders and observation data were used answer questions in sections 3.4.3, 3.4.4, and 3.4.5 regarding improvements in classroom processes, development of reading habits among children and improvements in home-school links.

3.4.1 Has CLAPS enhanced learning levels of children in specific programme-defined competencies identified for different curricular areas?

As described above, this section will compare competency scores as defined by CLAPS at the baseline assessment (cohort I, December 2006) to the endpoint assessment (collected as part of this evaluation in February/March 2010). It will then present time series data comparing achievement of competencies, and followed by data on stakeholder perceptions with regard to achievement of competencies.

3.4.1.1 Comparison of programme-defined competency scores at the beginning of CLAPS programme (cohort I) to the end of CLAPS program (cohort II)

The major focus of CLAPS was to develop specific competencies in all the curricular areas. In each curricular area, two core competencies were identified. Based on the attainment of these competencies, children were divided into two groups, 'A' and 'B'. Group 'A' was comprised of children whose competency attainment was 80% and above and Group 'B' was comprised of children whose attainment was less than 80%. In order to assess whether there were significant differences in the percentages of children in 'A' group between cohort I and cohort II, a chi-square test of significance was used.

The values of chi-square were significant for all the competencies of class III children, indicating that there was a significant difference in the number of children in the 'A' group between baseline and endpoint assessments (see Table 14 below). However, it should be noted that this change was not in the expected direction. *In other words, core competencies of children of class III seem to have decreased, as there was a lower percentage of 'A' group children at the endpoint assessment compared to the baseline assessment.*

Table 14: Chi-square values comparing percentage of 'A' group children in Class III for different competencies at baseline (cohort I) and endpoint (cohort II)

Competencies	% of 'A' Group Children		Chi-square	Sig
	Baseline* (Cohort I, n=4262)	Endpoint** (Cohort II, n=3823)		
Telugu Competency 1	33.9	29.1	6.65	0.01
Telugu Competency 2	25.4	12.1	435.33	0.00
Mathematics Competency	32.3	23.2	123.33	0.00
Mathematics Competency 2	25.0	17.1	106.36	0.00
EVS1 Competency 1	28.0	15.0	378.29	0.00
EVS1 Competency 2	25.6	14.5	270.83	0.00
EVS2 Competency 1	27.7	4.6	1688.93	0.00
EVS2 Competency 2	24.8	11.9	413.88	0.00

The values of chi-square were significant for all the competencies of class V children except competency 2 of both Telugu and Mathematics. This indicates that there exists a significant difference in the number of children in group 'A' between baseline and endpoint assessments in all the competencies except competency 2 of Telugu and Mathematics. *Similar to Class III children, however, competencies of children of class V seem to have substantially decreased, and there was a greater percentage of 'A' group children at baseline than at the endpoint assessment in all the curricular areas* (Table 15).

Table 15: Chi-square values between comparing percentage of 'A' group children in Class V for different competencies at baseline (cohort I) and endpoint (cohort II)

Competencies	% of 'A' Group Children		Chi-square	Sig
	Baseline* (cohort I, n=4964)	Endpoint** (cohort II, n=4415)		
Telugu Competency 1	36.4	34.7	28.17	0.00
Telugu Competency 2	28.0	25.9	3.56	0.059
Mathematics Competency 1	33.5	22.9	202.53	0.00
Mathematics Competency 2	26.2	22.9	0.81	0.369
EVS1 Competency 1	30.3	16.8	441.9	0.00
EVS1 Competency 2	26.9	24.0	0.013	0.91
EVS2 Competency 1	29.3	15.7	454.3	0.00
EVS2 Competency 2	26.7	16.2	243.67	0.00

3.4.1.2 Comparison of programme-defined competency scores at different points throughout CLAPS programme (time series data)

In order to ascertain whether the competencies of children in different curricular areas improved at different points of time during the implementation of CLAPS, cross-tabulation tables were prepared and chi-square tests were conducted to compare the number of children in Group A (i.e., the number of children who received 80% or more) to the number of children in Group B. Child data from December '06 to April '09 was examined. A chi-square was calculated to determine whether there was a significant difference in the percentage of 'A' group children at different time points.

See Table 16 below. The values of chi-square were significant for all the competencies at different points of time, indicating that number of 'A' and 'B' group children differed across time, and that these differences in the number of children in 'A' and 'B' groups were not by chance. With regard to the magnitude of variation, a gradual decline from December '06 (baseline) perhaps corroborates the similar declining trend observed in Tables 14 and 15 provided above. Similar trends were evident in respect of both the competencies of Telugu and Mathematics competency-2. However, the magnitude of chi-square values is varying with an increase during April '07. With regard to competency-1 of EVS1 there was increase in chi-square values different points of time but was fluctuating in competency 2 of EVS1.Similarly, competency-1 of EVS-II had a gradual increase of chi-square and there was a rise during April '09 in competency 2.

Table 16: Chi-square values comparing A and B children in different competencies across time

Competencies	Dec '06	Apr '07	Apr '08	Apr '09
Telugu Competency 1	46.12**	42.77**	14.96**	5.67**
Telugu Competency 2	89.21**	81.03**	43.61**	13.63**
Mathematics Competency 1	11.22**	24.56**	7.59*	12.89**
Mathematics Competency 2	71.68**	60.25**	26.44**	17.23**
EVS1 Competency 1	-	-	26.13**	48.79**
EVS1 Competency 2	-	-	26.70**	48.58**
EVS2 Competency 1	-	-	33.14**	35.96**
EVS2 Competency 2	-	-	33.77**	57.52**

* $p<0.05$ and ** $p<0.01$

In order to know whether these variations were in favour of improvement in competencies, percentage of children in 'A' group over time was examined. Table 17 below shows that there was a mixed trend of rise and fall of percentages of 'A' group children. At the baseline, percentages of 'A' group children ranged from about 55 to 80 in different curricular areas. Competency 1 of Telugu and competency 2 of Mathematics recorded the highest (79.5) and lowest (55.6) percentage of 'A' group children. The percentage of children in 'A' group across all the curricular areas in April '09 ranged from 64.5% to 81.1% Competency-1 of Telugu recorded the highest proportion of 'A' group children (81.1%) and competency-2 of Mathematics recorded the lowest percentage of 'A' group children (64.5%).

Table 17: Percentage of children in 'A' group over different temporal points

Competencies	Dec '06	Apr '07	Apr '08	Apr '09
Telugu Competency 1	79.5	84.8	76.0	81.1
Telugu Competency 2	63.2	70.4	61.4	66.4
Mathematics Competency 1	70.5	79.5	76.1	74.3
Mathematics Competency 2	55.6	65.9	62.0	64.5
EVS1 Competency 1	-	-	65.9	70.9
EVS1 Competency 2			66.8	73.6
EVS2 Competency 1	-	-	68.2	69.6
EVS2 Competency 2			65.7	71.2

* p<0.05 and ** p<0.01

3.4.1.3 Stakeholder perceptions regarding accomplishment of competencies

In order to triangulate the above findings, opinions of implementers and stakeholders were also sought and analysed. The majority of teachers expressed through questionnaires that with the introduction of the CLAPS intervention children accomplished competencies to a 'great extent' in Telugu (65.9%) and Mathematics (55.1%). Less than 50% opined that competencies in EVS1 (47.8%) and EVS2 (48.3%) were accomplished to a 'great extent'. A negligible percentage (0.3%) felt that the competencies were not accomplished at all (Appendix Table C44). Similar opinions were expressed by teachers in interviews also. The majority of them opined that the competencies in Telugu (68.5%) and Mathematics (63.7%) have been achieved to a great extent (Appendix Table C45).

Progress in Attainment of competencies among Children:

1. **Results showed a decline in the percentage of children in 'A' group (i.e. achieving 80% or higher) at the end of the programme in comparison to the beginning, for both classes III and V.**
2. **In the case of Telugu and Mathematics, there was a marked improvement in attainment of competencies during the first six months of CLAPS intervention in all the competencies but it could not be sustained to the next year. The exception was in competency 2 of Mathematics, for which there was some improvement in the consequent year of CLAPS implementation.**
3. **For EVS I and II, an improvement was observed from April '08 to April '09.**

3.4.2 Has CLAPS enhanced school achievement levels of children in different curricular areas?

3.4.2.1 Comparison of *school achievement scores* at the beginning of CLAPS programme (cohort I) compared to the end of CLAPS program (cohort II)

This sub-section deals with the achievement related data, obtained from school records (baseline – cohort I) and endpoint tests (cohort II) administered by the evaluation team. The achievement results of classes V and class III are

presented separately so as to know whether there were differences seen in these comparisons. In order to measure the achievement of children in Telugu and Mathematics, both written and oral tests were administered. Oral tests will be discussed separately later in this section, because there were no baseline results available to make comparisons. Significance of the mean differences between baseline (cohort I) and endpoint (cohort II) written achievement test scores on Telugu, Mathematics, Environmental Studies 1 (EVS-1) and Environmental Studies 2 (EVS-2) were obtained class wise. There was a significant difference between means of cohort I and cohort II based on total achievement of class III and class V children. When means were compared, it was evident that there was a significant improvement (8.87) in total achievement of class V children whereas no such improvement was evident in class III children. See Table 18 below.

Table 18: Significance of difference of means between cohort I and cohort II in respect of total achievement of class III and class V children

Class	Group	Mean	SD	N	Df	CR	Sig
Class V	Cohort-I	55.59	20.48	4964	9377	21.25	0.000
	Cohort-II	64.46	19.78	4415			
Class III	Cohort-I	54.40	20.19	4262	8083	5.96	0.000
	Cohort-II	51.31	26.31	3823			

*Mean Difference = Cohort-II - Cohort-I

Further, mean differences of cohort-II and cohort-I achievement scores of class III and V children in all curricular areas were analyzed. The values of CRs between cohort-I and II with respect to achievement of children in all the curricular areas were significant, except Mathematics achievement in class III. There was an improvement in achievement from cohort I (baseline) to cohort II (endpoint) in case of class V while class III children have better achievement scores in cohort I as compared to cohort II in all the curricular areas.

With regard to achievement of class III children, a significant difference was found between cohort II and cohort I but these differences were in favour of cohort I (i.e., proportion of A-group children at baseline was greater than proportion of A-group children at endpoint). The magnitude of difference in means was higher in Telugu language (-7.47) followed by EVS2 (-3.46) and EVS1 (-1.43) in respect of class III children (Table 19). In class V, a substantial improvement in Telugu (9.75), EVS1 (9.12), Mathematics (9.09) and EVS2 (7.47) achievement was evident from their mean differences. See Table 19.

Table 19: Values of CRs between baseline and endpoint in respect of achievement in different curricular areas

Sample	Curricular areas	Mean Difference*	CR**	Sig
Class V	Telugu	9.75	18.332	.000
	Mathematics	9.09	17.200	.000
	EVS1	9.12	20.351	.000
	EVS2	7.47	16.595	.000
Class III	Telugu	-7.47	12.703	.000
	Mathematics	-0.02	0.027	.979
	EVS1	-1.43	2.392	.000
	EVS2	-3.46	6.166	.020

*Mean Difference = Cohort-II - Cohort-I, CR** = Critical Ratio

A. District-wise Analysis of Achievement:

Table 20 compares the baseline and endpoint scores of children of class V in the selected sample districts. For the most part, all districts show improvement in all the curricular areas. One exception is in the case of the Karimnagar district, for which achievement levels of class V children in Environmental Studies II decreased (AM=52.28) compared to their performance in cohort I (AM=53.48). Another exception was that the achievement levels of class V children belonging to Vizianagaram and West Godavari had substantially decreased in cohort II compared to cohort I in all the curricular areas. In Vizianagaram, the margin of mean difference was more in Telugu (10.93) and Mathematics (7.63) whereas in West Godavari district EVS I (11.85) and EVS II (15.73) recorded higher mean difference between cohort I and cohort II.

Table 20: District wise mean values of cohort I (baseline) and cohort II (endpoint) in respect of achievement of Class V children

District	Telugu		Mathematics		EVS I		EVS II	
	Baseline	Endpoint	Baseline	Endpoint	Baseline	Endpoint	Baseline	Endpoint
Anantapur	52.36	68.72	46.21	64.91	46.00	68.44	44.60	70.10
Chittoor	62.08	82.55	61.54	77.79	59.49	70.17	58.03	63.28
Karimnagar	57.61	59.17	52.60	56.05	52.25	60.88	53.48	52.28
Khammam	56.44	79.27	54.69	79.68	51.73	67.20	52.43	71.43
Nalgonda	56.83	85.59	53.46	79.49	50.74	72.37	52.80	75.59
Nellore	62.10	69.57	55.12	64.70	56.63	70.41	55.46	72.86
Vizianagaram	60.04	49.11	55.62	47.99	57.72	53.15	57.93	55.88
West Godavari	66.13	62.40	60.37	50.05	61.51	49.66	62.95	47.22

* Baseline=Cohort I; End Point = Cohort II

Table 21 compares the baseline and endpoint scores of children of class III in the selected sample districts. There was variation among districts as to whether there was improvement evident at the endpoint assessment compared to the baseline assessment. Achievement levels of class III children improved in all the curricular areas in the Nalgonda, Anantapur and Chittoor districts. Achievement levels in Telugu and Environmental Studies II had decreased in Nellore district and in Mathematics and EVS1 for the Khammam district. Achievement levels of class III children did not improve in any of the curricular areas in the Vizianagaram or Karimnagar districts, and improved only slightly in one curricular area (EVSII) for the West Godavari district.

Table 21: District wise mean values of baseline and endpoint in respect of achievement of Class III children

District	Telugu		Mathematics		EVS I		EVS II	
	C-1*	C-II*	C-1*	C-II*	C-1*	C-II*	C-1*	C-II*
Anantapur	44.74	55.55	45.91	65.68	44.62	56.81	43.42	46.20
Chittoor	57.26	80.34	54.67	78.36	52.69	74.02	50.05	77.07
Karimnagar	60.62	40.74	59.35	52.81	55.82	44.54	57.33	41.23
Khammam	62.10	60.55	60.72	77.87	55.38	73.81	55.77	51.24
Nalgonda	57.00	73.47	58.12	86.72	50.12	80.99	53.93	58.29
Nellore	58.30	48.03	60.28	65.96	53.80	57.98	55.41	46.49
Vizianagaram	60.74	25.40	59.15	30.83	57.55	22.74	57.04	17.14
West Godavari	58.26	31.09	65.56	29.27	56.31	23.69	29.39	36.14

*C-1= Cohort I (Baseline); C-II= Cohort II (End Point)

B. Locale-wise analysis between Cohort I and Cohort II achievement scores:

The state level results revealed that the magnitude of improvement was more in rural schools of the state as compared to urban schools (See Table 22 below). This was evident from mean differences between cohorts I and II. While comparing the improvements across the subjects, it was noticed that class V rural children improved their achievement levels most in Telugu. This was followed by improvement in Mathematics and Environmental studies I and II respectively. However, for the urban children, improvement in Telugu was followed by improvement in EVS I, Mathematics and EVS II.

Table 22: Locale-wise CR values between Cohort I and Cohort II in respect of achievement of Class V children

Level	Subjects	Rural			Urban		
		Mean Difference	CR	Sig	Mean Difference	CR	Sig
State	Telugu	9.91	17.09	0.00	8.69	6.53	0.000
	Mathematics	9.62	16.63	0.00	6.08	4.67	0.000
	EVS1	9.52	19.46	0.00	6.99	8.23	0.000
	EVS2	7.88	16.03	0.00	5.23	4.66	0.000

Mean difference= Cohort II - Cohort I

The values of CRs were significant between cohort I and cohort II performance of class III children belonging to both rural and urban schools in Telugu and EVS II whereas the values of CRs were not significant for Mathematics and EVS I when total sample of rural and urban schools were taken into consideration (See Table 23 below).

Table 23: Locale wise CR values between cohort I and cohort II in respect of achievement of Class III children

Level	Subjects	Rural			Urban		
		Mean Difference	CR	Sig	Mean Difference	CR	Sig
State	Telugu	-6.45	10.21	0.000	-13.88	8.71	0.000
	Mathematics	0.075	0.116	0.908	-0.641	0.401	0.689
	EVS1	-1.16	1.798	0.072	-3.12	1.94	0.053
	EVS2	-3.22	5.35	0.000	-4.78	3.08	0.002

Mean difference= Cohort II - Cohort I

3.4.2.2 Comparison of school achievement scores at different points throughout the CLAPS programme (time series data)

In order to assess the progress of children in their overall achievement in different curricular areas at different point of times from the beginning to end of CLAPS, repeated measures ANOVA were carried out for all the subjects for the state overall (Table 24). For this purpose, achievement data of children during December '06, April '07, April '08 and April '09, in Telugu and Mathematics was collected from school records for children in Classes III and V at the time of data collection. In the case of EVS, the time series data were available in an interval from April '08 to April '09. One limitation was that improvements due to natural changes over time were not controlled. This could not be controlled, as a control group was not available.

There was a significant variation evident over time in achievement of children in all the subjects, as evident from the ANOVA results shown in Table 24. The main effects were significant for achievement in Telugu ($F(4, 1705) = 16.85$, $p < 0.01$), Mathematics ($F(4, 1705) = 48.89$, $p < 0.01$), EVS1 ($F(2, 1707) = 14.98$, $p < 0.01$) and EVS2 ($F(1, 1708) = 36.37$, $p < 0.01$).

Table 24: ANOVA repeated measures on criterion Achievement in Different Subjects over Time (Whole State)

Subject	Multivariate		Within Subjects Effects		Within Subjects Contrasts	
	df	F	df	F	df	F
Telugu	4, 1705	16.85*	4, 6832	13.14*	1, 1708	14.18*
Mathematics	4, 1705	48.89*	4, 6832	54.46*	1, 1708	63.71*
EVS1	2, 1707	14.98*	2, 3416	13.43*	1, 1708	13.42*
EVS2	1, 1708	36.37*	1, 1708	36.37*	1, 1708	36.37*

* P<0.01

A. District-wise Analysis of Achievement:

Tables 25 to 27 show the achievement of children in each district over time, for the subjects of Telugu, Mathematics, EVSI and EVSII. In Telugu, six out of eight districts showed an improvement in achievement from Dec. '06 to April '07, marginal decline from April '07 to April '08, and again little improvement from April '08 to April '09 (see Table 25).

Table 25: Mean achievement in Telugu at different temporal points

Districts	Dec '06	Apr '07	Apr '08	Apr '09
Anantapur	54.01	55.19	58.52	53.94
Chittoor	66.61	69.43	63.91	65.23
Karimnagar	60.29	65.69	62.55	66.86
Khammam	65.11	67.51	66.35	71.37
Nalgonda	64.17	67.49	62.89	64.29
Nellore	67.83	68.91	66.91	75.67
Vizianagaram	59.44	64.43	63.16	63.16
West Godavari	70.81	63.16	63.75	71.09
State	**62.75**	**65.10**	**62.94**	**65.10**

In Mathematics, the trend for State-level showed an improvement in achievement from Dec. '06 to April '07, decline from April '07 to April '08, and again little improvement from April '08 to April '09 (see Table 26).

Table 26: Mean achievement in Mathematics at different temporal points

Districts	Dec '06	Apr '07	Apr '08	Apr '09
Anantapur	52.72	56.72	52.87	53.44
Chittoor	63.19	68.26	64.07	63.79
Karimnagar	61.36	64.74	65.45	62.79
Khammam	63.31	66.89	64.46	71.62
Nalgonda	62.95	67.22	62.21	61.02
Nellore	68.52	71.58	63.75	67.65
Vizianagaram	58.60	64.72	61.26	60.21
West Godavari	70.51	65.98	65.69	65.91
State	**61.78**	**65.33**	**62.00**	**62.17**

For EVS-I, five out of eight districts showed an improvement in achievement levels. For EVS-II, improvement in achievement levels was observed in seven out of eight districts (See Table 27).

Table 27: Mean achievement in EVS I & II at different temporal points

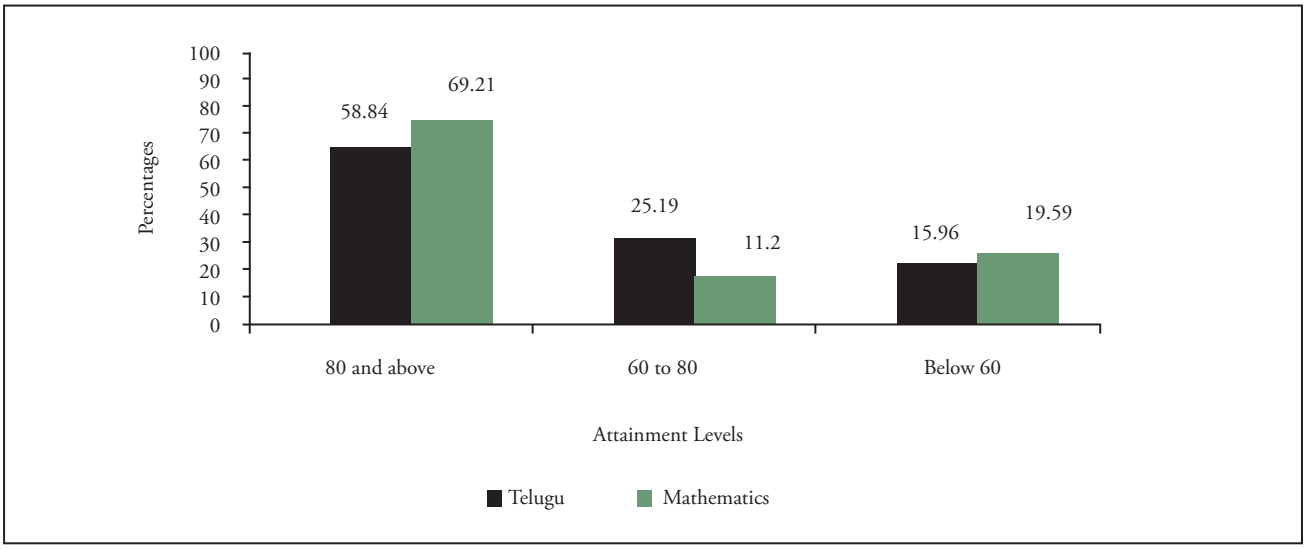
Districts	EVS-I		EVS-II	
	Apr '08	Apr '09	Apr '08	Apr '09
Anantapur	54.83	53.03	54.79	51.03
Chittoor	59.23	62.52	59.52	64.64
Karimnagar	58.98	63.33	58.16	62.72
Khammam	63.80	69.30	63.71	67.23
Nalgonda	55.93	55.72	53.69	55.40
Nellore	61.39	70.76	61.11	70.48
Vizianagaram	61.01	60.24	53.56	58.78
West Godavari	66.65	69.93	65.80	66.04
State	**58.74**	**61.29**	**57.88**	**60.65**

3.4.2.3 Status of Achievement in Oral Tests

Oral tests of Telugu and Mathematics were administered to five randomly selected children each of class V and class III from all the selected schools. Children of classes V and III were then grouped into three categories on the basis of their obtained scores for analysis (80% or above, between 60% and 80% and less than 60% in the oral tests). Frequencies and percentages were computed to identify the number of children in each category; see Figures 13 (Appendix Table C46) and 14 (Appendix Table C47).

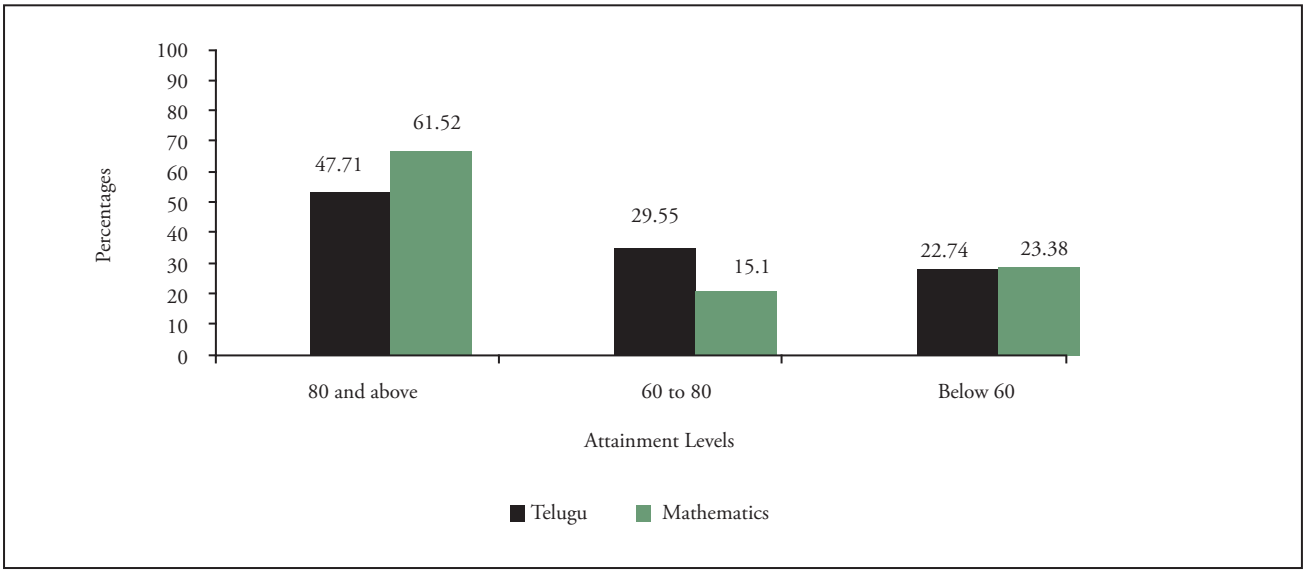
The results revealed that most children in Class V were able to attain more than 80% on these oral tests (69.2% in Mathematics, 58.8% in Telugu). About 16% of class V children obtained less than 60% in Telugu compared to 19.6% who obtained less than 60% in Mathematics.

Figure 13: Attainment levels of Class V children in Telugu and Mathematics oral tests



Similarly, the largest proportion of Class III children obtained more than 80% in Mathematics (61.52%), however only 47.7% of children reached this level in Telugu. There were many children who attained between 60% and 80% (29.55% Telugu; 15.1% Mathematics) and below 60% (Telugu 22.7%; Mathematics 23.4%).

Figure 14: Attainment levels of Class III children in Telugu and Mathematics oral tests



With regard to the opinion of parents on language and computational skills of their children, a large majority of parents stated that that their children could carry out simple numerical and algebraic calculations needed for activities such as calculating the milk mans' bills (92%). This was followed by children's abilities of reading fluently (82.5%). Furthermore, parents also reported that their children could write letters correctly (66.7%). On the whole they were of the opinion that their children's communication and computation skills had improved as had been observed by them in their day-to-day life interactions with their children (Appendix Table C48).

3.4.2.4: Stakeholder perceptions regarding impact of CLAPS on achievement

In order to triangulate the above findings with the perception of different stakeholders, analysis was completed with responses to questionnaires and interviews with different stakeholders. More than fifty percent of parents expressed that they were satisfied to a 'great extent' (59.5%) with the performance of their children in Telugu. Slightly less than 50% of the parents interviewed, expressed substantial satisfaction with regards to their children's performance in both Mathematics and EVS. Likewise, just under half of them were also satisfied 'to some extent' with their children's performance in English (46.6%) (Appendix Table C 49).

Mandal Resource Persons (MRPs) were also asked to rank the strategies of CLAPS in order to ascertain their opinions regarding the effectiveness of the CLAPS strategies in enhancing the learning achievements of children. A composite score was arrived at assigning score of 1 to 11 for the rankings given by MRPs. The frequencies of particular ranks were multiplied to the corresponding score value of that rank to arrive at a composite score. These composite scores were put into an ordinal scale. There were a total of eleven strategies that were ranked from 1 to 11, 1 being the highly ranked and 11 being the least ranked strategy. Out of these strategies, the first five rankings were given by MRPS were Competency based teaching, attendance of children and teacher attendance, Monitoring and Review, and SMC and AMC meetings. Star Grading of Schools, Performance Grading of Schools, and Positioning of Vidya Volunteers were the lowest ranked (Table 28 below).

Table 28: Ranking of CLAPS Strategies for Children Learning by MRPs

Strategies	Rank
Competency Based Teaching Learning	1
Attendance of Children	2
Teacher Attendance	3
Monitoring and Review	4
SMC & AMC Meetings (Home School Link)	5
Regular Testing of Children	6
Teacher Training	7
Innovative Activities	8
Star Grading of Schools	9
Performance Grading of Schools	10
Positioning of Vidya Volunteers	11

The majority of MEOs indicated that Competency Based Teaching Learning (92.1%) affected the learning achievement of children. Besides Competency Based Teaching Learning, the other strategies that MEOs believed to be effective in enhancing the learning achievements of children were School Level Monitoring and Reviews (78.9%); Regular Assessment of Children (73.7%); AMC Meetings and regular Training of Teachers (71.1%); Classroom Library (60.5%); and Performance Grading of Schools (57.9%). Of all the strategies of CLAPS, MEOs rated CBTL as most effective in improving learning achievements of children (Appendix Table C50).

Enhancement in School Achievement among Children:

1. **Comparisons of Cohort I to Cohort II showed that achievement levels of class V children were significantly greater for all subjects at the state level, and that this was true for most districts. This was not true for Class III, and in many cases cohort II actually had significantly lower scores than cohort I.**
2. **Cohort II scores were significantly better than cohort I scores for Class V children belonging to both rural and urban schools of the state in all curricular subjects. This was not true for Class III.**
3. **Time series data trends at the State level for Telugu and Mathematics showed an improvement in achievement in the first six months of CLAPS, then a decrease from April '07 to April '08. Between April '08 and April '09, scores increased for Telugu and EVS but remained about the same for Mathematics. The patterns seen at the state level were similar to that of most districts.**
4. **The majority of class V children showed improvement in oral computation and verbal skills in Telugu and Mathematics. In class III and impact on improving mental Mathematics was evident but there was no such impact on Telugu. A large majority of parents were satisfied with their children's performance on communication and computation skills.**
5. **More than fifty percent of parents were satisfied with their children's performance in different curricular areas. CBTL was found to be most effective strategy for improving achievement level of children as opined by MEOs. While the views of MRPs on CBTL was contrary to this perception.**

3.4.3 Has CLAPS improved classroom teaching learning processes focusing on Competency Based Teaching Learning (CBTL)?

Teachers and their classroom practices were two major sources of data that helped in ascertaining whether classroom processes were improved by using CBTL in all the subjects of classes III and V. Opinions of teachers and classroom observations of Telugu, Mathematics and EVS of practicing teachers were analysed.

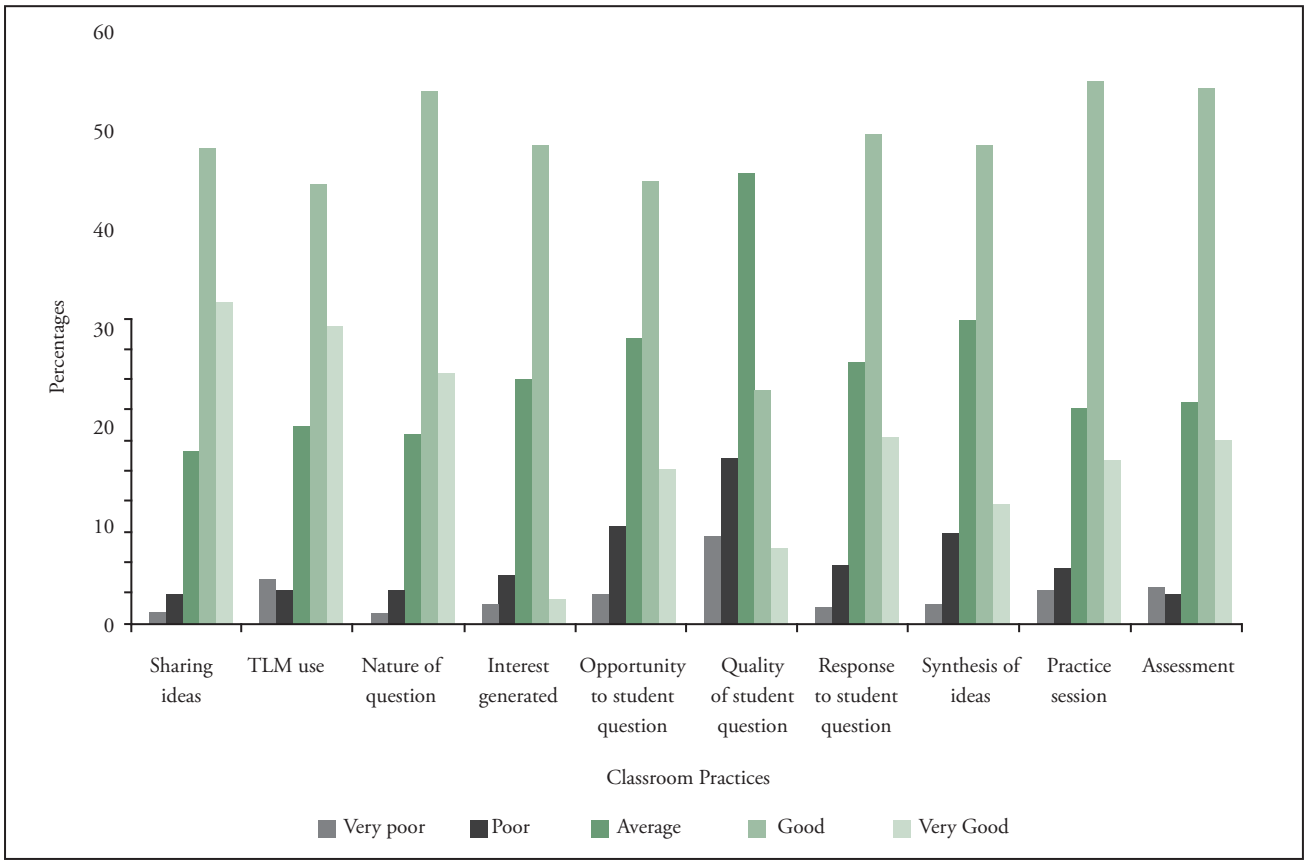
Teachers' opinions were sought and analysed through a questionnaire on teacher training, CBTL and special strategies for 'B' group children. The majority of teachers expressed that teacher training material 'facilitated most' in improving their classroom transactions (62.2%), whereas 32.9% opined that it facilitated 'to some extent'. Teachers who indicated that training material impeded their classroom transactions were found to be negligible (0.4%). Similarly, the majority of them felt that teacher training facilitated most in improving their classroom transactions (Appendix Table C51). With regard to CBTL, the majority of teachers felt that in general it helped them to improve their classroom practices (64.9%). In addition, a substantial number of teachers were using special strategies for 'B' group children (57.6%), which helped in teaching-learning (Appendix Table C 52).

The classroom observation schedule was used to study the classroom process in all the curricular areas. This tool mainly focused on relevance of material used for the activity, introduction of lesson/topic, practices used to develop competencies, use of specific strategies for 'B' group children and teaching learning method used in the classroom. The material used to conduct activities in the classroom was found to be relevant to a great extent in 57% of classroom observations. For the most part, teachers used either questioning (91.3%) or discussion (55.6%) to introduce the lesson. Methods which were used by fewer teachers to introduce lessons including experimentation (19.5%), narration/story (25.6%), games (13.7%) and songs (11.2%) (Appendix Table C 53).

Classroom practices that were considered important in developing competencies were organization of activities, relevance of activities, and involvement of children, assessment procedures and specific strategies for 'B' group children. Very few teachers (5.4%) were observed to organize large group activities whereas most of children were found to be engaged in individual (59.6%) or in small group activities (34.3%).

A large majority of activities in the classroom were found to be relevant to the intended competency to be developed (94.9%). Frequently used assessment procedures as observed were: oral questioning (95.3%) followed by written work (73.6%) and monthly tests (31.4). It was observed that teachers used specific strategies both during teaching time (57.8%) and in a separate period (39.4%) for 'B' group children. (Appendix table C54)

Figure 15: Classroom Practices



Teacher-children interaction during classroom transaction was observed on a five point scale (Very Poor, Poor, Average, Good and Very Good) on ten related aspects of teaching-learning, namely, sharing ideas, use of TLM, nature of questions, interest generated amongst children, opportunity to student to ask question, quality of children's questions, response to children's question by teacher, synthesis of ideas, practice session and assessment. Classroom practices that were given a rating of 'very good' on a five-point scale in more than 20% of classroom observations were sharing ideas (32.1%), use of TLM (29.6%), and questioning (24.9%).

Though negligible, quality of student questions (8.3%) was rated very poor, followed by TLM use (4.0%). However, quality of student questioning was rated on the whole as average (45.1%) in the majority of classroom observations. The practices that were rated as 'Good' in majority of classroom observations were practice sessions for activities (54.5%), assessment (53.8%) and nature of questions (53.4%). On the whole classroom practices of teachers were satisfactory as most of the aspects were found above average except quality of student questions (30.3% rated this as 'Good' or "Very Good'). (See Figure 15, Appendix Table: C 55).

Improvements in Classroom Transactions:

1. **The majority of Teachers surveyed indicated that training and training on CBTL helped them to improve their classroom transactions and they were able to use special strategies to help 'B' group children.**
2. **For introducing a lesson questioning and discussion were most frequently used methods by the teachers. Questioning technique was used frequently for assessment followed by written work.**
3. **Individual and small group activities were frequently organized during classroom activities as compared to large group activities.**
4. **On the whole, those observing the classroom practices of teachers rated most aspects as 'good'.**

3.4.4 Has CLAPS developed reading habits amongst children?

Improving reading habits of primary children was one of the objectives of CLAPS. Several activities under CLAPS were intended to achieve this objective. The data were collected from head teachers, teachers, children, parents and observation of classroom library period, for both Class III and Class V.

Teachers were asked to rate the regularity of children in reading classroom library books, on a five-point scale (always, frequently, often, rarely and never). A large majority of teachers (76.5%) indicated that children always read from the classroom libraries and 18.0% of the children opined that they read these books frequently. Further, 95.8% of teachers expressed that setting up of classroom libraries improved reading habits among children (Appendix Table: C56).

Opinions of children were collected on their usage of the classroom library and improvement in their reading habits thereafter/ since the introduction of the library. An overwhelming majority of children (96.8%) reported that, they used the classroom library. On the other hand, while 68.3% of children expressed that they were allowed to read books besides their library periods, another 31.4% reported being denied of this permission. With regard to the types of books children read, almost all children (96.8%) liked to read story books followed by books with songs and poems (82.4%) and subject related books (51.3%). Few children (24.5%) also used the classroom library to read general knowledge books. During the library period, apart from reading books (79%), children also completed their homework (50.7%) and played games (28.8%). Library period helped children to improve their learning of school subjects (96%) and in improving their reading abilities (86.2%). Children opined that their general knowledge also improved due to the classroom library period (52.4%). Almost all children (98.8%) expressed that they gained

in many other ways including the inculcation of the reading habit brought about by the classroom library period (Appendix Table C57).

Library period was also observed in order to know/ identify the manner in which children were engaged in reading. The most common activity during this period consisted of children were reading books independently (92.4%), followed by teacher guided reading (84.8%), pair reading (75%) and reading in small groups (53.3%). A small percentage (13%) of children was found to be engaged in other work during the library period. It was also observed that a few children read intensively during this period (38%) while another 62% did not (Appendix Table C58).

In addition to these results from teachers and children, parents reported that their children could read newspapers fluently (82.5%) and write letters (66.7%) (Appendix Table C59).

Improvement in Reading Habits

1. **Teachers and parents who were interviewed felt that there was an improvement in reading habits of their children.**
2. **Children expressed that their reading habit improved due to the library period, and in turn this helped in improving their learning levels in school subjects. Most of them preferred to read storybooks and were engaged in reading books during the library period.**
3. **Classroom observations revealed that children were either reading books independently or engaged in reading under the guidance of teachers.**

3.4.5 Has CLAPS strengthened home-school linkages?

In order to know how far CLAPS accomplished its objectives related to home-school links, opinions of head teachers, teachers and Mandal level educational officers (MEOs) were sought and analyzed.

Information collected at Parent Teacher Meetings (PTAs) indicated that almost all the sample schools (97%) were recording the minutes of meetings. With regard to major issues discussed in these meetings, children's attendance (42.1%) was found to be the most discussed issue followed by mid day meal (13.9%) and teacher attendance (2.1%). The other issues (comprising 33.3%) discussed in PTA meetings were on cleanliness, performance of children and fund utilization (Appendix Table: C60).

Opinions of teachers pertaining to the home-school link revealed that majority of teachers felt that CLAPS improved home-school links to some extent (46.9%) or to a great extent (42.2%). There were only 9.6% of teachers who expressed that CLAPS had no effect in improving home-school links and very few teachers who reported that CLAPS impeded the home-school link either to some extent (0.8%) or to great extent (0.4%). Responding to the activities of CLAPS that facilitated or impeded the home-school link, they opined that review meetings by the head teacher mostly facilitated (61.8%). This was followed by Academic Monitoring Committee (AMC) meetings (53.8%), educational meals (44.6%) and reviews of Academic Monitoring Officers (44.1%). Some teachers were of the opinion that educational meals (11.6%) and reviews by AMOs (11%) had no effect in strengthening the home-school linkage. With regard to frequency of home visits, most of the teachers visited children's home frequently (44.2%) and interacted with parents (45%) (Appendix Table: C61).

Strengthening Home School Link:

1. **PTA meetings were being held regularly in almost all schools and children's attendance was the most common issue discussed in these meetings.**
2. **Review meetings organized by Head Teachers mostly helped in strengthening home school links, followed by AMC meetings, review meetings of Academic Monitoring Officers (AMOs) and Educational melas.**
3. **Teachers opined that CLAPS helped in strengthening home – school links. Majority of the teachers were frequently visiting children's homes and interacting with their parents.**

3.5 Evaluation Question 5: What unintended outcomes might be attributable to CLAPS? Are these positive or negative?

This evaluation question focuses on evidence of unintended outcomes both positive and/or negative. In educational quality initiatives, apart from intended outcomes a number of unintended outcomes are also observed. This sub-section presents evidences of positive and negative unintended outcomes that could be attributed to the CLAPS quality initiative. Data were collected from various sources such as from the head teachers, teachers, Mandal Education Officers, state level officials, parents and community through interviews and focus group discussions. The field staff and the team members also recorded their observations and reflections in the field notes. Two kinds of evidences were collected for this evaluation question: Data from quantitative sources such as evaluation tools and secondary data available in/ from school records and qualitative data derived from the reflections of the field staff and the team members. Responses were grouped into positive and negative outcomes and further sub-grouped into major themes.

3.5.1 The following themes emerged as positive unintended outcomes

3.5.1.1 Team Spirit developed

A majority of the teachers (95.9%) that were interviewed were of the opinion that since the initiation of the CLAPS intervention children had become friendlier with their peer group and they worked more harmoniously in groups than before. Further probing of teachers revealed that organization of various kinds of educational melas and other innovative activities increased the frequency of participation of children in outdoor activities, which had led to the development of team spirit amongst the children. The analysis of qualitative responses from teacher interviews also confirmed that the organization of educational melas under CLAPS, improved children's inter-personal skills. *"With the involvement of innovative activities particularly the wall magazine and melas, children were getting more opportunities to work together."* One teacher mentioned that increasing the frequency of organization of melas would further strengthen team spirit among children.

3.5.1.2 Improvement in Teacher's Punctuality and Attendance

A majority of parents (91.07%) were of the opinion that teachers' regularity and punctuality in coming to schools had improved during CLAPS. A parent commented during the interview (Appendix Table: C62) that, *"Some new programme is running in the schools during last 2 years. Now teachers are always on time."* Most of the teachers (92.3%) interviewed on this aspect also mentioned that.

"Teachers teaching in primary classes were more regular and punctual in coming to schools." (Appendix Table: C63)

Focus group discussions with community members also confirmed that regularity of teachers had improved. A few parents mentioned that, *"Earlier, they were not visible and used to come late."* This observation was also confirmed by the field staff and team members in the field notes upon visiting schools without prior information.

3.5.1.3 Increased self-esteem and confidence level of children

Most of the teachers (95.1%) who were interviewed commented that the self-esteem and confidence levels of children had increased after the implementation of the CLAPS programme. One Teacher commented:

"With the involvement of children in innovative activities particularly classroom library, school post boxes and wall magazines, they were more open in their views and confident to share their ideas/opinion."

This opinion was corroborated by the majority of parents (86.7%) who were interviewed (Appendix Table: C 65) A few parents expressed the opinion that

"They are now more confident while talking to visitors (unfamiliar persons, survey team)."

Data collected through the focus group discussion also revealed the same opinion by the community members. While analyzing qualitative data from the seventeen FGDs with community members, ten of them highlighted that

"Children are now more outgoing and assist us in understanding social matters."

3.5.1.4 Improvement in Teacher and children's relationship

Parents that were interviewed noted that their children liked the teachers and were less fearful of them. They also mentioned that their children talked about their teachers at home. A majority of the children interviewed mentioned that they liked school (94.51%) because of their teacher's behavior. (Appendix Table: C 66) Children mentioned:

"Most of the time teachers play with us, tell stories. Earlier she used to give work only from the book."

"Earlier teacher(s) give work from the book [to] write questions on the black board. Now in Telugu and Math she sits with us to solve our problem."

Parents also supported this view in their FGDs.

3.5.2 The following appeared to be negative unintended outcomes

3.5.2.1 Effect on Group 'A' children

According to CLAPS implementation plan one period each was devoted to language (Telugu) and Mathematics in all primary classes for remediation to Group B children. Classroom observation data indicated that during remediation of group 'B' group children, group 'A' children were either engaged in providing some help to group 'B' children who were not being attended to by the teacher or engaged with textbooks and worksheets. This practice was de-motivating to 'A' group children and the monthly school records and yearly progress reports also indicated that the

number of 'A' group children was not improving as was expected in the programme. Special strategies were provided to group 'B' children in the classrooms but no specific strategies/material were planned for engaging 'A' group children to sustain and further improve their learning levels.

3.5.2.2 Negative feelings in 'C' and 'D' grade schools

In spite of teachers' awareness about the fact that 'grading of schools' was planned/done to improve the achievement level of children, analysis of teachers' interview data revealed that low grading of schools based on children's performance led to the development of negative feelings amongst them. The assumption was that with close and timely monitoring, the number of 'C' and 'D' performance grade schools would be reduced. However, data collected from teachers revealed that this practice led to the development of feelings of inferiority within the, schools and teachers concerned.

On further probing, they mentioned that the school grading system instead led the teachers to resort to activities such as diluting the assessment system to improve the children's results and thereby improving the school grade.

A few teachers specified that *"assessment of children was sometimes quite liberal as it is a public document"* to depict a positive picture about the school. Secondly, contrary to the implementation plans, the support of MRPs was not available to schools for about an academic year.

3.5.2.3 Mismatching of CLAPS competencies and curriculum competencies

The intention of CLAPS was to upgrade the CLIP competencies from literacy, numeracy level to the understanding level by covering all core curricular areas. Under CLAPS two core competencies were identified in each subject. The basic premise of CLAPS was to develop mastery over these core competencies (80% and above) in different curricular areas. The analysis of classroom observation data indicated that teachers were dealing with core competencies of CLAPS in language and Mathematic separately. They were unable to integrate these competencies with the syllabus of these subjects. This created some gaps in curriculum transaction.

3.5.2.4 More Time Spent in Record Keeping

Data collected in field notes indicated that teachers devoted most of their time to maintaining the records. Many teachers commented that:

"CLAPS prepares us on how to keep records."

The teachers also reported that:

"With the CLAPS programme, paper work/record-keeping tasks have increased many folds. Most of our time goes in keeping the monthly CLAPS exams records. It would be better to utilize this time in teaching the children."

The purpose of record keeping under the CLAPS programme was to have a regular follow up of children's progress and provide timely feedback to their guardians and take corrective measures. The field notes' summaries revealed that teachers had to maintain CLAPS school records separately and most of their time went in this work.

3.6 Key Findings

3.6.1 Teacher Training

- Overall, teacher training was undertaken as intended.
- 93% teachers and other functionaries received training under the CLAPS implementation in the State.
- About 93% teachers received the material and 95% out of those who received trainings received the training material in time.
- Majority of the teachers appreciated the training modules for their presentation, relevance and adequacy of the content. Teachers used the training materials in the schools to a great extent.
- More than 75% of teachers and 83% of MRPs indicated that the training needs of teachers were assessed during the review meetings.
- Directions provided by the State for organizing training programmes were largely adhered to and the mandal resource persons were trained on a regular basis as was visualized under the programme.
- Awareness score of teachers was slightly above average at the state aggregate levels. However, there are significant variations across districts. There were no rural and urban variations with respect to the awareness of teachers.

3.6.2 Competency Based Teaching Learning (CBTL)

- For emphasis on competency based teaching learning remedial teaching period as a regular component in the school time table to ensure that all children improve upon their achievement levels.
- Evident that remedial teaching was provided on a regular basis in language and mathematics to children performing below 80% in respective subjects ('B' group children). In most cases it was observed that teachers were directly helping the children during the remedial periods.
- Teachers stated that they received an orientation on CBTL to address the remedial teaching for 'B' group during teacher training programmes. Ninety six (96%) percent children stated they received remediation in mathematics and 97% received in Telugu.
- Classroom observations of remedial classes indicated that the rate of participation of children was relatively more in mathematics followed by EVS and then in Telugu. Children of class III participated in classroom processes relatively more than children of class V.
- About 92% MEOs have remarked that the teachers used the training material in the classroom teaching. Majority of the DIET faculty stated that they provided guidelines and suggested strategies to handle 'B' group children to teachers.

3.6.3 Innovative Activities

- Evidences suggested that the implementation of innovative activities was implemented as intended in almost all the schools. Honesty box, post-box, wall magazine, classroom library, school cabinet existed in majority of the schools.
- Books were accessible to all the children in all the classroom libraries. The children were issued books for reading besides the library period and the schools maintained an issue registers to keep records of books issued to the children.
- Teachers' were present in the classes during the library period and they were helping children in reading and clarifying their doubts. In some schools they were also found to be helping children in selecting and searching the books from the classroom library.

- Children used classroom libraries for improving curricular subjects, reading ability and general knowledge. Sixty eight (68%) percent children stated that they were issued books besides the library period. They also mentioned that this period helped them in improving their reading ability and general knowledge.
- Number of schools participating in Educational melas including 'Math', 'Language', 'TLM' and 'Vigyaan' Mela, was found to be less than expected.

3.6.4 Monitoring

- The programme was short of being implemented as intended with regard to monitoring and review activities.
- Majority of the teachers reported that academic support expected to be provided by the MRPs was not adequate in terms of content, pedagogy or assessment related issues and problems. The State level officials acknowledged that due to non-availability of MRPs for almost a year, the academic support to the teachers could not be provided during CLAPS.
- The majority of head teachers indicated that they conducted teacher review meetings regularly either fortnightly or monthly in the schools. Academic monitoring committee meetings were organized regularly on monthly basis and these were attended by parents, community members, teachers and head teachers.

3.6.5 Home-school link

- There were substantial efforts under the programme to establish healthy home-school links as stated by the parents and teachers. Visit of teachers to children's homes and their interactions with the parents were frequent and parents too were participating in the meetings organized by the schools.

3.6.6 Effectiveness of Programme Components

- Teacher-training, innovative activities, and awareness of teachers acted as the key predictors which facilitated the learning achievement of children at the school level.
- Across regions findings indicated that teacher-training was found as the single most key predictor in improving achievements in Rayalseema, whereas monitoring and innovative activities in Telangana and Coastal Andhra.
- In three districts out of the eight sample districts innovative activities were found as the key predictor (D1, D2, and D6), followed by teacher training and home-school link which were found in two districts only.
- CBTL, school grading and home-school links were not found to be the key predictors in facilitating the achievement of children in any curricular subject at the state level.
- At the district level, monitoring was not found as key predictor in any district except in Karimnagar. Home-school links, which did not appear as a key predictor at the state level but was found as a key predictor in Nellore, Vizianagaram and West Godavari districts.
- Process grading of schools had no impact on performance grading and vice versa. However, the teachers and other functionaries believed that the grading system would have effect on achievement.

3.6.7 Impact of CLAPS

- The total achievement of children in class V has increased in the State.
- Impact of CLAPS was evident in improvements in achievement levels of children of class V in all the curricular areas in all the districts except Vijay Nagram and West Godavari, where it was evident in two curricular areas.

- In Class III there was no improvement in total achievement of children at the state level. However, impact in improvement in achievement levels of children in class III was evident only in four districts of Anantpur, Chittoor, Nalgonda and Nellore in the state.
- Impact of CLAPS was not evident in enhancing competencies of children in all the curricular areas as there was a decline in percentage of children in 'A' group at the end of the programme compared to beginning, for both classes III and V.
- Results across the state revealed that the impact of CLAPS was significant in improving achievement levels of both rural and urban children of class V in all the curricular areas.
- CLAPS helped majority of class V children in improving the speaking skills in Telugu and in mental Math. There was substantial number of children of class V whose attainment was as high as 80%.
- Teachers and parents who were interviewed felt that there was an improvement in reading habits of their children. Children expressed that their reading habit improved due to availability of the library period and in turn helped in improving their learning levels in school areas.
- Teachers opined that CLAPS helped in strengthening home - school links. Majority of the teachers were frequently visiting children's homes and interacting with their parents.

3.6.8 Unintended Outcomes

- Teachers (class III and V) mentioned that organization of various kinds of educational melas and other innovative activities increased the frequency of participation among children which has led to the development of team spirit amongst the children.
- Majority of the parents were of the opinion that teachers regularity in coming to schools and punctuality improved during CLAPS.
- Majority of the teachers commented during interviews that the self-esteem and confidence of children had increased after the implementation of the CLAPS programme.
- Parents observed that the children liked the teachers and were less fearful of them and talked about their teachers at home. A majority of the children interviewed mentioned that they liked school because of their teachers.

Section 4

Discussion and Recommendations

SECTION 4: DISCUSSION AND RECOMMENDATIONS

The programme evaluation study was undertaken primarily to evaluate the efficiency and effectiveness of CLAPS. The CLAPS evaluation team took all the precautions in adhering to the evaluation standards of utility, feasibility, accuracy and propriety. This section on discussions of findings and recommendations is presented in four parts. The first section provides a brief summary of the key findings, which have emerged from the previous section. The second part of this section highlights the limitations of the study. The third part presents a discussion of the findings in a thematic manner and the last part concludes with some recommendations and issues for considerations for the programme planners and implementers.

4.1 Summary of the Key Findings

All the major intervention components of CLAPS; namely teacher training, awareness generation, innovative activities, CBTL and home-school links were implemented as intended in the programme with marginal variations across the districts. However, the programme was not implemented as intended, as far as monitoring was concerned.

With regard to the total achievement (i.e. across all curricular areas), teacher-training, innovative activities and awareness were found to be key predictors at the state level. While teacher-training emerged as a key predictor for enhancing learning achievement in all curricular areas at the state level, it was a key predictor in only two districts (D2 and D6). With regard to enhancing competencies, teacher-training was found to be a key predictor for at least one competency in each of the curricular areas at the state level and in five out of the eight districts (D1, D2, D3, D6 and D7).

Innovative activities was found to be a key predictor at the state level for achievement in Telugu only, and for competency attainment for only two curricular areas (Telugu C2 and EVS1 C1). At the district level, innovative activities predicted achievement in only two of the districts (D2 and D6) and competency attainment in only three districts (D2, D6 and D8).

The programme components of school grading, home-school links, and monitoring were not found to contribute significantly to learning achievement or competency attainment of children at the state level and were also not key predictors for most of the districts. CBTL was not found to be a key predictor at the state or district level in any of the curricular areas for either learning achievement or competency attainment.

While analyzing the outcome findings of CLAPS it was found that the competency level of children (Percent of 'A' group children) in both the grades did not increase over a period of time as was assumed. Similarly, examination of the progress of children competency-wise at different points of time showed progress in attainment of competency but this progress was not continuous; percentage of A group children increased in the first 6 months, then decreased in 2007-08, then increased slightly again in 2008-09). Evidence suggested that over a period of time CLAPS might have impacted the achievement of children in class V (i.e., mean achievement scores increased between December 2006 and April 2009). However, scores did not increase among class III children at the state level. Impact of CLAPS was evident in the improvements in the achievement levels of children of class V in all the curricular areas in all the districts except Vizianagaram and West Godavari, where it was evident only in two curricular areas. In class III, improvement was evident in four districts only. There was also an improvement in the reading habits of children because of the availability of classroom library periods. The organisation of educational melas, Parents-Teacher Meetings and regular visits of teachers to children's homes led to improvements in home-school linkages.

4.2 Limitations and considerations for future evaluations

The findings of the evaluation study as presented in the report provide valuable insights about CLAPS as an intervention for improving quality of elementary education. However, it is important to consider the results of the study in the light of certain limitations, which are as follows:

- An impact evaluation requires comparison between an 'experimental' and a 'control' group of comparable characteristics. CLAPS was implemented in all government primary schools across all districts of Andhra Pradesh simultaneously, thus there was no group of comparable schools which could have been used as the control group or the counterfactual. Due to the availability of the achievement scores prior (cohort I) and post (cohort II) the implementation of CLAPS, it was decided to use independent samples cohort design. However, the comparison of the experimental and the control group design would have made it possible to attribute any changes in achievement levels to the CLAPS program, rather than to other confounding factors.
- The impact evaluation of children's learning achievement was based on the baseline data provided by the State Project Office from the school records (cohort I). This baseline data were compared with the data obtained from a similar but not identical test administered by the evaluation team. However, the tests were developed by the state experts, who were also involved in developing the baseline tests in the state.
- All the instruments were initially prepared in English and later translated into Telugu. This may have resulted in some gaps in the expression of ideas.
- Qualitative data were mainly gathered through focus groups, interviews and classroom observations. The data received from some interview questions did not adequately elicit the information that was being sought. The field investigators, field supervisors and district coordinators selected for the study were provided about eight days of training for data collection. Conducting interviews and focus group discussions requires much skill and practice. It is likely that the interviewers were not skilled enough to adjust the wording of questions or optimally probe the information being provided by respondents.
- Responses from qualitative questions were grouped into categories. With the huge amount of data, the categories were sometimes not mutually exclusive and sometimes contained multiple ideas. This created some ambiguity while analyzing this data.

Future evaluations should create and use a valid programme implementation fidelity measure; clearly define and operationalise all variables; include valid and reliable instruments and ensure appropriate training for all team members on qualitative methods, including instrument development, data collection procedures and analysis of qualitative data. It is also recommended that a systematic document review be undertaken in future evaluations. This will help the team to more clearly define constructs, describe program logic model and learn from previously published documents on the programme.

4.3 Discussion of Findings

The discussion and reflection on findings have been done in the light of process and outcomes of CLAPS. Given below is a presentation and discussion of the findings:

4.3.1 Process of implementation of components and their relationship with achievement (Evaluation questions 1, 2 and 3)

It was evident from the findings that all the components of CLAPS were implemented as intended in the plan except the component of monitoring both at the state and the district levels. Evidence regarding implementation of

teacher training suggested that almost all the teachers received training materials before or during the training. The training materials were also found to be very useful by the teachers. The evidence showed that the training material for Telugu was also developed well in advance by the state and shared before or during the training. As the medium of instruction was Telugu, teachers were in a position to take maximum benefit of the material and processes. Discussion with MRPs, DIET faculty and members of the state resource group who were the master trainers mentioned during their interviews that the trainings were participatory and 'hands-on' experiences were given in all the training programmes. Analysis of the relationship between teacher training and children's achievement revealed that teacher training was a key predictor of total achievement in different curricular areas as well as of competency attainment at the state level. At the district level, the training was also found to be a key predictor for competency attainment in five districts (D1, D2, D3, D6 and D7), and for achievement in two districts (D2 and D6). However, it did not emerge as a key predictor for all the districts. It showed that the same training strategies were not found to be effective for all the districts, suggesting that district specific training strategies may need to be developed to increase effectiveness of training.

Programme planners and developers viewed CBTL as one of the important components for improving both the subject-specific core competency level as well as the achievement level of children. However, it did not emerge as a contributing predictor for improving the competency and achievement levels of children in any of the curricular areas at the state as well as at the district-levels. In order to effectively implement CBTL, three major efforts were made: 1) one extra period each for Telugu and Mathematics remediation was allotted per day in addition to the regularly allotted period for these subjects; 2) subject-wise core competencies were also identified within each curricular area (i.e. Telugu C1, Telugu C2) for attainment by children to improve their learning within each subject; 3) further efforts were made to assess children's attainment of competency levels on a monthly basis and to keep records competency-wise. However, the strategy of allotting two periods for these subjects did not yield improvement, especially in case of Telugu. Surprisingly, though a separate period was not allotted for EVS, competencies in this curricular area did improve more than for Telugu. The findings suggested that during remedial periods while teachers paid attention to the 'B' group children who sat in small groups and carried out various kinds of activities, the 'A' group children were left unattended. This implies that the extra period was not being meaningfully utilized to cater to the needs of the 'A' group children. This resulted in the 'A' group children not being able to sustain the higher achievement levels nor improving their competency or achievement levels. With regular monthly assessments, teachers were also required to record the progress of children and were also engaged in a variety of record keeping activities. Though this was not expected to affect their instructional efficiency but perhaps it might have encroached in children's learning opportunity time.

Although teachers felt that proper implementation of CBTL was likely to improve children's competencies, and in turn their achievement levels, the data did not support this assumption. Evidence clearly indicated that the CBTL strategy was not a key predictor of the competency level of children in classes V and III. Data showed that dealing with subject-specific core competency in isolation was not helpful to children's learning. Since this programme component did not yield the expected results, it should not be continued in the CLAPS program.

All the innovative activities were successfully implemented in almost all schools and were made accessible to all children. However, the participation of schools was not the same for different types of educational melas. While analyzing the relationship between total achievement and the innovative activities, it was found that at the state level innovative activities emerged as a key predictor for facilitating children's achievement levels. It was also found to be a significant predictor at the state level for facilitating the subject competencies in two areas (Telugu 2 and EVS 1). However, it was a key predictor at the district level only in the case of three districts; namely, Anantpur (D2), Nellore (D6) and West Godavari (D8). Teachers and parents expressed that introduction of innovative activities including classroom libraries improved children's reading habits. Children held similar opinions. The findings revealed that although innovative activities improved the reading habits of children, it could not improve the competency level

of children in Telugu. Perhaps setting up classroom libraries improved children's reading habits and also motivated them to study further, but this may not have been reflected in their achievement scores. It clearly revealed that strategies worked differently in different districts. District-specific strategies may need to be developed.

The state had well defined monitoring mechanisms at different levels (school to district) under CLAPS. Schools were also awarded process and performance grades on regular intervals, so as to ensure that timely feedback could be given to schools for their improvement. The evidence suggested that monitoring implementation was not found to be of a satisfactory level as reported by teachers and the other field staff. This component also did not emerge as a key predictor for achievement in any of the districts for any curricular area except Karimnagar in case of EVS I and in Nellore and Karimnagar for EVS I (Competency 2) and in West Godavari for EVS II (Competency 2) with regards to the attainment of competencies. One reason for such a finding could be the unavailability of academic support to the teachers at the school level, as most of the positions of MRPs had been lying vacant for more than a year. Thus, the academic support was not available from the MRPs/ MEOs particularly in managing classroom teaching and assessing children. The problems that were encountered by the teachers in could have been mitigated if monitoring was focused on academic issues and on-site feedback to teachers. Although during the state level interviews policy makers expressed that monitoring was key to CLAPS success, in actuality it emerged as the weakest link amongst all of CLAPS components.

There was no correlation between process grading or performance grading of schools and learning achievement of children of class V in any of the subjects. However, teachers were of the opinion that both process and performance grading of schools positively impacted the learning achievement of children. This data suggests that the strategy of school grading was also not found to be effective in improving child attainment of competencies or achievement and thus should not be continued in the CLAPS program in the same manner. Though the program should include a component assessing schools, a new system should be developed that makes this part of regular monitoring mechanisms.

Under CLAPS the home-school link was intended to develop community support and in turn greater participation of parents and children in school activities. It was revealed that almost all schools were regularly conducting Parent Teacher meetings and recording the minutes properly. Children's attendance was the most frequently discussed issue during PTA meetings. Review meetings conducted by head master, academic monitoring officers and educational melas improved the home-school linkage. Community members also shared that the teachers visited the houses of children and interacted with their parents frequently. While all this was in place, it is important to mention that home-school links did not prove to be a significant predictor for achievement at the state level. However, children's achievement and attendance has not been correlated and this link might have influenced the achievement of children. Research studies have demonstrated a huge impact of attendance on learning achievement. The home-school link was found to be a significant predictor for improving the achievement of children only in Vizianagaram (D7) and West Godavari (D8) in all curricular areas except Telugu. This further calls for drawing district specific strategies as similar strategies were not found to be functioning effectively across districts.

4.3.2 Outcomes of CLAPS (Evaluation questions 4 and 5)

It appeared from the above discussion of the findings that almost all the components of CLAPS except monitoring were implemented as intended with minor deviations across the districts. All the interventions/ activities were visualized keeping in view the prime goal of CLAPS which is to improve the competencies and, in turn, the achievement level of children. To achieve this broader goal, the assumption was that if children's attainment level of core competencies in different curricular areas was 80% and above, the resultant achievement level of children would also be improved.

While analyzing the outcome findings of CLAPS it was found that the competency level of children (Percent of 'A' group children) in both the grades did not increase over a period of time as was assumed. However, this may be due to a limitation in the way of measuring; specifically, the dichotomous grouping of children into 'A' and 'B' (80% and above in 'A' and 79% and below in 'B') cannot indicate the progress of children. For example the percentage of children lying in the 0-30% category might progress into the next category of 31-60%. This division was not available. Without this, it is difficult to fully analyze the progress of children with lower competency levels to start with. Similarly, when we see the progress of children competency wise at different points of time there was progress in attainment of competency but this progress was not continuous (i.e., percentage of A group children increased in the first 6 months, then decreased in 2007-08, then increased slightly again in 2008-09). The spurt may have been due to the initial motivation at the beginning of the programme implementation. The reason of the decreasing percentage of 'A' group children in 2007-08 may have been due to vacant positions of monitoring officers. After filling up of these positions an improvement in their competency levels was noted in 2008-09. The trend from December 2006 to April 2009 was that there was an increase in the percentage of 'A' group children every alternate year. The maximum increase of 'A' group children was noticed during 2007.

While analyzing achievement level of children of classes III and V there was an improvement in class V and not in Class III at the state level. These gains in Class V may be attributed to the CLAPS intervention, as these children were fully exposed to CLAPS for three years and class III children were exposed to only for a year. However, the design of this evaluation does not allow us to rule out other factors that could have caused these increases, such as regular classroom teaching or maturation of the children. Furthermore, though the achievement levels of children in the state improved, there were variations across the curricular areas in terms of the magnitude of gains. The increase in achievement was relatively more evident in Mathematics, followed by EVS and then Telugu. The least benefitted curricular area was Telugu. One reason could be that Telugu was the mother tongue and the medium of instruction in the classroom, and the children might not have made special efforts to enhance their language proficiencies or to study hard for this curricular area. On the other hand, with the introduction of innovative activities oral competencies in Telugu had improved substantially. With regard to learning achievement at the district level, it was shown, that the achievement levels of class V children belonging to Vizianagaram and West Godavari districts had dropped. In the other districts there was a substantial improvement in achievement levels from baseline level to endpoint testing. In class III significant improvement in achievement levels were evident in all curricular areas only in Anantapur, Chittoor and Nalgonda districts. However, in other districts improvement was evident in one curricular area or the other, but not in all curricular areas. Upon analyzing achievement at the district level, few district variations emerged. As with many other pieces of evidence from this evaluation, this showed that CLAPS' strategies need to be developed for the district levels.

A few positive unintended outcomes emerged in response to the introduction of the CLAPS initiative, including: development of team spirit among children, improvement in teachers' punctuality and attendance in schools, better student teacher relations and the enhancement of self-esteem and confidence among children.

4.4 Recommendations

A. Policy Planners

A number of recommendations emerging from the study for policy planners are presented below:

- Development of district-specific strategies should be considered for any learning enhancement programmes undertaken in Andhra Pradesh, as uniform strategies for all districts has not proved to be successful in the CLAPS programme.

- Strengthen existing monitoring and feedback mechanisms at the mandal and district levels:
  - Ensure adequate positioning of mandal resource persons to provide academic inputs and feedback to teachers about their classroom practices.
  - Feedback to teachers should include more on-site academic support rather than being purely supervisory, and feedback should be regular and timely.
  - Ensure schools receive regular feedback regarding how children and teachers are performing.
- Incorporate effective and useful components of CLAPS such as innovative activities, and the strategies of teacher training in future quality initiatives for elementary education. Do not include strategies not found to be effective in enhancing achievement, including competency based teaching learning and process and performance grading of schools.
- Limit the amount of non-academic/record keeping work done by teachers.
- Incorporate programme evaluation as an inbuilt and integral component in the state's plans pertaining to the quality initiatives in elementary education.
  - Ensure that authentic baseline studies are conducted at the start of innovative projects and regular monitoring data are maintained to ensure the robust evaluation of the projects.

B. For Implementers

A number of recommendations also emerged for implementers, and are presented below:

- Teachers should classify children into several different groups based on their learning levels (rather than only 'A' versus 'B' group children). However, ensure:
  - That teachers are given training about how to effectively engage these groups of children in remedial periods both for all curricular areas (rather than only Telugu and Mathematics).
  - That self learning material is developed and available for children in order to meaningfully engage them in learning when teachers are involved with other groups.
  - That teachers provide timely formative feedback to children of all groups on a regular basis in order to improve their learning achievement.
- Develop training material and ensure sufficient training is provided to master trainers and mandal resource persons keeping in view their roles in issues of providing academic support to teachers.
- Delineate clear-cut roles and responsibilities for mandal resource persons, MEOs and DIET faculty members to enable them to contribute effectively to the Learning Enhancement Programme.
- Evolve strategies to record implementation fidelity of various components.

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Appendices

Table A1: Description of Competencies - Classes I & II

Class	Subject	Competencies	Specifications
1&2	Telugu	1. Listening & speaking	Answering/responding after listening to a small story/song. Speaking about known things like birds, flower, games, likes & dislikes.
		2. Action songs	Performing action song with action/expression and adding lines.
		3. Reading	Reading words, sentences fluently from the textbook and story-books.
		4. Writing	Writing given words/sentences legibly and correctly (dictation) Writing words of objects on a given picture/Illustration.
1&2	Mathematics	1. Number concepts	Counting the numbers up to three digits (second class), two digits numbers (First class), ascending, descending order, before-after number, short form, expansion, etc.
		2. Addition	Addition up to three digits numbers with carry forward (Second class) and two digits numbers without carry forward (First class).
		3. Subtraction	Subtraction up to three digits numbers with borrowing (Second class) and two digits numbers without borrowing (First class).
		4. Oral/Mental Mathematics	Addition, subtraction (small word problems) problems mentally without using paper pencil.
1&2	EVS	1. Understanding EVS basic Concepts	Child should observe, categorise, identify the differences, similarities.
		2. Drawing and labeling	Child should draw the pictures and write their names.

Table A2: Description of Competencies – Classes III to V

Class	Subject	Competencies	Specifications
III, IV & V	Telugu/Urdu	1. Reading fluently, comprehension and express their own words	• Reading the given text from outside the textbooks i.e. story books, newspapers, magazines, etc. fluently and comprehending the same and express about the text in their words. • If the child do not read fluently or real fluently but unable to comprehend and express in their own words, the child is considered as not performer of the competency.
		2. Self-writing	• Writing a paragraph with five or six sentences on known objects/story/incidents/ character etc. in their words correctly. • The child is considered as non-performer if he/she is unable to write at least five sentences or though he/she writes five sentences but commit more than five mistakes i.e. syntax and Symantec.
III, IV & V	Mathematics	1. Addition, Subtraction, multiplication, division	• Children able to do addition subtraction, multiplication and division problems without any mistakes. • Addition, subtraction problems up to 5 to 6 digit numbers with carry forward and borrowing respectively. • Multiplication up to three digit numbers with two digits, divisions up to 4-digit numbers with two digits numbers. • If the child is able to solve 4 problems out of 5 (addition, subtraction, multiplication one problem each and two division problem) given is considered on performer.
		2. Oral/Written problems	• Solving problems only without paper/pencil, problem related to regular unit/ chapters in the textbook. • Solving verbal/written problems as per syllabus/textbook. • If the child is able to solving 4 problems out of 5 given is considered as performer.

III, IV & V	EVS I	Conceptual understanding	Children able to defined concept, given examples, making classification, identifying similarities and the differences, describing phenomena, giving reasons etc. • If the child answers correctly four questions out of five given, he/she is considered as performer.
		1. Mapping skills	• Children able to draw small maps about school, village, state etc. • Children able to read the given map i.e. village social map, mandal, district, state etc. and identified the land marks, directions, road etc. • **Map pointing identifies various location in a given outline map.** • Out of the above exercise if the child performs any four given tasks out of five, the child is considered as performer.
III, IV & V	EVS II	1. Conceptual understanding	• Children able to defined concept, given examples, making classification, identifying similarities and the differences, describing phenomena, giving reasons etc. • If the child answers correctly four questions out of five given, he/she is considered as performer.
		2. Drawing & labeling field experiments	• Children able to do conduct experiment and records the process and articulate the observation • Children draw the diagrams, label correctly • If the child does properly is considered as performer
III, IV & V	English	1. Listening & speaking	• The child follows the given instruction in English and responds properly. • Children speak about known thing/ family /school/fiends in two or three sentences. • If the child does not do properly is considered a non-performer.
		2. Reading & writing	• Reading words, sentences and express in their own words in English/Mother tongue. • Children write dictated words, sentences correctly. • Children write words of objects in a given illustration/picture. • If the child is able to perform in both reading and writing properly, is considered as performer.

Table A3: School Processes Indicators

Category 'A'	
-	Conduct of school prayer properly and effectively.
-	School Campus – Clean and Green: Maintenance of classrooms and school surroundings clean and neat. National Green Core Activities are being implemented. There is no dumping of waste material and display of old charts years together on the walls.
-	Class Room Environment: The teachers teach without sitting in the chair and providing teaching learning activities in interactive mode. Teachers sit with children supporting/assisting them in learning.
-	Avoiding Sticks: Ban on punishments. No child abuse and punishment.
-	Teacher Preparation: Teachers Planning – 1) Annual Plans, 2) Unit Plans and 3) Period Plans, etc., are being maintained and followed, developing and using TLM etc.
-	Separate strategies for high and low achievers: More focus on children with low performance. Special strategies/remedial teaching for children with low performance are being followed.
-	Avoiding Guides and Question Banks: Children are not using guides and they are not writing question answers following guides.
-	Utilization of Library books and conducting reading activities: maintenance of Classroom Library and issue of books to the children. Children literature is available and within the reach of the children. Recording the details of the books that are being issued/read by the children and teachers.
-	Conducting examination using Teacher Generated Question Paper: Teacher develops question papers and other assessment tools. Practicing remedial teaching for low performers. Conducting exams with question papers that are generated by them, assessing and recording in the progress reports and sending them to the parents.
-	Special strategies for classes I and II: Focus on Classes I and II and implementation of special strategies as per check list.

-	Head teacher conducts progress reviews with teachers at school level and conducting parent meetings. Review of progress of children performance and other quality processes with teachers by the Headmaster on first and third Saturdays in every month and recording progress details and minutes of the meeting in the register. Conduct of Parent Teacher meetings (PTA) and teachers contact children' families by visiting the houses.
-	Implementation of the time table and other activities as per the academic plan and annual plan
Category 'B'	
-	Children's health and hygiene: Maintaining and observing of children's health and hygiene, arrangements for the washing the hands before midday meal, annual health checkups from nearby health-center etc.
-	Organization of curricular activities: Conduct of games, cultural and other creative activities in the schools on a continuous basis.
-	Innovative Activities: Proper implementation of school post box, wall magazine, children's clubs, children diary, honesty box, teacher diary, etc.
-	Supporting children with special needs (IED): Identification of children with special needs and supporting them.
-	Preparation of TLM and utilization of grants: Teacher Preparation – TLM preparation and utilization, Teacher Grants utilization etc. Keeping modules and records in access.
-	Correction of homework, notebooks and children's assignments: Teachers observe children's work, note books regularly every day and support.
-	Arrangements of Radios and utilization of Radio Programmes (Vindam – Nerchukundam): Effective utilization of Radio Programmes and follow-up of activities.
-	Proper implementation of Midday Meal Programme: Effective implementation of Midday Meal Scheme, food as per menu, cleanliness, and quantity of food served.
Category 'C'	
-	Ensuring children attendance (minimum 90%: There is no variation between the attendance marked in the register and actual head count of the children. 90% of children of the enrolled do attend the school.
-	Teacher attendance (minimum 85%): Engaging the children in teaching learning process, time and task.
-	100% enrolment: 100% enrolment of school age children and there are no out of school children in the school catchment area.
-	Proper utilization of Toilets: Maintenance of toilets and children should use the urinals and toilets in the school.
-	School development with support of community/NGO's – School infrastructure, Para teachers, PTA meetings.
-	Improvement in children's performance i.e. minimum 3% in every month: 3% of increment over children's performance over last month and display of school grade on the wall, demonstration of children performance to the parents and community at regular intervals.

Table A4: Programme Logic model

Identified needs (current situation)	Inputs/Resources	Activities	Intended Outputs	Short term outcomes	Long term Outcomes
- To Improve the competencies in various curricular areas such as language Telugu), Environmental Studies, (EVS) and Mathematics -To enhance teachers' skills and competence in teaching of language, Math and EVS -To develop reading ability/ habits amongst children -To improve community participation and home, school links	*Fiscal Resources:* Allocation of funds from Central and State Governments Budget from SSA towards teacher training, module printing, monitoring, evaluation and reviews *Human Resource* State Pedagogy team and State Resource Groups@ 40 at State level District Pedagogy team and District Resource Groups @ 30 per subject at district level Academic monitoring from DIETs, Mandal Resource persons @ 3 per Mandal • Cluster level Co-coordinators and accomplished teachers Resource Persons at various levels act as trainers as well as monitor the programme on the field • Physical Resource: Resources at DIETs, MRCs and as well as School complexes (CRCs), Teaching learning material, Resources for Teleconferencing using support from SAP NET, SIET and receiving facility at MRCs and CRCs	1. Capacity building of teachers, trainers and field functionaries. • Need Assessment • Training of Resource Persons • Development of modules on Competency Based Teaching Learning (CBTL) • Training of Teachers in all subjects • Training of monitoring personnel 2. Competency based teaching learning processes/practices • Identification of subject specific and grade specific competencies • Implementation of CBTL in classrooms. 3. Remedial measures • Allocation of one period each for language and mathematics in school time-table for remedial teaching. • Development of remedial material for children • Trainings of teachers on remedial measures • Development of children literature and strengthening classroom libraries 4. Innovative Activities • Wall magazine, classroom libraries, children diary, children cabinet, school post box, etc. Organization of Educational Melas: Vigyan, Language and Mathematics. 5. Monitoring and Reviews • Development of monitoring formats schedule & software. Formation of monitoring teams and execution of monitoring plan at various levels • Review meetings at various levels 6. School Performance Grading • Monthly assessment of children through teacher made tests • Maintenance of CLAPS register and children performance records and grading • Development of criteria for school performance grading (i.e., A, B, C, D) • Implementation of school performance grading. • Grade display in classrooms and schools 7. School process grading • Development of appropriate indicators reflecting improved school processes • Display of posters on school process grading in schools • Grading of schools as zero star, one star, two star and three star based on the indicators 8. Community participation and home school links • Formation of school management committees, Academic monitoring committee • Orientation of community members • Organisation of monthly review meetings by community in schools • Demonstration of children performance to parents • Maintenance of Minutes book	• 12 modules of training material for teachers and other educational functionaries • 50 trained RPs at district level and 5000 at block level. • 149,044 trained teachers (2006-07). • 166,953 trained teachers in all subjects (2007-08). • 162,939 trained teachers in all subjects (2008-09) • 1 Educational Mela per term • 5 Classroom libraries in each school • 1 Post box and honesty box in each school • 1 grade display board in each school	• Teacher competencies are manifested into classroom practices • Children's participation and engagement improved • Improved pedagogical practices • Improved number of A graders in competencies • Improved children attendance and participation • Increased number of three and two star schools • Increased number of A and B grade schools • Community participation increased	• Enhanced teaching skills and competencies • Improvement in children's competencies in all curricular areas(Telugu, Mathematics, EVS) • Improved Reading ability and habits amongst children • Improved school community partnership

Table B1: Evaluation Framework

Evaluation Question	Indicators	Data sources	Methods
1. Has CLAPS been implemented as intended? Why? Why not?	• Awareness about CLAPS amongst teachers, educational functionaries • Teacher training plans & teacher preparation • Classroom processes and practices • Monitoring Mechanism • School level innovative activities • Home – School Link	• Teachers • Children • Parents • Educational Functionaries (MRPs, MEOs, DIET faculty) • School Records	• Questionnaires • Interviews • School schedule • Observation schedules
2. To what extent the following components of implementation strategies facilitated or impeded the learning achievement of children? • Awareness about CLAPS • Competency-Based Teaching Learning • Teacher Training • Monitoring • School Grading – Performance and Process Grading • Innovative activities • Home School Links	• Pedagogic knowledge of CBTL • Practice of CBTL in classroom • Quality of training manuals for teachers and resource persons and the extent put to use • Training programmes organized for RPs and teachers- their relevance and quality • Efficacy of assessing process grading of schools • Efficiency of assessing performance and process grades and their display • Effectiveness of monitoring mechanism • Frequency of monitoring • Academic monitoring committee meetings • Participation of community in school activities • Follow-up based on • monitoring and reviews • Implementation of Innovative activities in schools • Libraries set up and in use • Implementation of innovative activities in schools • Setting up of libraries and its use	• Schools • Records of monitoring data • Educational functionaries • Field investigators • Field notes • Training material for teachers • Training plans/records • Teachers • Community/parents	• School Schedule • Questionnaires • Observation schedules • Interviews • Achievement tests developed by evaluation team
3. Is there any differential impact of process grading and performance grading on learning achievement of children?	• Learning achievement of children • Efficacy of school performance grading • Efficacy of school process grading	• Children • School records • Educational functionaries • Head teachers and teachers	• Achievement tests (based on CLAPS competencies) • School Schedule • Interviews
4. Has CLAPS achieved its objectives?	• Children's Achievement in Telugu, Mathematics and EVS for classes III and V • Children's attainment of CLAPS competencies in curricular areas • Integration of CBTL practices in classroom transaction • Participation of children in library period • Regular AMC meetings • Regular review by HM • Regular review by AMOs • Home visits of teachers • Participation of children in educational melas	• Children • Teachers • Classroom transaction • Classroom Library • Monitoring personnel • Community • School records on time series and baseline data	• Achievement tests (based on CLAPS competencies) • Observation schedules • School Schedule • Questionnaires • Interviews • Document reviews
5. What unintended outcomes might be attributable to the CLAPS? Are these positive or negative?	• All the outcomes which have impact other than those specified in the programme objectives	• Children • Teachers • Educational Functionaries • Community members	• Interview • School schedule • Questionnaire

Table B2: Female Literacy Rates in the Districts of Andhra Pradesh

S. No.	Coastal Region	Name of the District	Female Literacy Rate
1	Coastal Andhra Pradesh	Srikakulam	43.68
2		Vizianangaram	39.91
3		Visakhapatnam	50.12
4		East Godavari	60.94
5		West Godavari	68.99
6		Krishna	63.19
7		Guntur	53.74
8		Prakasham	45.08
9		Nellore	56.38
10	Rayalaseema	Chittoor	55.78
11		Kadapa	49.54
12		Anantpur	43.34
13		Kurnool	40.03
14	Telangana	Mahabubnagar	31.89
15		Rangareddy	56.49
16		Hyderabad	73.50
17		Medak	38.66
18		Nizamabad	39.48
19		Adilabad	40.30
20		Karimnagar	42.75
21		Warangal	45.09
22		Khammam	47.44
23		Nalgonda	44.68

(Source: Census report 2001)

Table 3: Percentage of Teachers who responded correctly to Awareness Questions

Name of the region	Name of the sampled district	Total number of mandals in the district		Number of selected mandals	
		Rural	Urban	Rural	Urban
Rayalaseema (R_1)	Anantapur	63	08	05	01
	Chittoor	66	11	05	01
Telangana(R_2)	Karimnagar	57	05	04	01
	Khammam	46	07	03	01
	Nalgonda	59	09	04	01
Coastal Andhra(R_3)	Nellore	46	03	04	01
	Vizianagaram	34	09	03	01
	West Godavari	46	08	04	01
Total		417	60	32	8
	Grand Total	477		40	

Table B4: Region-wise distribution of sampled schools

Region	Total no. of rural schools	Total no. of urban schools	Total no. of schools	No. of sample rural schools	No. of sample urban schools	Total no. of sample schools
Rayalaseema	12857	1021	13878	75	6	81
Telangana	22922	2030	24952	126	15	141
Coastal Andhra	25524	1774	27298	141	12	153
Total	61303	4825	66128	342	33	375

Notes: (*) There is a minor variation in the number of teachers and BRTEs who responded to each item

Table B5: Region-wise distribution of sub-sampled schools

Issues	Chennai Schools (Phases I & II)	Coimbatore Schools (Phases III & IV)	Model Schools in Other Districts (Phase III)	Other Schools in Other Districts (Phase IV)
Rayalaseema (R_1)	**Rural**	**Urban**	**Rural**	**Urban**
1	**05**	**01**	**05**	**01**
2	**05**	**01**	**05**	**01**
Total	**10**	**02**	**10**	**02**
Telangana (R2)	Rural	Urban	Rural	Urban
3	**04**	**01**	**05**	**01**
4	**03**	**01**	**04**	**01**
5	**04**	**01**	**05**	**01**
Total	**11**	**3**	**14**	**3**
Coastal Andhra (R3)	Rural	Urban	Rural	Urban
6	**03**	**01**	**04**	**01**
7	**04**	**01**	**05**	**01**
8	**04**	**01**	**05**	**01**
Total	**11**	**3**	**14**	**03**
Grand Total	**32**	**8**	**38**	**8**
	40		**46**	

Table B6: District-wise Data Collection Plan

District Name & code		No. of Mandals	No. of teams	No. of FIs	No. of FSs	No. of DCs	No. of 3 day cycle Schools	No. of 4 day cycle Schools	No. of 5 day cycle Schools	Total No. of Schools	School Schedules	Teachers Questionnaire	Teachers Interviews	Children Interviews	Parents Interviews	MEO Interviews	MRP questionnaire	DIET faculty Interviews	DPO official interview	Class Room Observation	Library period Observation	No. of children written Class III achievement test	No. of children written Class V achievement test	No. of children written Class III Oral test	No. of children written Class V Oral test
											Tool 1	Tool 2	Tool 4	Tool 5	Tool 6	Tool 7	Tool 3	Tool 8	Tool 8	Tool 9	Tool 10				
Ananthapur-1		6	5	15	2	1	31	4	6	41												397	422	184	175
Chittoor-2		6	5	15	2	1	30	4	6	40	40	80	20	40	40	6	12	2	2	36	12	389	470	179	187
Karimnagar-3		5	6	18	2	1	39	6	6	51	51	104	24	48	48	5	12	1	1	36	12	604	798	241	246
Khammam-4		4	5	15	2	1	30	5	5	40	40	71	20	38	40	4	9	2	1	30	10	352	362	181	167
Nalgonda-5		5	6	18	2	1	38	6	6	50	50	93	21	48	48	5	12	1	1	36	12	526	669	240	222
Nellore-6		5	6	18	2	1	43	6	6	55	55	103	23	46	46	5	8	2	1	36	12	427	482	226	238
Vizianagaram-7		4	5	15	2	1	33	5	5	43	43	83	20	40	39	4	8	3	2	30	10	511	466	197	183
WestGodavari-8		5	6	18	2	1	43	6	6	55	55	102	21	47	47	5	10	2	2	36	12	617	746	254	261
Total			**44**	**132**	**16**	**8**	**287**	**42**	**46**	**375**	**375**	**715**	**168**	**346**	**347**	**38**	**81**	**17**	**11**	**276**	**92**	**3823**	**4415**	**1702**	**1679**

Table C1: Opinions of teachers on Organization of Teacher Training

Aspects Covered	Don't know	Not Adequate	Adequate	Quite Adequate
Duration of the training programme	5.81	21.10	56.80	16.29
Preparedness of resource persons	5.95	13.74	62.32	17.99
Course content of training programme	4.96	7.93	65.72	21.39
Development of language (Telugu) skills for Teaching	4.67	7.08	64.73	23.51
Development of skills for teaching mathematics	4.25	7.93	62.32	25.50
Development of skills for teaching EVS	4.39	7.22	64.45	23.94
Organization of remedial teaching	5.97	12.22	62.50	19.32
Development of TLM	3.97	12.06	60.57	23.40
Development of achievement tests	4.11	6.24	64.26	25.39
Assessment of children in implementation of CLAPS	4.40	5.67	63.40	26.52
Implementation of innovative activities under CLAPS	3.97	4.54	55.89	35.60
Interaction between teachers and resource persons during training	5.56	13.25	58.12	23.08

Table C2: Awareness among Teachers in Various Districts

Districts	Mean Values	SD
State	**13.99**	**2.01**
Anantapur	14.5	1.05
Chittoor	14.7	0.86
Karimnagar	13.67	2.81
Khammam	13.39	1.79
Nalgonda	14.67	0.96
Nellore	14.11	2.22
Vizianagaram	12.73	2.96
West Godavari	14.18	0.91

(Mean scores taking 1='low', 2= 'moderate' and 3= 'high') source CRO Q 44)

Table C3: Rate of Participation of Weak Children during remedial period

Dists/subject	Language		Mathematics		EVS	
	Class III	Class V	Class III	Class V	Class III	Class V
01	1.67	2.00	1.83	2.17	1.83	2.33
02	1.29	1.50	1.50	1.33	1.67	1.50
Region I	1.46	1.75	1.67	1.75	1.75	1.92
03	1.83	1.83	2.00	2.33	2.00	2.00
04	2.00	2.00	2.40	2.20	2.60	1.60
05	2.67	1.00	2.50	1.33	2.33	1.67
Region II	2.18	1.59	2.29	1.94	2.29	1.76
06	1.17	1.33	1.50	1.50	1.17	0.67
07	1.60	1.80	1.80	2.20	1.60	2.20
08	1.83	1.83	1.50	1.67	1.17	2.17
Region III	1.53	1.65	1.59	1.76	1.29	1.65
State (overall)	1.74	1.65	1.87	1.83	1.78	1.76

(Mean scores taking 1='low', 2= 'moderate' and 3= 'high') source CRO Q 44)

Table C4: Participation of Schools in Educational Melas

Type of Mela	N	No. of schools	%
Vigyaan	314	234	74.52
Mathematics/metric	322	251	77.95
Language	321	242	75.39
TLM	315	226	71.75

Table C5: Utilization of Library Period by Children

	Learn subjects better	Improving reading habit	Improving General Knowledge
Ananthpur	97	77	51
Chittoor	100	93	73
Karimnagar	100	84	41
Khammam	97	100	71
Nalgonda	98	98	57
Nellore	98	93	46
Vizianagaram	98	83	45
West Godavari	83	66	43

Table C6: Support provided by Monitoring Officials to Teachers

Aspect	Response Categories	% of responses
Content related	Don't know	5.52
	Not at all	5.10
	To some extent	64.59
Pedagogy Related	Don't know	4.24
	Not at all	7.50
	To some extent	60.82
Assessment of Pupils	Don't know	3.39
	Not at all	5.94
	To some extent	56.86
Meeting with Parents	Don't know	3.82
	Not at all	8.91
	To some extent	56.72
Report making	Don't know	4.53
	Not at all	5.95
	To some extent	39.09

Table C7: Parents' Participation in Meetings

Not at all	Sometimes	regularly
16	41	43

Notes: (*) Demonstration; Villupattu & puppet show; discussion; drama; conference; games; Power Point presentation; use of audio-video materials; group learning.

Table C8: Regression Analysis on Criterion Telugu (Language) Competency – 1

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Awareness	0.177	0.204	0.036	3.6	1	Multiple R	0.268
						R Square	0.072
						Adjusted R Square	0.053
						Standard Error of Estimate	0.973
						F	3.84*

* p<0.01

Table C9: Regression Analysis on Criterion Telugu Competency – 2

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher training	0.201	0.266	0.014	1.4	3	Multiple R	0.358
Innovative Activities	0.192	0.240	0.046	4.6	1	R Square	0.128
Awareness	0.135	0.209	0.028	2.8	2	Adjusted R Square	0.110
						Standard Error of Estimate	0.943
						F	7.29*

Table C10: Regression Analysis on Criterion Mathematics Competency – 1

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher training	0.146	0.244	0.036	3.6	1	Multiple R	0.340
						R Square	0.116
Awareness	0.156	0.218	0.034	3.4	2	Adjusted R Square	0.098
						Standard Error of Estimate	0.949
						F	6.51*

* p<0.01

Table C11: Regression Analysis on Criterion Mathematics Competency – 2

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Awareness	0.126	0.182	0.023	2.3	1	Multiple R	0.286
						R Square	0.082
						Adjusted R Square	0.063
						Standard Error of Estimate	0.968
						F	4.41*

* p<0.01

Table C12: Regression Analysis on Criterion EVS I Competency – 1

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher Training	0.195	0.288	0.056	5.6	1	Multiple R	0.359
Innovative Activities	0.117	0.205	0.024	2.4	2.5	R Square	0.129
						Adjusted R Square	0.111
Awareness	0.118	0.203	0.024	2.4	2.5	Standard Error of Estimate	0.943
						F	7.36*

* p<0.01

Table C13: Regression Analysis on Criterion EVS I Competency – 2

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher Training	0.168	0.128	0.0.22	2.2	1	Multiple R	0.231
						R Square	0.053
Monitoring Mechanism	0.141	0.102	0.014	1.4	2	Adjusted R Square	0.034
						Standard Error of Estimate	0.983
						F	2.8*

* p<0.01

Table C14: Regression Analysis on Criterion EVS II Competency – 1

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher training	0.226	0.308	0.069	6.9	1	Multiple R	0.376
						R Square	0.141
Awareness	0.173	0.228	0.039	3.9	2	Adjusted R Square	0.124
						Standard Error of Estimate	0.936
						F	8.19*

* p<0.01

Table C15: Regression Analysis on Criterion EVS II Competency – 2

Variables Included	Beta	r	Beta x r	Contribution		Model summary	
				%	Rank		
Monitoring Mechanism	0.136	0.142	0.019	1.9	1	Multiple R	0.155
						R Square	0.024
						Adjusted R Square	0.004
						Standard Error of Estimate	0.998
						F	1.22

Table C16: Regression Analysis on Criterion different Competencies of children in Rayalaseema

Sub	Variables Included	Beta	r	Beta xr	% of Contribution	Model Summary	
Telugu Comp 1	Teacher Training	0.266	0.268	0.07	7.0	Multiple R	0.494
						R square	0.244
						Adj R sqr	0.160
						SE Est	0.789
						F	2.91*
Telugu Comp 2	Innovative Activities	0.327	0.077	.03	3.0	Multiple R	0.533
						R square	0.284
						Adj R sqr	0.205
						SE Est	0.859
						F	3.58*
Mathematics Comp 1	Teacher Training	0.325	0.349	0.11	11.0	Multiple R	0.491
						R square	0.241
						Adj R sqr	0.157
						SE Est	0.817
						F	2.86*
Mathematics Comp 2	Teacher Training	0.293	0.322	0.09	9.0	Multiple R	0.606
						R square	0.367
						Adj R sqr	0.297
						SE Est	0.830
						F	5.23*
EVS I Comp 1	Teacher Training	0.350	0.389	0.17	17.0	Multiple R	0.511
						R square	0.261
						Adj R sqr	0.179
						SE Est	0.824
						F	3.18*
EVS I Comp 2	Teacher Training	0.345	0.285	0.10	10.0	Multiple R	0.533
						R square	0.284
						Adj R sqr	0.204
						SE Est	0.865
						F	3.56*
EVS II Comp 1	Teacher Training	0.332	0.343	0.11	11.0	Multiple R	0.616
						R square	0.380
						Adj R sqr	0.311
						SE Est	0.980
						F	5.52*
EVS II Comp 2	Innovative Activities	0.408	0.299	0.12	12.0	Multiple R	0.546
						R square	0.298
						Adj R sqr	0.220
						SE Est	0.857
						F	3.82*

* $p<0.01$

Table C17: Regression Analysis on Criterion different Competencies of children in Telangana

Sub	Variables Included	Beta	r	Beta xr	% of Contribution		Model Summary	
Tel Comp 1	Monitoring Mechanism	0.168	0.144	0.02	2.0	1	Multiple R	0.316
							R square	0.100
							Adj R sqr	0.052
							SE Est	0.669
							F	2.07*
Tel Comp 2	Innovative Activities	0.327	0.077	.03	3.0	1	Multiple R	0.447
							R square	0.200
	Innovative Activities	0.209	0.294	0.06	6.0	2	Adj R sqr	0.157
							SE Est	0.880
							F	4.63**
Math Comp 1	Monitoring Mechanism	0.214	0.293	0.06	6.0	2	Multiple R	0.514
							R square	0.264
	Innovative Activities	0.417	0.462	0.19	19.0	1	Adj R sqr	0.224
							SE Est	0.828
							F	6.66**
Math Comp 2	Monitoring Mechanism	0.241	0.306	0.07	7.0	2	Multiple R	0.454
							R square	0.206
	Innovative Activities	0.266	0.363	0.10	10.0	1	Adj R sqr	0.163
							SE Est	0.867
							F	4.81**
EVS I Comp 1	Monitoring Mechanism	0.330	0.403	0.13	13.0	2	Multiple R	0.571
							R square	0.326
	Innovative Activities	0.397	0.467	0.19	19.0	1	Adj R sqr	0.290
							SE Est	0.811
							F	8.98**
EVS I Comp 2	Innovative Activities	0.224	0.294	0.07	7.0	1	Multiple R	0.351
							R square	0.123
							Adj R sqr	0.076
							SE Est	0.915
							F	2.62**
EVS II Comp 1	Monitoring Mechanism	0.179	0.207	0.04	4.0	1	Multiple R	0.359
							R square	0.129
							Adj R sqr	0.082
							SE Est	0.677
							F	2.75**
EVS II Comp 2	Home School Link	0.199	0.208	0.04	4.0	1.5	Multiple R	0.398
							R square	0.158
	Awareness	0.219	0.181	0.04	4.0	1.5	Adj R sqr	0.113
							SE Est	0.922
							F	3.49**

* $p<0.05$; ** $p<0.01$

Table C18: Regression Analysis on Criterion different Competencies of children in Coastal Andhra

Sub	Variables Included	Beta	r	Beta xr	% of Contribution		Model Summary	
Tel Comp 1	Monitoring Mechanism	0.267	0.295	0.08	8.0	1	Multiple R	0.425
							R square	0.180
	Innovative Activities	0.242	0.236	0.06	6.0		Adj R sqr	0.139
							SE Est	0.996
							F	4.37**
Tel Comp 2	Teacher Training	0.265	0.219	0.06	6.0	1	Multiple R	0.450
							R square	0.202
	Innovative Activities	0.359	0.350	0.13	13.0	2	Adj R sqr	0.162
							SE Est	0.763
							F	5.04**
Math Comp 1	Monitoring Mechanism	0.241	0.277	0.07	7.0	2	Multiple R	0.460
							R square	0.211
	Innovative Activities	0.322	0.284	0.09	9.0	1	Adj R sqr	0.172
							SE Est	0.809
							F	5.32**
Math Comp 2	Monitoring Mechanism	0.249	0.276	0.07	7.0	2	Multiple R	0.449
							R square	0.201
	Innovative Activities	0.326	0.281	0.09	9.0	1	Adj R sqr	0.161
							SE Est	0.744
							F	5.01**
EVS I Comp 1	Monitoring Mechanism	0.224	0.255	0.06	6.0	2	Multiple R	0.481
							R square	0.231
	Innovative Activities	0.405	0.320	0.13	13.0	1	Adj R sqr	0.193
							SE Est	0.726
							F	5.98**
EVS I Comp 2	Monitoring Mechanism	0.448	0.491	0.22	22.0	1	Multiple R	0.537
							R square	0.289
							Adj R sqr	0.253
							SE Est	0.760
							F	8.06**
EVS II Comp 1	Monitoring Mechanism	0.190	0.209	0.04	4.0	2	Multiple R	0.419
							R square	0.175
	Innovative Activities	0.353	0.316	0.11	11.0	1	Adj R sqr	0.134
							SE Est	0.706
							F	4.22**
EVS II Comp 2	Monitoring Mechanism	0.233	0.226	0.05	5.0	1	Multiple R	0.318
							R square	0.101
							Adj R sqr	0.056
							SE Est	0.979
							F	2.24*

* p<0.05: ** p<0.01

Table C19: R square values – criterion Telugu competency 1 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1	Anantapur	0.389	2.09	0.086
2	Chittoor	0.325	2.2	0.061
3	Karimnagar	0.129	1.06	0.402
4	Khammam	0.072	0.34	0.928
5	Nalgonda	0.022	0.13	0.996
6	Nellore	0.191	1.52	0.186
7	Vizianagaram	0.138	0.79	0.593
8	West Godavari	0.13	1.1	0.378

Table C20: R square values – criterion Telugu competency 2 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.356	1.81	0.133
2.	Chittoor	0,403	3.09	0.013
3.	Karimnagar	0.193	1.71	0.142
4.	Khammam	0.171	0.92	0.508
5.	Nalgonda	0.155	1.08	0.395
6.	Nellore	0.282	2.53	0.028
7.	Vizianagaram	0.347	2.66	0.026
8.	West Godavari	0.117	0.97	0.454

Table C21: R square values – criterion Mathematics competency 1 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.196	0.799	0.596
2.	Chittoor	0.239	1.44	0.226
3.	Karimnagar	0.137	1.14	0.358
4.	Khammam	0.268	1.62	0.166
5.	Nalgonda	0.108	0.71	0.665
6.	Nellore	0.429	4.84	0.000
7.	Vizianagaram	0.327	2.43	0.039
8.	West Godavari	0.118	0.981	0.449

Table C22: R square values – criterion Mathematics competency 2 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.220	0.928	0.504
2.	Chittoor	0.254	1.56	0.185
3.	Karimnagar	0.150	1.27	0.293
4.	Khammam	0.218	1.24	0.314
5.	Nalgonda	0.116	0.77	0.615
6.	Nellore	0.362	3.65	0.003
7.	Vizianagaram	0.169	1.02	0.434
8.	West Godavari	0.203	1.86	0.109

Table C23: R square values – criterion EVS I competency 1 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.220	0.928	0.504
2.	Chittoor	0.254	1.56	0.185
3.	Karimnagar	0.150	1.27	0.293
4.	Khammam	0.218	1.24	0.314
5.	Nalgonda	0.116	0.77	0.615
6.	Nellore	0.362	3.65	0.003
7.	Vizianagaram	0.169	1.02	0.434
8.	West Godavari	0.203	1.86	0.109

Table C24: R square values – criterion EVS I competency 2 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.415	2.33	0.059
2.	Chittoor	0.290	1.87	0.108
3.	Karimnagar	0.365	4.12	0.002
4.	Khammam	0.358	2.47	0.039
5.	Nalgonda	0.117	0.78	0.610
6.	Nellore	0.316	2.97	0.012
7.	Vizianagaram	0.101	0.56	0.783
8.	West Godavari	0.105	0.86	0.530

Table C25: R square values – criterion EVS II competency 1 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.244	1.06	0.420
2.	Chittoor	0.312	2.08	0.075
3.	Karimnagar	0.143	1.19	0.327
4.	Khammam	0.181	0.98	0.465
5.	Nalgonda	0.113	0.75	0.632
6.	Nellore	0.231	1.93	0.088
7.	Vizianagaram	0.206	1.30	0.279
8.	West Godavari	0.158	1.37	0.247

Table C26: R square values – criterion EVS competency 2 and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.488	3.13	0.018
2.	Chittoor	0.473	4.09	0.003
3.	Karimnagar	0.136	1.13	0.361
4.	Khammam	0.462	3.81	0.004
5.	Nalgonda	0.179	1.27	0.287
6.	Nellore	0.228	1.90	0.09
7.	Vizianagaram	0.277	1.91	0.097
8.	West Godavari	0.454	6.09	0.000

Table C27: Teachers' opinions on aspects of teacher training that facilitated them (N=715)

S. No.	Aspects	Impeded						Facilitated			
		Great Extent		Some Extent		No Effect		Some Extent		Great Extent	
		N	%	N	%	N	%	N	%	N	%
1	Classroom Teaching	3	0.4	6	0.8	34	5	233	33	439	61
2	Core Competencies	4	0.6	4	0.6	42	6	221	31	444	62
3	Remedial Teaching	3	0.4	6	0.8	49	7	291	41	366	51

Table C28: Regression analysis on total achievement (all subjects)

Variables Included	Beta	R	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher Training	0.189	0.267	0.051	5.1	1	Multiple R	0.371
						R Square	0.138
Innovations	0.121	0.217	0.026	2.6	3	Adjusted R Square	0.120
Awareness	0.179	0.251	0.045	4.5	2	Standard Error of Estimate	0.938
						F	7.928*

* p<0.01

Table C29: Regression Analysis on Criterion Achievement in Telugu

Variables Included	Beta	R	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher Training	0.207	0.279	0.058	5.8	1	Multiple R	0.381
						R Square	0.145
Innovations	0.177	0.252	0.045	4.5	2	Adjusted R Square	0.128
Awareness	0.169	0.250	0.042	4.2	3	Standard Error of Estimate	0.934
						F	8.438*

* p<0.01

Table C30: Regression Analysis on Criterion Achievement in Mathematics

Variables Included	Beta	R	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher Training	0.138	.224	.031	3.1	2	Multiple R	0.323
						R Square	0.104
Awareness	0.159	.223	.035	3.5	1	Adjusted R Square	0.086
						Standard Error of Estimate	0.956
						F	5.78*

* p<0.01

Table C31: Regression Analysis on Criterion Achievement in EVS I

Variables Included	Beta	R	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher training	0.189	.244	.046	4.6	1	Multiple R	0.337
Awareness	0.165	.222	.037	3.7	2	R Square	0.114
Monitoring Mechanism	0.109	.160	.017	1.7	3	Adjusted R Square	0.096
						Standard Error of Estimate	0.951
						F	6.39*

* p<0.01

Table C32: Regression Analysis on Criterion Achievement in EVS II

Variables Included	Beta	R	Beta x r	Contribution		Model summary	
				%	Rank		
Teacher training	.178	.257	0.046	4.6	1.5	Multiple R	0.370
Monitoring Mechanism	.136	.188	0.026	2.6	3	R Square	0.137
Awareness	.183	.250	0.046	4.6	1.5	Adjusted R Square	0.119
						Standard Error of Estimate	0.939
						F	7.87*

* p<0.01

Table C33: Regression Analysis on Criterion Achievement of children in Rayalaseema

Subject	Variables Included	Beta	R	Beta x r	Contribution		Model summary	
					%	Rank		
Telugu	Teacher Training	0.332	0.349	0.12	12.0	1	Multiple R	0.530
							R square	0.281
							Adj R sqr	0.201
							SE Est	0.717
							F	3.52*
Mathematics	Teacher Training	0.342	0.357	0.12	12.0	1	Multiple R	0.577
							R square	0.333
							Adj R sqr	0.259
							SE Est	0.681
							F	4.49*
EVS I	Teacher Training	0.443	0.452	0.20	20.0	1	Multiple R	0.620
							R square	0.384
							Adj R sqr	0.316
							SE Est	0.533
							F	5.61*
EVS II	Teacher Training	0.358	0.351	0.13	13.0	1	Multiple R	0.646
							R square	0.417
	School Grading	0.252	0.246	0.07	7.0	2	Adj R sqr	0.353
							SE Est	0.597
							F	6.45*
Total Ach	Teacher Training	0.399	0.411	0.16	16.0	1	Multiple R	0.632
							R square	0.399
							Adj R sqr	0.332
							SE Est	0.59
							F	5.98*

* p<0.01

Table C34: Regression Analysis on Criterion Achievement of children in Telangana

Subject	Variables Included	Beta	R	Beta x r	Contribution		Model summary	
					%	Rank		
Telugu	Monitoring Mechanism	0.302	0.33	0.09	9	2	Multiple R	0.5
							R square	0.25
	Innovative Activities	0.275	0.372	0.1	10	1	Adj R sqr	0.209
							SE Est	0.705
							F	6.18*
Mathematics	Monitoring Mechanism	0.256	0.306	0.08	8	2	Multiple R	0.468
							R square	0.219
	Innovative Activities	0.316	0.383	0.12	12	1	Adj R sqr	0.177
							SE Est	0.716
							F	5.21*
EVS I	Monitoring Mechanism	0.296	0.354	0.1	10	2	Multiple R	0.556
							R square	0.309
	Innovative Activities	0.38	0.467	0.18	18	1	Adj R sqr	0.272
							SE Est	0.632
							F	8.30*
EVS II	Monitoring Mechanism	0.341	0.381	0.17	17	1	Multiple R	0.485
							R square	0.235
	Innovative Activities	0.291	0.348	0.1	10	2	Adj R sqr	0.194
							SE Est	0.662
							F	5.70*
Total Ach	Monitoring Mechanism	0.326	0.374	0.12	12	2	Multiple R	0.545
							R square	0.297
	Innovative Activities	0.348	0.433	0.15	15	1	Adj R sqr	0.259
							SE Est	0.637
							F	7.85*

* $p<0.01$

Table C35: Regression Analysis on Criterion Achievement of children in Coastal Andhra

Subject	Variables Included	Beta	R	Beta x r	Contribution		Model summary	
					%	Rank		
Tel	Monitoring Mechanism	0.195	0.221	0.04	4.0	2	Multiple R	0.458
							R square	0.210
	Innovative Activities	0.321	0.339	0.10	10.0	1	Adj R sqr	0.170
							SE Est	0.847
							F	5.28*
Mathematics	Monitoring Mechanism	0.299	0.322	0.09	9.0	2	Multiple R	0.499
							R square	0.249
	Innovative Activities	0.346	0.330	0.11	11.0	1	Adj R sqr	0.211
							SE Est	0.854
							F	6.59*
EVS I	Monitoring Mechanism	0.337	0.375	0.13	13.0	1	Multiple R	0.532
							R square	0.284
	Innovative Activities	0.352	0.295	0.10	10.0	2	Adj R sqr	0.247
							SE Est	0.883
							F	7.86*
EVS II	Monitoring Mechanism	0.331	0.337	0.11	11.0	2	Multiple R	0.509
							R square	0.259
	Innovative Activities	0.366	0.342	0.13	13.0	1	Adj R sqr	0.222
							SE Est	0.951
							F	6.94*
Total Ach	Monitoring Mechanism	0.309	0.335	0.10	10.0	2	Multiple R	0.525
							R square	0.275
	Innovative Activities	0.369	0.348	0.13	13.0	1	Adj R sqr	0.239
							SE Est	0.863
							F	7.54*

* $p<0.01$

Table C36: R square values – criterion Total Achievement and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.429	2.47	0.048
2.	Chittoor	0.417	3.28	0.010
3.	Karimnagar	0.109	0.88	0.519
4.	Khammam	0.190	1.04	0.423
5.	Nalgonda	0.058	0.36	0.921
6.	Nellore	0.376	3.87	0.002
7.	Vizianagaram	0.222	1.43	0.224
8.	West Godavari	0.157	1.37	0.248

Table C37: R square values – criterion Telugu Achievement and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.394	2.14	0.080
2.	Chittoor	0.317	2.12	0.070
3.	Karimnagar	0.101	0.80	0.574
4.	Khammam	0.107	0.53	0.805
5.	Nalgonda	0.059	0.37	0.916
6.	Nellore	0.314	2.95	0.013
7.	Vizianagaram	0.176	1.06	0.406
8.	West Godavari	0.122	1.01	0.429

Table C38: R square values – criterion Mathematics Achievement and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.425	2.43	0.051
2.	Chittoor	0.360	2.57	0.032
3.	Karimnagar	0.046	0.35	0.907
4.	Khammam	0.207	1.16	0.356
5.	Nalgonda	0.073	0.46	0.858
6.	Nellore	0.336	3.25	0.007
7.	Vizianagaram	0.242	1.59	0.169
8.	West Godavari	0.143	1.22	0.313

Table C39: R square values – criterion EVS I Achievement and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.356	1.81	0.133
2.	Chittoor	0.391	2.93	0.017
3.	Karimnagar	0.223	2.06	0.078
4.	Khammam	0.297	1.87	0.109
5.	Nalgonda	0.095	0.62	0.740
6.	Nellore	0.366	3.72	0.003
7.	Vizianagaram	0.198	1.23	0.311
8.	West Godavari	0.169	1.49	0.205

Table C40: R square values – criterion EVS II Achievement and programme components independent variables

S. No	Programme Components	R Square	F	Sig
1.	Anantapur	0.476	2.99	0.022
2.	Chittoor	0.405	3.11	0.013
3.	Karimnagar	0.063	0.48	0.817
4.	Khammam	0.160	0.85	0.559
5.	Nalgonda	0.277	2.25	0.050
6.	Nellore	0.237	1.99	0.076
7.	Vizianagaram	0.166	0.99	0.452
8.	West Godavari	0.224	2.12	0.070

Table C41: Comparison between Teachers who Perceived Performance Grading and Process Grading to be Facilitating Children's Learning Achievement

	Impeded Most	Impeded to Some Extent	No Effect	Facilitated to Some Extent	Facilitated Most
Process grading	0.43	1.00	7.02	40.40	51.15
Performance grading	0.57	0.86	3.29	32.14	63.14

Table C42: Percentage of Teachers who perceived that Performance Grading facilitated Children's Learning Achievement

Districts	Impeded Most	Impeded to Some Extent	No Effect	Facilitated to Some Extent	Facilitated Most
Anantapur	1.27	1.27	1.27	16.46	79.75
Chittoor	0.00	0.00	0.00	16.25	83.75
Karimnagar	0.00	2.00	2.00	43.00	53.00
Khammam	1.41	1.41	5.63	43.66	47.89
Nalgonda	1.08	0.00	0.00	21.51	77.42
Nellore	0.00	0.00	7.92	43.56	48.51
Vizianagaram	1.37	1.37	5.48	36.99	54.79
West Godavari	0.00	0.97	3.88	33.01	62.14
State	**0.57**	**0.86**	**3.29**	**32.14**	**63.14**

Table C43: Percentage of Teachers who perceived that Performance Grading facilitated Children's Learning Achievement

Districts	Impeded Most	Impeded to Some Extent	No Effect	Facilitated to Some Extent	Facilitated Most
Anantapur	1.27	1.27	1.27	36.71	59.49
Chittoor	0.0	0.0	2.5	20.0	77.5
Karimnagar	0.00	2.04	8.16	59.18	30.61
Khammam	1.41	1.41	8.45	47.89	40.85
Nalgonda	0.00	1.08	5.38	30.11	63.44
Nellore	0.00	0.00	7.92	39.60	52.48
Vizianagaram	1.37	1.37	5.48	52.05	39.73
West Godavari	0.00	0.97	14.56	37.86	46.60
State	**0.43**	**1.00**	**7.02**	**40.40**	**51.15**

Table C 44: Opinions of teachers on accomplishment of competencies through questionnaire (N=715)

Subjects	Great extent	Some extent	Average	Large extent	Not at all	No Response
Language	471 (65.9)	205 (28.7)	19 (2.7)	5 (.7)	2 (.3)	13 (1.8)
Mathematics	394 (55.1)	251 (35.1)	48 (6.7)	7 (1.0)	2 (.3)	13 (1.8)
EVS 1	342 (47.8)	302 (42.2)	51 (7.1)	5 (.7)	2 (.3)	13 (1.8)
EVS 2	345 (48.3)	303 (42.4)	45 (6.3)	7 (1.0)	2 (.3)	13 (1.8)

Table C 45: Opinions of teachers on accomplishment of competencies through interview (N=168)

Subjects	Great extent	Some extent	Not at all	Don't know	No Response
Language	115(68.5)	40 (23.8)	2 (1.2)	9 (5.4)	2 (1.2)
Mathematics	107 (63.7)	49 (29.2)	1 (.6)	9 (5.4)	2 (1.2)
EVS 1	82 (48.8)	73 (43.5)	2 (1.2)	9 (5.4)	2 (1.2)

Table C46: Attainment levels of Class V children in Telugu and Mathematics oral tests

Percentage Range	Telugu	Mathematics
80 and above	58.84	69.21
60 to 80	25.19	11.2
Below 60	15.96	19.59

Table C47: Attainment levels of Class III children in Telugu and Mathematics oral tests

Percentage Range	Telugu	Mathematics
80 and above	47.71	61.52
60 to 80	29.55	15.1
Below 60	22.74	23.38

Table C 48: Opinions of parents on language and computational skills (N=348)

Item	Yes	No	No Responses
Fluent Reading	287 (82.5)	55 (15.8)	6 (1.7)
Write letter correctly	232 (66.7)	109 (31.3)	7 (2.0)
Calculate milk man bill etc.	320 (92.0)	21 (6.0)	7 (2.0)

Table C 49: Opinions of parents on performance of their children in school subjects (N = 348)

Subjects	Not average	Not satisfied	To some extent	Great extent	No Response
Language	2 (.6)	34 (9.8)	87 (25.0)	207 (59.5)	18 (5.2)
English	23 (6.6)	70 (20.1)	162 (46.6)	71 (20.4)	22 (6.3)
Mathematics	6 (1.7)	40 (11.5)	113 (32.5)	169 (48.6)	20 (5.7)
EVS	21 (6.0)	44 (12.6)	118 (32.5)	169 (48.6)	20 (5.7)
Edu. Melas	134 (38.5)	35 (10.1)	96 (27.6)	52 (14.9)	31 (8.9)

Table C 50: Opinions of MEOs about effectiveness of CLAPS strategies on learning achievement

Strategy	Most effective		Effective		Least effective		Not effective	
	F	%	F	%	F	%	F	%
CBTL	35	92.1	1	2.6	1	2.6	1	2.6
Regular Training of Teachers	27	71.1	9	23.7	2	5.3	0	0
School Level Monitoring and Reviews	30	78.9	8	21.1	0	0	0	0
SMC and AMC Meetings	27	71.1	7	18.4	4	10.5	0	0
Regular Assessment of children	28	73.7	9	23.7	1	2.6	0	0
Classroom Library	23	60.5	14	36.8	0	0	1	2.6
Performance Grading of Schools	22	57.9	13	34.2	3	7.9	0	0
Star Grading of Schools	22	57.9	10	26.3	5	13.2	1	2.6

Table C 51: Opinions of teachers on training regarding classroom teaching

Aspect	Facilitated		No Effect	Impeded		No Response
	Most	Some Extent		Some Extent	Most	
Training Manual	455 (62.2%)	235 (32.9%)	11 (1.5%)	3 (0.4%)	3 (0.4%)	18 (2.5%)
Training	439 (61.4%)	233 (32.6%)	16 (2.2%)	6 (0.8%)	3 (0.4%)	18 (2.5%)

Table C 52: Opinions of teacher on CBTL and special strategies in improving classroom transaction

Aspect	Always	Frequently	Often	Rarely	Never	No Response
CBTL	464 (64.9%)	187 (26.2%)	44 (6.2%)	4 (0.6%)	1 (0.03%)	14 (2.0%)
Special Strategies	412 (57.6%)	34 (32.7%)	49 (6.9%)	3 (0.4%)	3 (0.4%)	14 (2.0%)

Table C 53: Devices used for introducing lesson (Classroom Observation)

Discussed	Yes		No	
	F	%	F	%
Questions	253	91.3	24	8.7
Discussions	154	55.6	123	44.4
Experiment	54	19.5	223	80.5
Story	71	25.6	206	74.4
Game	38	13.7	239	86.3
Song	31	11.2	246	88.8

Table C 54: Classroom practices to develop competencies

S. No.	Classroom Practice	Responses					
		Individually		Small Groups		Large groups	
		f	%	f	%	f	%
1	Organization of Activities	165	59.6	95	34.3	15	5.4
		Yes			No		
		f	%		f	%	
2	Relevance of Activities	263	94.9		14	5.1	
		Not Involved		Some Extent		Great Extent	
		f	%	f	%	f	%
3	Involvement of Children	12	4.3	123	44.4	142	51
		Yes			No		
4	Assessment Procedures	f	%		f	%	
	a. Question Answer	264	95.3		13	4.7	
	b. Written Work	204	73.6		73	26.4	
	c. Monthly Tests	87	31.4		190	68.7	
5	Specific Strategies						
	a. During Teaching Time	160	57.8		117	42.1	
	b. Separate Period	109	39.4		168	60.6	

Table C 55: Teacher behaviour/method in the classroom (N=277)

S.No.	Behaviour/ Method	Very poor		Poor		Average		Good		Very Good	
		F	%	F	%	F	%	F	%	F	%
1.	Sharing ideas	2	0.7	7	2.5	47	17.0	132	47.7	89	32.1
2.	TLM use	11	4.0	8	2.9	54	19.5	122	44.0	82	29.6
3	Nature of question	-	-	8	2.9	52	18.8	148	53.4	69	24.9
4.	Interest generated	4	1.4	12	4.3	67	24.2	133	48.0	61	2.0
5.	Opportunity to student question	7	2.5	26	9.4	79	28.5	123	44.4	42	15.2
6.	Quality of student question	23	8.3	45	16.2	125	45.1	64	23.1	20	7.2
7.	Response to student question	3	1.1	15	5.4	12	26.0	136	49.1	51	18.4
8.	Synthesis of ideas	4	1.4	24	8.7	84	30.3	133	48.0	32	11.6
9.	Practice session	8	2.9	14	5.1	59	21.3	151	54.5	45	16.2
10.	Assessment	9	3.2	7	2.5	61	22.0	149	53.8	50	18.1

Table C 56: Opinions of head teachers and teachers

Aspect	Response Category											
Content of letters*	Yes				No				No Response			
	F		%		F		%		F		%	
• Complaint	276		73.6		98		26.1		1		0.3	
• Suggestion	149		39.7		222		59.2		4		1.1	
• Feelings	322		85.9		50		13.3		3		0.8	
• Any Other	152		40.5		206		54.9		17		4.5	
Reading Books**	Always		Frequently		Often		Rarely		Never		No Response	
	N	%	N	%	N	%	N	%	N	%	N	%
• Regularity	547	76.5	129	18	23	3.2	1	0.1	1	0.1	14	20
Reading Habit***	Yes				No				No Response			
	N		%		N		%		N		%	
• Improvement	161		95.8		5		3		2		1.2	

* School Schedule (N=375) ** Teacher Questionnaire (N=715) *** Teacher Interview (N=168)

Table C 57: Opinions of children in using classroom library (N=347)

Item	Response category					
	Yes		No		No Response	
	N	%	N	%	N	%
Using classroom library	336	96.8	10	2.9	1	0.3
Reading Books beyond Library Period	237	68.3	109	31.4	1	0.3
Types of Books Reading						
• Story Books	336	96.8	10	2.9	1	0.3
• Songs and Poems	286	82.4	60	17.3	1	0.3
• Subject related Books	178	51.3	167	48.1	2	0.6
• General Knowledge Books	85	24.5	260	74.9	2	0.6
• Any Other	47	13.5	–	–	300	86.5
Activities during Library Period						
• Reading Books	274	79.0	14	4.0	59	17.0
• Doing left out Home Work	176	50.7	169	48.7	2	0.6
• Play Games	100	28.8	245	70.6	2	0.6
• Any Other	344	99.1	–	–	3	0.9
Gains of Library Period						
• Learn Subject Better	333	96.0	13	3.7	1	0.3
• Improve Reading Ability	299	86.2	47	13.5	1	0.3
	182	52.4	164	47.3	1	0.3
• Improve General Knowledge	343	98.8	–	–	4	1.2
• Any Other						

Table C 58: Manner of reading books, types of books and nature of reading in Classroom Library Period (N=92)

S. No.	Aspect	Yes		No	
		N	%	N	%
1.	**Activities**				
	• Independent Reading	85	92.4	07	7.6
	• Together Reading	69	75.0	23	25.0
	• In Groups	49	53.3	43	46.7
	• Teacher guided	78	84.8	14	15.2
	• Do other work	12	13.0	80	87.0
2.	**Types of Books**				
	• Story books	90	97.8	2	2.2
	• Work book	18	19.6	74	80.4
	• Comics	81	88.0	11	12.0
	• Text book	19	20.7	73	79.3
	• G.K	23	25.0	69	75.0
3.	**Involvement in Reading**	N		%	
	• Not Reading				
	• Causal Reading	0		0	
	• Intensive Reading	57		62.0	
		35		38.0	

Table C 59: Parents' opinions on language and arithmetic skills of their children

S. No.	Item	Yes		No		No Response	
		F	%	F	%	F	%
1.	Reading fluent news paper	287	82.5	55	15.8	6	1.7
2.	Writing letter	232	66.7	109	31.3	7	2.0
3.	Calculate payment of milkman	320	92.0	21	6.0	7	2.0

Table C 60: PTA meetings (N=375)

S. No.	Aspect	Yes		No		No Response	
		F	%	F	%	F	%
1.	Minutes of PTA meeting	364	97%	7	1.9	4	1.1
2.	Major Issues Discussed in Meeting					33	8.5
	Children Attendance	158	42.1				
	Teacher Attendance	8	2.1				
	Midday Meal	52	13.9				
	Any Other	125	33.3				

Table C 61: Teachers' opinions on Home School Link

S. No.	Aspect	Facilitation				No Effect		Impeding			
		Most		Some Extent				Some Extent		Most	
		N	%	N	%	N	%	N	%	N	%
1.	Impact of CLAPS	302	42.2	335	46.9	69	9.6	6	0.8	3	0.4
2.	AMC Meeting	385	53.8	272	38.0	52	7.3	5	0.7	1	0.1
3.	Review by HM	442	61.8	221	30.9	46	6.4	5	0.7	1	0.1
4.	Review by AMO	315	44.1	310	43.4	78	11.0	11	1.5	1	0.1
5.	Educational Melas	319	44.6	302	42.2	83	11.6	6	0.8	5	0.7
6.	Frequency of	Always		Frequently		Often		Rarely		Never	
	• Home Visits	179	25.0	316	44.2	191	26.7	12	1.7	17	2.4
	• Parent Interaction	226	31.6	322	45.0	143	20.0	9	1.3	15	2.1

Table C62: Regularity of Teachers and children in attending the school

Response	Parents opinions							
	Region 1		Region 2		Region 3		All Regions	
	N	%	N	%	N	%	N	%
Yes	78	98.73	132	97.06	127	96.21	337	97.12
No	1	1.27	4	2.94	5	3.79	10	2.88
Yes	76	96.2	122	89.71	118	89.39	316	91.07
No	3	3.8	14	10.29	14	10.61	31	8.93
	79	100	136	100	132	100	347	100

Table C 63: Perception of Teachers on unintended outcomes about implementation of CLAPS

Statement of opinion	Extent of opinion*																													
	Strongly Agree								Agree								Disagree								Strongly Disagree					
Item	Region 1		Region 2		Region 3		All Regions		Region 1		Region 2		Region 3		All Regions		Region 1		Region 2		Region 3		All Regions		Region 1		Region 2		Region 3		All Regions	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Children's Attendance improved	111	69.8	117	43.7	135	46.9	363	50.8	45	28.3	137	51.1	120	41.7	302	42.2	1	0.6	10	3.7	12	4.2	23	3.2	1	0.6	1	0.4	8	2.8	10	1.4
Teacher's punctuality improved	118	74.2	158	59	170t	59	446	62.4	30	18.9	96	35.8	88	30.6	214	29.9	4	2.5	11	4.1	7	2.4	22	3.1	3	1.9	0	0	10	3.5	13	1.8
Reduced teachers absenteeism	94	59.1	131	48.9	116	40.3	341	47.7	42	26.4	107	39.9	140	48.6	289	40.4	8	5	23	8.6	15	5.2	46	6.4	12	7.5	4	1.5	6	2.1	22	3.1
Self confidence and self esteem of children	111	69.8	152	56.7	151	52.4	414	57.9	42	26.4	105	39.2	119	41.3	266	37.2	3	1.9	7	2.6	4	1.4	14	2	1	0.6	0	0	0	0	1	0.1
Team spirit among children	118	74.2	149	55.6	177	61.5	444	62.1	35	22	113	42.2	94	32.6	242	33.8	3	1.9	2	0.7	1	0.3	6	0.8	1	0.6	0	0	3	1	4	0.6

*Tool no.2, Item no.4

Table C 64: Perception of parents on children's personality dimensions after implementation of CLAPS

Dimension	Parent's Responses								
	Response	Region 1		Region 2		Region 3		All Regions	
		N	%	N	%	N	%	N	%
Independent and self confidence	Yes	71	89.87	121	88.97	109	82.58	301	86.74
Communication skills	Yes	76	96.2	122	89.71	113	85.61	311	89.63
Personal hygiene	Yes	76	96.2	122	89.71	125	94.7	323	93.08
Other dimensions	Yes	17	21.52	30	22.06	23	17.42	70	20.17
Developed leader ship qualities	Yes	3	3.8	2	1.47	3	2.27	8	2.31
Able to express opinion freely	Yes	1	1.27	2	1.47	5	3.79	8	2.31
Takes interest to study at home	Yes	4	5.06	12	8.82	9	6.82	25	7.2
Helps parents in house hold activities	Yes	6	7.59	1	0.74	2	1.52	9	2.59
Speak well with all/ good communication skills	Yes	1	1.27	2	1.47	2	1.52	5	1.44
Develop habit of going to school regularly	Yes	0	0	1	0.74	2	1.52	3	0.86
Creative expression improved	Yes	0	0	2	1.47	1	0.76	3	0.86
Participate more in cultural activities	Yes	0	0	1	0.74	0	0	1	0.29
Keep themselves neat and tidy	Yes	1	1.27	1	0.74	2	1.52	4	1.15
Irrelevant		1	1.27	4	2.94	5	3.79	10	2.88
No response		63	79.75	92	67.65	102	77.27	257	74.06
Tool no 6 Item 33									

Table C 65: Reasons given by the children for liking the schools

Reason	Children*							
	Region 1		Region 2		Region 3		All Regions	
	N	%	N	%	N	%	N	%
Behaviour of the Teacher	79	100	128	96.97	120	88.89	327	94.51
Way of Teaching	79	100	128	96.97	122	90.37	329	95.09
Classroom environment	77	97.47	122	92.42	111	82.22	310	89.6
interaction of parents with teachers about children	74	93.67	104	78.79	101	74.81	279	80.64

* Tool no 5 Item 21 (a to e)

WHAT IS PROGRAMME EVALUATION?

"The systematic investigation of the merit, worth, or significance of an 'object' "

Michael Scriven

"…the systematic assessment of the operation and/or outcomes of a program or policy, compared to a set of explicit or implicit standards as a means of contributing to the improvement of the program or policy…"

Carol Weiss

विद्यया ऽ मृतमश्नुते

एन सी ई आर टी
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This study has been supported by the
SSA-Technical Cooperation Fund (TCF) - Technical Services Agency

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