STUDY ON IMPACT OF BaLA (BUILDING as LEARNING AID) IN STATE OF GUJARAT

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List of Abbreviations

%	:	Percentage
AVG	:	Average
BRC	:	Block Resource Center
BaLA	:	Building as Learning Aid
C M T	:	Concept Mapping Test
CRC	:	Cluster Resource Centre
DIET	:	District Institutes of Education and Training
DISE	:	District Information System for Education
DPE	:	District Programme Engineer
DPEP	:	District Primary Education Programme
DPEP	:	District Primary Education Programme
FGD	:	Focus Group Discussion
FI	:	Field Investigator
GCPE	:	Gujarat Council of Primary Education
HSE	:	Higher Secondary Education
ICDS	:	Integrated Child Development Services
MHRD	:	Ministry of Human Resource Development
MIS	:	Management Information System
N.A.B.R.	:	Non availability of BaLA resources
No.	:	Number
SE	:	Secondary Education
SIEMAT	:	State Institutes of Educational Management and Training
SSA	:	Sarva Shiksha Abhiyan
TLM	:	Teaching Learning Material
UEE	:	Universalization of Elementary Education
UNICEF	:	United Nations Children's Fund
UNICEF	:	United Nations International Children's Education Fund
V.G.	:	Very good
V.P.	:	Very poor
VEC	:	Village Education Committees

EXECUTIVE SUMMARY

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Building as Learning Aid (BaLA)

Schools are specialized spaces for learning. Traditionally, school buildings were conceived to provide shelter to the activity of education. They were treated as structures of bricks and mortar, rather than as enclosures that encompass a learning environment. Often, not much attention is paid to the interface between building design and the design of the teaching and learning program – how the use of space and its constituent elements, including lighting and ventilation, can support more diverse learning activities apart from frontal teaching (e.g. for small group learning, individual reading, for project work).

BaLA is about developing the school's entire physical environment as a learning aid – the inside, the outside, the semi-open spaces – everywhere. At the core, it is about maximizing the educational 'value' of a built space. It is based on 'how children learn'. Building as a Learning Aid (BaLA) aims to use the built elements like the floor, walls, pillars, staircases, windows, doors, ceilings, fans, trees, flowers, or even rainwater falling on the building as a learning resource.

BaLA activity helps in:

- Creating child-friendly learning environment
- Learning by doing and experiencing
- Involving multiple senses in the learning process
- Allowing different children to learn at a different pace
- Learning through peer group activities
- Developing inclusive settings for all children
- Allowing children to learn all the time in the school environment

Need and Importance of BaLA

The fact that physical space can be a resource in the teaching-learning process has never been explored seriously. Buildings are also the most expensive physical asset of a school. By innovatively treating the school spaces (e.g. classroom, circulation spaces, outdoors, natural environment etc.) and their constituent built elements (like the floor, wall, ceiling,

door, windows, furniture, open ground) a range of learning situations and materials can be integrated such that they can actively be used as a learning resource. This resource can complement the teaching process and supplement textbook information, much beyond providing wall space for posters and decoration. A three-dimensional space can offer a unique setting for a child to learn because it can introduce a multiple sensory experience into the otherwise uni-sensory textbook or a blackboard transacted by a disinterested teacher. It can make abstract concepts more concrete and real from the child's perspective. The architecture of a school can be a resource for teaching–learning processes. There are two levels of innovative interventions under BaLA:

1. Develop the spaces to create varied teaching –learning situations for all
2. Develop the built elements in these spaces as teaching –learning aids with sensory cues

Using BaLA, spaces can be created as setting for the various goals for learning – to know, to do, to live together and to be.

For children it can help in developing

- Language and Communication skills
- Numeracy skills
- Abstract notions through concrete examples
- Respect for nature and environment
- Capability to realize potential of available resources
- Power of observation

It has been found that fun filled, aesthetical environment relieves children of boredom and increases constructive use of time.

Implementation of BaLA in India

It would not be wrong if we say that Mr. Kabir Vajpayee is the founder or initiator of BaLA activities in Government Schools. Mr. Kabir Vajpayee's involvement in education began with the Lok Jumbish Programme in Rajasthan. He was among the architects chosen to innovate with existing school buildings in rural areas. The challenge was to repair and renovate structures creatively with a budget of Rs 25,000.

After Lok Jumbish, Mr. Kabir Vajpayee and his team worked with at Vinyas to put together some 100 different ideas which schools elsewhere in country could implement. This was BaLA and it became a book brought out with the help of the World Bank.

Hence BaLA as an idea originated in Lok Jumbish in Rajasthan in 1997 - 98. It was in its infancy, with no name at that time. Vinyãs' Interdisciplinary Study and work with several experts from child development, pedagogy, environment, science and others led to a more systematic set of about 150 design ideas during 2000-2001. This we called as BaLA – Building as Learning Aid. This work was supported by UNICEF, India.

It was only in the latter part of 2004 and early 2005 that systematic dissemination of the idea started and the central as well as the state governments took keen interest in adopting the idea and taking it to planning and implementation. The Rajiv Gandhi Foundation and its then Director General and Senior Programme officer of Education were the key force in pushing us as well as the Ministry of Human Resources Department (MHRD). At the HRD ministry in Delhi, once they were clear about the concept, they were forthcoming to ask the states to take it on immediately – on their own initiative.

Implementation of BaLA in Gujarat

In Gujarat, in January 2006, the then Secretary, Education also read that book and decided to develop 'Dream schools' for Gujarat, – by using BaLA ideas. He provisioned and sanctioned Rs 2.5 lakhs per school for 100 schools and the SSA office also collected information from several other schools that had unspent grants and donations that could be used. Each year, the number of BaLA schools in Gujarat has been steadily increasing, due to the demand generated by the communities. At present, more than 2500 schools are covered, across all districts and blocks. Each school, block, district has its own unique planning and design strategy as well as implementation.

This project aims to study the overall impact of BaLA in State of Gujarat.

Title of the Study

"Study on Impact of BaLA (Building as Learning Aid) in State of Gujarat"

Objectives of the study

The following were the objectives set for the study to be conducted: To study the availability of BaLA resources

1. To study the condition of BaLA resources
2. To compare the enrolment and retention rate before-after implementation of BaLA
3. To study the different concept learnt by students through BaLA
4. To Study perceptions of teachers regarding usefulness of BaLA

Methodology

The area of research for this topic includes eight districts of Gujarat, two from each direction viz. north, south, west and central. As the study also has to assess impact on enrolment and retention rates of 3 years before and after implementation of BaLA in schools, hence 2006 - 2007 and 2007 - 2008 BaLA schools were selected for the study. Since 2006-2008 there is total of 601 schools in which BaLA was implemented in primary schools of Gujarat. Thus 10% of the same i.e. 60 schools are selected by random sampling method for the study. Further this sample also includes nearly 60% of total schools of each selected districts where BaLA was implemented in 2006 - 2008. The data also covers 42 talukas of 8 selected districts. Equal and proportionate selection of talukas from each district is not made, due to unavailability of BaLA schools in every taluka in specified years.

Sample of the Study

For the present study eight districts namely Banaskantha, Dang, Dahod, Mehsana, Bharuch, Jamnagar, Junagadh and Vadodara were selected. Out of these selected districts total 60 schools were selected in which BaLA was implemented in the year of 2006-07 and 2007-08.

Description of Tools

Total 5 types of schedules were developed for the data collection. It includes following heads:

1. **Questionnaire for Principal**: This includes information of BaLA schools provided by principal in terms of, whether the BaLA planned and executed in school effectively, effect of BaLA on enrolment and retention, students

participation in group and self-engaged learning, utilized the misused and unused place effectively.

2. **Questionnaire for Teacher:** This includes information of school in terms of, condition and utilization of BaLA resources in class rooms, student's participation in group and self engaged learning, impact of BaLA on basic learning standard, impact of BaLA on attendance.

3. **Investigator Observation:** This schedule includes observations of investigators regarding the condition of BaLA resources, utilization of BaLA resources in school and class rooms, students participation in group and self engaged learning, environment of school for students, use of misused and unused place to utilize BaLA, Questionnaire for Principal Presence of students before and after school time, concept mapping test of I to VII standard students to check their knowledge about the BaLA concepts displayed in the school, collected the data on enrolment and re10tion before and after implementation of BaLA, number of concepts available in the school and the condition of resources.

4. **Interview with Principal:** This includes information about initiatives taken by principal to implement the BaLA, what changes they have observed before and after implementation of BaLA, what types of good practices they have observed after implementation of BaLA, problems faced during the implementation of BaLA.

5. **Group Discussion with Teachers:** This includes according to teachers what are the advantages of BaLA, what are the initiatives taken by them to encourage BaLA in their school.

Data Collection

The field investigators were selected from same locality and given appropriate training for the data collection. They were given time to understand the whole procedure and clarify the doubts. The field investigators, along with research associate and principal investigators went for the data collection. The first district selected for data collection was Mehsana. Afterwards Jamnagar, Vadodara, Dahod, Bharuch, Dang, Banaskantha and Junagadh were visited respectively for data collection. At the end of each sampled

school's data collection process, all the relevant schedules were stamped and signed by respective school principals to ensure authenticity of data.

Data Analysis

After completion of data collection, all the data was fed in the computer. After that frequency and percentage were calculated. Data analysis is based on the information provided by principals and teachers, collected through questionnaire, interview and observation made by Field investigator. Observation schedule is playing a vital role in Data collection. As it comprises various CMT (1620 in number with participation of 2100 students from 60 schools) taken by field investigator, information collected from official records on Enrolment and Retention rate in schools of 7 years, checklist to see exactly how many BaLA resources are available and their conditions. The data were analyzed both qualitatively and quantitatively depending on whether the data collected was in descriptive form or numerical form.

Data Analysis of Tribal District

An exclusive study is made to understand the Impact of BaLA in tribal region. For which data was collected from Dang and Dahod districts.

Analysis and Interpretation of the Data

The data collected from the extensively designed questionnaire were coded and analyzed qualitatively using frequency, sum and percentages. Tabulation and statistical analysis were made to study the overall Impact of BaLA in State of Gujarat. Content analysis technique was also used for the analysis of the subjective responses collected from Interview schedule and Focus Group Discussion with teachers.

The Data analysis is purely based on information provided by Principals, Teachers and Observation and CMT conducted by Field Investigators. The analysis and interpretations are made objective wise and at the end overall impact of BaLA on schools' infrastructure and educational environment is prepared.

Major Findings

The major findings of the study reflects availability and condition of BaLA resources, various basic concepts learnt by students (class I-VII) impact on enrolment and retention in school, perception of teachers regarding usefulness of BALA and overall impact of BALA on schools physical environment and education.

Findings of All 8 Districts

Availability and Condition of BaLA Resources

1. In all schools BaLA resources are found and their condition is good to average.
2. In 45% schools condition of BaLA resources in classroom was found good.
3. In 42% schools utilization of BaLA resources in school was found good.
4. However BALA introduce in these schools 4 to 5 year before they need maintenance.
5. Dot Board, Word Wall, Picture with Fun, Calendar, Map, Geometrical Board, Shape Chart, Mathematical Puzzle, Ruled writable Surface, Green Board, Solar System, Practice Word, Numerical Tables, Height Measurement, Mystery Wall, Run Way/ Path Way, Herb Garden, Green writing Board for Self-Learning Long Jump, Angles, Me and My World, Low Height seating are total 21 items found in more than 70% schools.
6. 90% i.e. majority of the principals stated that there is impact of BaLA on enrolment and retention in the school.

Impact on Enrolment and Retention

7. After implementation of BaLA in 2007-08, consistency in total enrolment with average of 74 to 76 has been observed. However there has not been much effect of BaLA on total enrolment in the schools.
8. In those schools where BaLA was implemented in 2007-2008, consistency in total retention has been observed from 2006-07 to 2010-11 with an average of 302 to 306.
9. In those schools where BaLA was implemented in 2006-2007, total enrolment was low but after implementation of BaLA in three years i.e. from 2007-2008 significant increase in total enrolment was observed followed by gradual decrease in successive years.

10. There was remarkable impact of BaLA on total retention in those schools where BaLA was implemented in 2006-2007. The total retention increased after implementation of BaLA. However gradual decrease in total retention in last three years was also observed.

Result of CMT (Subject wise)

11. In 32.95% schools, students' knowledge of Numerical concept was found good and in 36.08% schools, it was found average.

12. In 33.55% schools, students' knowledge of Alphabet concept was found good and in 35.98% schools, it was found average.

13. In 27.37% schools, students' knowledge of Story Based Learning concept was found good and in 40.40% schools, it was found average.

14. In 30.07% schools, students' knowledge of Guajarati concept was found good and in 44.47% schools, it was found average.

15. In 31.67% schools, students' knowledge of Environmental Science concept was found good and in 42.38% schools, it was found average.

16. In 31.88% schools, students' knowledge of Science concept was found good and in 43.66% schools, it was found average.

17. In 57.01% schools, students' knowledge of Social Science concept was found average and in 42.13% schools, it was found good.

18. In 31.88% schools, students' knowledge of Science concept was found good and in 43.66% schools, it was found average.

19. In 32.70% schools, students' knowledge of Mathematics concept it was found good and in 40% schools, students it was found average.

Result of CMT (Class wise)

20. In 31.27% schools the knowledge of Class 1 students was found good and in 42.55% schools it was found average.

21. In 31.87% schools the knowledge of Class 2 students was found good and in 44.67% it was found average.

22. In 30.85% schools the knowledge of Class 3 students was found good and in 36.13% it was found average.

23. In 32.08% schools the knowledge of Class 4 students was found good and in 36.30% it was found average.

24. In 27.18% schools the knowledge of Class 5 students was found good and in 45.45% it was found average.

25. In 29.23% schools the knowledge of Class 6 students was found good and in 45.36% it was found average.

26. In 28.50% schools the knowledge of Class 7 students was found good and in 43.95% it was found average.

Perceptions of Teachers Regarding Usefulness of BaLA

27. 96.66% i.e. majority of the principals stated that school has become more happy and joyful place for students.

28. 95% principal stated that BaLA gives holistic space to students for development.

29. 60% principals informed that BaLA is not crowding existing space of their school.

30. 78.33% principals stated BaLA schools are sensitive to accomplish needs of all children from I to VII standard.

31. 78.33% principals informed that they are not getting any donation for maintenance of BaLA activity.

32. 85% teachers replied affirmatively when asked for use of BaLA resources in teaching.

33. 34% teachers said they didn't receive any training to utilize BaLA resources.

34. 63.34% teachers said that BaLA is not crowding existing space of their school.

35. 85% i.e. majority of the principals stated that through BaLA various concepts are learnt by students in class-room.

36. 85% of teachers replied affirmatively when asked for concepts learnt through BaLA by student in Class room easily.

37. 70% teachers replied affirmatively when asked for their contribution to learning through BaLA.

38. 80% teachers accepted that there is an impact of BaLA in school.

39. 70% i.e. majority of the teachers stated that they contributed to the learning through BaLA. It was found majority of the times they were confusing their preparation of TLM (Teaching Learning Material) with contribution to BaLA.

40. 66.67% principals stated affirmatively that BaLA is helpful in encouraging slow learners.

41. 86.66% principals stated that BaLA is efficiently planned in the school.

42. 85% principals stated that BaLA is efficiently executed in the school.

43. 80% principals stated that school maintains the BaLA resources and 85% teachers opined the same.

44. 60% principals replied that BaLA is not crowding existing space of the school whereas 63.34% teachers opined the same.

45. 81.66% principals stated that Impact of BaLA in Classroom Participation of Students is very good. However 61.67% teachers stated that Impact of BaLA in Classroom participation of students is good.

46. 61.02% principals stated that students' participation itself-engaged learning is good and 65% teachers opined the same. However as per observation it is only 44.06%.

47. 68.33% principal stated that students' participation in group-learning is good and 71.67% teachers opined the same. However as per observation it is only 47.46%.

Impact of BaLA on overall Development of School

48. 69.39% principals stated that they have used misused space in good way. As per observation it is only 39.91%.

49. 61.4% principals stated that they have used unused space in good way. As per observation it is only 48.21%.

50. 68.33% principals stated that they have used under used space in good way. As per observation it is only 48.17%.

51. 63.33% principals stated that utilization of BaLA resources in school is good. However as per observation it is good in 46.67% schools.

52. Utilization of BaLA resources in classrooms was found good in 45.76% schools.

53. Utilization of classroom for implementing ideas of BaLA was found average in 47.45% schools.

54. In 41.64% schools BaLA was accessible to differently able Children.

55. Principal's contribution to learning through BaLA was found good in 53.44% schools.

Findings of Tribal Districts

Availability and Condition of BaLA Resources

1. In all schools BaLA resources are found and in 45.45% schools condition of BaLA resources were found average in school.

2. In 63.63% schools condition of BaLA resources in class room was found average. However BaLA was introduced in these schools 4 to 5 year before so they need maintenance.

4. Dot Board, Word Wall, Picture with Fun, Calendar, Map, Geometrical Board, Shape Chart, Mathematical Puzzle, Ruled writable Surface, Green Board, Solar System, Practice Word, Numerical Tables, Height Measurement, Mystery Wall, Run Way/ Path Way, Herb Garden, Green writing Board for Self-Learning Long Jump, Angles, Me and My World, Low Height seating are total 21 items found in more than 75% of schools. In no school amphitheater was found.

5. All principals unanimously stated that there is an Impact of BaLA on enrolment and retention in the school.

6. In those schools where BaLA was implemented in 2007-2008, variance in total enrolment with average of 98 to 106 from 2007-08 to 2009-10 is observed. In 2010-11 lowest total enrolment with average of 87 was observed.

7. It was found that after implementation of BaLA in 2007-08, there was a gradual increase in total retention. However notable decrease is seen in 2010-11 with average of 392.

8. In those schools where BaLA was implemented in 2006-2007 no significant impact of BaLA was observed on total enrolment. It was found that there was a gradual decrease in total enrolment in schools from 2005-06 to 2008-09.

9. It was found that after implementation of BaLA in 2006-07 major increase in total retention was observed. This trend continued for next year. Further it seems that there was consistency with minor decrease in retention with the average 404 to 368 in last three years.

Result of CMT (Subject Wise)

14. In 34% schools, students' knowledge of Numerical concept was found good and in 43.6% schools it was found average.

15. In 31.51% schools, students' the knowledge of Alphabetical concept was found good and in 47.87% schools it was found average.

16. In 22.22% schools, students' knowledge of Story based learning concept was found good and in 58.38% schools it was found average and in 18.38 % it was found very poor.

17. In 43.79% schools, students' knowledge of Gujarati concept was found average and in 26.97% schools it was found poor.

18. In 26.66% schools, students' knowledge of Environmental Science concept was found good and in 44.57% schools it was found average.

19. In 30.89% schools, students' knowledge of Social Science concept was found good and in 52.93% schools it was found average.

20. In 28.01% schools, students' knowledge of Science concept was found good, in 30.08% schools it was found poor and in 42.35% schools it was found average.

21. In 27.52% schools, students' knowledge of Mathematics concept was found good, in 29.09% schools it was found poor and in 40.01% schools it was found average.

Result of CMT (Class wise)

22. In 28.33% schools knowledge of Class 1 students was found good and in 44.84% it was found average.

23. In 32.83% schools knowledge of Class 2 students was found poor and in 33.82% it was found average.

24. In 29.88% schools knowledge of Class 3 students was found good and in 44.0% it was found average.

25. In 31.64% schools knowledge of Class 4 students was found good and in 40.69% it was found average.

26. In 26.3% schools knowledge of Class 5 students was found good and in 47.56% it was found average.

27. In 31.78% schools knowledge of Class 6 students was found good and in 46.36% it was found average.

28. In 49.07% schools knowledge of Class 7 students was found average and in 25.09% it was found poor.

Perceptions of Teachers Regarding Usefulness of BaLA

29. 90.90% i.e. majority of the principals stated that school has become more happy and joyful place for students and believed that BaLA gives holistic space to students for development.

30. 72.72% i.e. majority of the principals said that BaLA is not crowding existing space of their school

31. 90.90% i.e. majority of the principals stated that BaLA schools are sensitive to accomplish needs of all children from I to VII standard.

32. 90.90% majority of the principals said that they are not getting any donation for maintenance.

33. 90.90% i.e. majority of the teachers stated that they are using BaLA resources in teaching however 81.81% of such teachers have not received any training for that.

34. 72.72% i.e. majority of the teachers stated that through BaLA various concepts are learnt by students in class-room.

35. 72.72% i.e. majority of the teachers stated that they contributed to the learning through BaLA. It was found majority of the times they were confusing their preparation of TLM (Teaching Learning Material) with contribution to BaLA.

36. All teachers unanimously accepted that there is a positive impact of BaLA on attendance.

37. 81.81% principals stated affirmatively that BaLA is helpful in encouraging Slow Learners and 72.72% teachers also opined the same.

38. 63.63% principals stated that BaLA is efficiently planned and executed in the school and 54.54% more than half of the total teachers opined the same.

39. 63.63% principals stated that school maintains the BaLA resources and 72.72% i.e. majority of the teachers opined the same.

40. 72.72% i.e. majority of the principals and teachers each replied that BaLA is not crowding existing space of the school.

Information Provided by Principal, Teacher and Observer

41. 45.45% principals stated that students' participation in self- engaged learning is good. However 45.45% teachers opined it is average and as per observation 54.54% it was found average.

42. 75% i.e. majority of the principals stated that they have used misused space in good way. However as per observation it is only true in 37.5% schools.

43. As per observation Utilization of BaLA resources in classrooms was good in 45.45% schools.

44. As per observation Utilization of class room for implementing ideas of BaLA was average in 45.45% schools.

45. As per observation Use of resources by teacher was average in 81.81% schools.

46. As per observation BaLA was accessible to differently able Children was average in 55.55% schools.

47. Principal's contribution to learning through BaLA was observed good in 45.45% schools.

48. It is found that 90.90 % BaLA schools, students found before and after school hours in school and playing and learning with BaLA resources.

Discussion

During the data collection various facts have emerged which are in addition to information analysed and interpreted in chapters. To conduct the CMT, various difficulties were faced by FI and Research team. In majority of schools BaLA resources pertaining to I- IV were available but in some classes i.e. V-VII BaLA were limited. The condition of BaLA resources in some of the schools was so bad that they were of no use. Repetition of same BaLA objects (eg. Me and My World for instance in Thasra school of Dahod, Mystery wall and Fun picture) was also one of the problems faced during Data Collection. In Mehsana Prathmik Shala-7 BaLA objects like Height measurement and maps were placed in a corner that no student could utilize the same. Rupenbandar school of Jamnagar BaLA, Adarsh Buniuyadi Prathmik Shala of Valia (Bharuch) and Chandigadh Prathmik Shala of Junagadh were found the outstanding BaLA schools. In these schools BaLA objects were maintained by the school management itself. In some

schools due to enthusiasm shown by Teachers and Principal BaLA was utilized by students but in some schools lack of enthusiasm towards the failure of the scheme. Teachers and principals were found having very limited knowledge of BaLA as majority of them considered BaLA as painting on wall or an activity which should be performed by students in recess. On the other hand there were Principals who described BaLA as learning with fun. It was also found that BaLA was quite popular in the rural areas. In the urban districts BaLA was not very successful due to availability of private schools. Introduction of Pragna Project had adverse impact on BaLA activity. It was found that in various schools BaLA resources from the class I and II were totally wiped and out. In most of the schools lack of awareness of BaLA activity among students, teachers and Principals was found. Apart from these discrepancies majority of BaLA schools had a very soothing environment. Seeing students playing and enjoying with BaLA resources was one of the pleasant moments of the memories of this project.

Conclusion

BaLA is successful in making its remarkable beginning in the state of Gujarat. Nearly 70% identified resources were available in BaLA School. Their condition was found either good or average. Students' knowledge of various concepts learnt through BaLA was found average and good. However no significant impact of BaLA is found on enrolment in the schools. However a minor impact of BaLA on retention is observed. Teacher knows about BaLA but there knowledge is very limited. 88% teachers didn't receive any training to utilize BaLA resources. Hence it is a serious matter which needs to be addressed.

Suggestions and Plan of Action

The Research Team humbly suggests the following plan of Action
Implementation of BaLA in school should not be a one-time event. After implementation of BALA in the school, provision of its maintenance has to be made and monitored.

- Provision to Maintain BaLA Resources by Government and
- Provision to Maintain BaLA resources by School Management.

Additional grant for maintenance and development of new BaLA resources should be provided annually.

BaLA should be designed in a way that it can cater to the needs of each class and each subject. Therefore along with Delightful and amusing elements of BaLA, it should be designed and implemented keeping in mind the class specific and subject specific requirements.

The placement of BaLA objects should be proportionately distributed between school premises and classrooms.

At the time of selection of school for implementing BaLA, caution should be taken that it should not overlap with other government programmes or projects. Vis- a-vis the school where BaLA is already implemented other projects like Pragna should not be introduced which has altogether different pedagogical method.

The two important stakeholders of BaLA are teachers and the students. Hence there has to be some provision to create awareness among them. Now BaLA has reached to its next level by introduction of i-BaLA but teachers at school level are not even trained to utilize the BaLA resources. Therefore there is an urgent need to start a training programme for Teachers of BaLA schools.

BaLA resources should be more attractive, colorful and the element of learning with fun should be equally emphasized.

To make BaLA schools more attractive and popular among students, parents and the surrounding population, the school building should be colored with bright and vibrant colors in order to catch attention.

Finally and most important, to create awareness among the students about the BaLA and its usefulness 'BaLA Day' should be celebrated in the school.

This "BaLA Day" can be celebrated in first week of academic year. Day programme can be divided in two sessions:

- In first part, pedagogy session of teacher with students should be conducted.
- In second session out siders, parents, guest etc. should be called and informed about the outstanding feature of their school.

Due to this day Programme, students at the beginning of the year will be informed about the BaLA resources available in their school so that they can utilize and play with these resources on their own during the academic year.

Due to the involvement of parents, guests and others BaLA will get promoted and new ideas will be generated. If 'BaLA Day' will be planned and executed properly, it will definitely generate impact on enrolment, retention, teaching and learning environment in the school.

CHAPTER 1

INTRODUCTION

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1.0 Introduction

Education is considered as a vital instrument in bringing about peaceful and silent economic and social revolution for ushering in an era of harmony and peace. Education in India did not begin with British rule. "Education" writes Dr. W. F. Thomason a most distinguished Indologists "is no exotic in India: There is no country where the love of learning had so early origin or had exercised so lasting and powerful an influence."

Under the Constitution of India, education is a concurrent subject, with a sharing of responsibilities (including legislation) between the Centre (Ministry of Human Resource Development) and States (Departments of Education). Management of schooling has been traditionally controlled by the mainstream state and district administrations. The last two decades have seen the emergence of a number of education-specific support institutions, such as the District Primary Education Programme (DPEP) and Sarva Shiksha Abhiyan, (SSA) State Implementation Societies, State Councils of Educational Research and Training (SCERT), State Institutes of Educational Management and Training (SIEMAT), District Institutes of Education and Training (DIET), Block Resource Centres (BRC), Cluster Resource Centres (CRC), and in rural areas, Village Education Committees (VEC), as well as an increased involvement of NGOs, that have acted as a counterweight to what is often an overly bureaucratic and hierarchical administration. The last decade or so has also seen the establishment of the *Panchayati Raj*, or village council, and this body is playing an increasingly important role in education in rural areas across the country. There are broadly four stages of school education in India: namely, primary, upper primary, secondary education (SE), and higher secondary education (HSE). The combination of primary and upper primary schooling is termed elementary education.

1.1 History of Education in India

The Ancient Indian Education System has been a source of inspiration and guidance to all educational system of the world. Ancient Indian Education was primarily the education of Vedas. It meant the perfect acquirement of the text through oral repetition from teacher. The source springs of education were Brahmans, Upanishads and Dharma Sutras. According to the thinkers in India, "Vidya" or Knowledge or "Learning" or "Education" is the 'Third Eye' of man, which gives him an insight in to all affairs and teaches him

how to act: It leads us to our salvation, in the mundane sphere it leads us to all round progress and prosperity.

Education removes difficulties and enables us to realize the value of life. The primary aim of ancient education was instilling in to the minds of pupils a spirit of being pious and religious for glory of god and goodness of man. The life of a pupil was full of spiritual acts.

The inculcation of civic virtues and social values were equally important objectives of education in India. Brahmins were the chief exponents of knowledge. It was mainly due to their efforts that we possess most of our sacred and secular literature.

1.2 History of Education in Gujarat

Education in Gujarat can be studied under three heads, education during Hindu period, Muslim period and British period. Hindu period is subdivided in to an ancient and Rajput periods. In the olden times pupils used go to the house of guru. This period of study was called *Brahmacharshram* as students had to live at Guru's house. During the Buddhist period we come across some universities like Nalanda, Takshashila etc. In India, in Gujarat there was one such university at Valabhipur in Saurashtra. The students of Valabhi were very clever in arguing i.e. Shastrath, Education in *Shabdvidya, Nyayavidya, Abhidharmvidya, Shilpvidya* and medicine was given (Harprasad,G. Shastri op.cit.pp.460-463).

During the reign of Bhimdev, Siddharaj Jayasingh and Kumarpal Patan had become the centre of learning. Siddhpur, Devpatan, Anandpur and Cambay were other centres of learning. A national system of education is a living thing. It is the outcome of forgotten struggles and difficulties and of battles long ago. Education is a development – A product of evolution of society. Hence before one starts studying the history of education of either nation or region one should study the factors influencing the education.

Geography is one of the main factors influencing the education of Gujarat. The long sea coast, attracted foreigners who indirectly affected languages, literature and education. The region climate of Gujarat has made the people generous of heart and liberal in their attitude. Thus Gujarat has become a confluence of varied cultures. Our educational activities are influenced by history also. Historical developments throw light on our study. The political rule is as significant as history, geography, culture and literature in

influencing the history of education. Political power affects education. The rulers of ancient, medieval, and lastly British Gujarat had influenced and contributed much in the development of educational system.

In the golden age of Solanki Kings, primary education of the period included instruction in alphabet, in numbers and in grammar for further education, subjects like architecture as well as urology, medicine and law and philosophy were studied. Brahmans, Jains and Buddhist were studying their own branches of religion. Muslims also simultaneously with the establishment of Sultanate, encouraged the centre of learning like Patan.

With the advent of British rule, the modern system of education began to develop. Before that in Gujarat indigenous systems through pathshalas and madrasa were imparting education. English education become more influential after Wood's dispatch of 1854 and emphasis was shifted to secular education from religious education.

1.3 Status of Elementary Education in India

Elementary education i.e. classes I – VIII consisting of primary (I – V) and upper primary (VI – VIII) is the foundation of the pyramid in the education system and has received a major push in the tenth plan. The role of education in facilitating social and economic progress is well recognized. It opens up opportunities leading to both individual and group entitlements. Education, in its broadest sense of development of youth, is the most crucial input for empowering people with skills and knowledge and giving them access to productive employment in future. Improvements in education are not only expected to enhance efficiency but also augment the overall quality of life. The Eleventh Plan places the highest priority on education as a central instrument for achieving rapid and inclusive growth. It presents a comprehensive strategy for strengthening the education sector covering all segments of the education pyramid.

The government has made elementary education compulsory and free. But, the goal of universal elementary education in India has been very difficult to achieve till now. Therefore, the nation has introduced innovative ways of universalizing elementary education. After the District Primary Education Programme (DPEP) of 1994, the government launched the "Sarva Shiksha Abhiyan" (SSA). Sarva Shiksha Abhiyan was

launched in 2001 to universalize and improve the quality of elementary education in India through community ownership of elementary education.

1.4 Sarva Shiksha Abhiyan

Sarva Shiksha Abhiyan is a recent initiative of the Government of India to achieve the goal of universalization of Elementary Education. Sarva Shiksha Abhiyan is an effort to universalize elementary education by community-ownership of the school system. It is a response to the demand for quality basic education all over the country. The SSA programme is also an attempt to provide an opportunity for improving human capabilities to all children, through provision of community - owned quality education in a mission mode.

1.4.1 Aims and Objectives of SSA

1. Sarva Shiksha Abhiyan is to provide useful and relevant elementary education for all children in the 6 to 14 age group by 2010. There is also another goal to bridge social, regional and gender gaps, with the active participation of the community in the management of schools.

2. Useful and relevant education signifies a quest for an education system that is not alienating and that draws on community solidarity. Its aim is to allow children to learn about and master their natural environment in a manner that allows the fullest harnessing of their human potential both spiritually and materially. This quest must also be a process of value based learning that allows children an opportunity to work for each other's well being rather than to permit mere selfish pursuits.

3. Sarva Shiksha Abhiyan realizes the importance of Early Childhood Care and Education and looks at the 0-14 age as a continuum. All efforts to support pre-school learning in ICDS centres or special pre-school centres in non ICDS areas will be made to supplement the efforts being made by the Department of Women and Child Development.

1.4.2 Objectives of Sarva Shiksha Abhiyan

- All children in school, Education Guarantee Centre, Alternate School, ' Back-to-School camp by 2003

- All children complete 5 years of primary schooling by 2007
- All children complete 8 years of elementary schooling by 2010
- Focus on elementary education of satisfactory quality with emphasis on education for life
- Bridge all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010
- Universal retention by 2010

1.5 Building as Learning Aid (BaLA)

Schools are specialized spaces for learning. Traditionally, school buildings were conceived to provide shelter to the activity of education. They were treated as structures of bricks and mortar, rather than as enclosures that encompass a learning environment. Often, not much attention is paid to the interface between building design and the design of the teaching and learning program – how the use of space and its constituent elements, including lighting and ventilation, can support more diverse learning activities apart from frontal teaching (e.g. for small group learning, individual reading, for project work).

BaLA is about developing the school's entire physical environment as a learning aid – the inside, the outside, the semi-open spaces – everywhere. At the core, it is about maximizing the educational 'value' of a built space. It is based on 'how children learn'. Building as a Learning Aid (BaLA) aims to use the built elements like the floor, walls, pillars, staircases, windows, doors, ceilings, fans, trees, flowers, or even rainwater falling on the building as a learning resource.

BaLA activity helps in:
- Creating child-friendly learning environment
- Learning by doing and experiencing
- Involving multiple senses in the learning process
- Allowing different children to learn at a different pace
- Learning through peer group activities
- Developing inclusive settings for all children
- Allowing children to learn all the time in the school environment

1.5.1 Need and Importance of BaLA

The fact that physical space can be a resource in the teaching-learning process has never been explored seriously. Buildings are also the most expensive physical asset of a school. By innovatively treating the school spaces (e.g. classroom, circulation spaces, outdoors, natural environment etc.) and their constituent built elements (like the floor, wall, ceiling, door, windows, furniture, open ground) a range of learning situations and materials can be integrated such that they can actively be used as a learning resource. This resource can complement the teaching process and supplement textbook information, much beyond providing wall space for posters and decoration. A three-dimensional space can offer a unique setting for a child to learn because it can introduce a multiple sensory experience into the otherwise uni-sensory textbook or a blackboard transacted by a disinterested teacher. It can make abstract concepts more concrete and real from the child's perspective. The architecture of a school can be a resource for teaching–learning processes. There are two levels of innovative interventions under BaLA:

1. Develop the spaces to create varied teaching –learning situations for all
2. Develop the built elements in these spaces as teaching –learning aids with sensory cues

Using BaLA, spaces can be created as setting for the various goals for learning – to know, to do, to live together and to be.

For children it can help in developing

- Language and Communication skills
- Numeracy skills
- Abstract notions through concrete examples
- Respect for nature and environment
- Capability to realize potential of available resources
- Power of observation

It has been found that fun filled, aesthetical environment relieves children of boredom and increases constructive use of time.

1.5.2 Implementation of BaLA in India

It would not be wrong if we say that Mr. Kabir Vajpayee is the founder or initiator of BaLA activities in Government Schools. Mr. Kabir Vajpayee's involvement in education began with the Lok Jumbish Programme in Rajasthan. He was among the architects chosen to innovate with existing school buildings in rural areas. The challenge was to repair and renovate structures creatively with a budget of Rs 25,000.

After Lok Jumbish, Mr. Kabir Vajpayee and his team worked with at Vinyas to put together some 100 different ideas which schools elsewhere in country could implement. This was BaLA and it became a book brought out with the help of the World Bank.

Hence BaLA as an idea originated in Lok Jumbish in Rajasthan in 1997 - 98. It was in its infancy, with no name at that time. Vinyãs' Interdisciplinary Study and work with several experts from child development, pedagogy, environment, science and others led to a more systematic set of about 150 design ideas during 2000-2001. This we called as BaLA – Building as Learning Aid. This work was supported by UNICEF, India.

It was only in the latter part of 2004 and early 2005 that systematic dissemination of the idea started and the central as well as the state governments took keen interest in adopting the idea and taking it to planning and implementation. The Rajiv Gandhi Foundation and its then Director General and Senior Programme officer of Education were the key force in pushing us as well as the Ministry of Human Resources Department (MHRD). At the HRD ministry in Delhi, once they were clear about the concept, they were forthcoming to ask the states to take it on immediately – on their own initiative.

1.5.3 Implementation of BaLA in Gujarat

In Gujarat, in January 2006, the then Secretary, Education also read that book and decided to develop 'Dream schools' for Gujarat, – by using BaLA ideas. He provisioned and sanctioned Rs 2.5 lakhs per school for 100 schools and the SSA office also collected information from several other schools that had unspent grants and donations that could be used. Each year, the number of BaLA schools in Gujarat has been steadily increasing, due to the demand generated by the communities. At present, more than 2500 schools are covered, across all districts and blocks. Each school, block, district has its own unique planning and design strategy as well as implementation.

This project aims to study the overall impact of BaLA in State of Gujarat.

1.6 Title of the Study

"Study on Impact of BaLA (Building as Learning Aid) in State of Gujarat"

1.7 Objectives of the study

The following were the objectives set for the study to be conducted: To study the availability of BaLA resources

1. To study the condition of BaLA resources
2. To compare the enrolment and retention rate before-after implementation of BaLA
3. To study the different concept learnt by students through BaLA
4. To Study perceptions of teachers regarding usefulness of BaLA

1.8 Methodology

The area of research for this topic includes eight districts of Gujarat, two from each direction viz. north, south, west and central. As the study also has to assess impact on enrolment and retention rates of 3 years before and after implementation of BaLA in schools, hence 2006 - 2007 and 2007 - 2008 BaLA schools were selected for the study. Since 2006-2008 there is total of 601 schools in which BaLA was implemented in primary schools of Gujarat. Thus 10% of the same i.e. 60 schools are selected by random sampling method for the study. Further this sample also includes nearly 60% of total schools of each selected districts where BaLA was implemented in 2006 - 2008. The data also covers 42 talukas of 8 selected districts. Equal and proportionate selection of talukas from each district is not made, due to unavailability of BaLA schools in every taluka in specified years.

1.8.1 Sample of the Study

For the present study eight districts namely Banaskantha, Dang, Dahod, Mehsana, Bharuch, Jamnagar, Junagadh and Vadodara were selected. Out of these selected districts total 60 schools were selected in which BaLA was implemented in the year of 2006-07 and 2007-08.

Table 1: Number of Schools from selected Districts

Sr. No.	Name of the District	No. of Blocks	No. of Schools
1	Banaskantha	6	9
2	Dang	1	4
3	Dahod	3	7
4	Vadodara	7	8
5	Mehsana	6	7
6	Bharuch	5	8
7	Jamnagar	6	7
8	Junagadh	8	10
	Total	**42**	**60**

Graph 1: Schematic diagram for Number of Schools from selected Districts

1.8.2 Description of Tools

Total 5 types of schedules were developed for the data collection. It includes following heads:

1. **Questionnaire for Principal**: This includes information of BaLA schools provided by principal in terms of, whether the BaLA planned and executed in school effectively, effect of BaLA on enrolment and retention, students participation in group and self-engaged learning, utilized the misused and unused place effectively.

2. **Questionnaire for Teacher:** This includes information of school in terms of, condition and utilization of BaLA resources in class rooms, student's participation in group and self engaged learning, impact of BaLA on basic learning standard, impact of BaLA on attendance.

3. **Investigator Observation:** This schedule includes observations of investigators regarding the condition of BaLA resources, utilization of BaLA resources in school and class rooms, students participation in group and self engaged learning, environment of school for students, use of misused and unused place to utilize BaLA, Questionnaire for Principal Presence of students before and after school time, concept mapping test of I to VII standard students to check their knowledge about the BaLA concepts displayed in the school, collected the data on enrolment and re10tion before and after implementation of BaLA, number of concepts available in the school and the condition of resources.

4. **Interview with Principal:** This includes information about initiatives taken by principal to implement the BaLA, what changes they have observed before and after implementation of BaLA, what types of good practices they have observed after implementation of BaLA, problems faced during the implementation of BaLA.

5. **Group Discussion with Teachers:** This includes according to teachers what are the advantages of BaLA, what are the initiatives taken by them to encourage BaLA in their school.

1.8.3 Data Collection

The field investigators were selected from same locality and given appropriate training for the data collection. They were given time to understand the whole procedure and clarify the doubts. The field investigators, along with research associate and principal investigators went for the data collection. The first district selected for data collection was Mehsana. Afterwards Jamnagar, Vadodara, Dahod, Bharuch, Dang, Banaskantha and Junagadh were visited respectively for data collection. At the end of each sampled school's data collection process, all the relevant schedules were stamped and signed by respective school principals to ensure authenticity of data.

1.8.4 Data Analysis

After completion of data collection, all the data was fed in the computer. After that frequency and percentage were calculated. Data analysis is based on the information provided by principals and teachers, collected through questionnaire, interview and observation made by Field investigator. Observation schedule is playing a vital role in Data collection. As it comprises various CMT (1620 in number with participation of 2100 students from 60 schools) taken by field investigator, information collected from official records on Enrolment and Retention rate in schools of 7 years, checklist to see exactly how many BaLA resources are available and their conditions. The data were analyzed both qualitatively and quantitatively depending on whether the data collected was in descriptive form or numerical form.

1.8.4.1 Data Analysis of Tribal District

An exclusive study is made to understand the Impact of BaLA in tribal region. For which data was collected from Dang and Dahod districts.

1.8.4.2 Analysis and Interpretation of the Data

The data collected from the extensively designed questionnaire were coded and analyzed qualitatively using frequency, sum and percentages. Tabulation and statistical analysis were made to study the overall Impact of BaLA in State of Gujarat. Content analysis technique was also used for the analysis of the subjective responses collected from Interview schedule and Focus Group Discussion with teachers.

The Data analysis is purely based on information provided by Principals, Teachers and Observation and CMT conducted by Field Investigators. The analysis and interpretations are made objective wise and at the end overall impact of BaLA on schools' infrastructure and educational environment is prepared.

Chapter 2

Availability of BaLA Resources in Schools and their Condition

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2.1 Availability of BaLA Resources in Schools and their Condition of All 8 Districts
2.2 Availability of BaLA Resources in Schools and their Condition of Tribal Districts
2.3 Information Provided by Teachers of All 8 Districts
2.4 Information on the basis of Observation of All 8 Districts
2.5 Information Provided by Teachers of Tribal Districts
2.6 Information on the Basis of Observation of Tribal Districts

2.1 Availability of BaLA Resources in Schools and their Condition of All 8 Districts

At the time of initiating BaLA activities nearly 40 types of BaLA resources were designed and implemented by Civil Department of Sarva Shiksha Abhiyan. At present in 2012 it is more than 100 types of BaLA resources have been developed by the department.

However there is no strict rule for minimum or maximum number of BaLA resources in school. The numbers generally vary from one school to other on the basis of strength of students and geographical area of the school. Generally considering these two facts grants from Rs. 1, 00,000 to Rs. 2, 50,000 was granted by SSA for developing the BaLA resources.

As selected schools for this study are from 2006-2008, expecting availability of nearly 100 BaLA resources from these schools would be unjust and unreasonable, because this number is for those schools which will develop into BaLA schools this year. After making pilot study and collecting data from Civil Department SSA, a list of 39 basic BaLA resources/ activity was made and data collection done accordingly.

The condition of BaLA resources rated with five scale rating system i.e. Very Good, Good, Average, Poor and Very Poor. The maximum found rating is colored with green box.

Table 2: Availability of BaLA Resources and Their Condition

Particulars	Yes		V.G.		G		AVG		P		V.P	
	No.	%	No.	%	No.	%	No.	%	No.	%	N	%
Dot Board	52	86.66	3	5.76	35	67.30	14	26.92	0	0	0	0
Word Wall	42	70	5	11.90	22	52.38	15	35.71	0	0	0	0
Picture with Fun	44	73.33	7	15.90	21	47.72	16	36.36	0	0	0	0
Calendar of Current, Last And Next Month	44	73.33	4	9.09	24	54.54	13	29.54	3	6.81	0	0
Map	55	91.66	14	25.45	23	41.81	16	29.09	2	3.63	0	0
Geometrical Board	49	81.66	6	12.24	21	42.85	21	42.85	1	2.04	0	0
Traditional Motif and	35	58.33	2	5.71	22	62.85	10	28.57	1	2.85	0	0

Visual												
Shape Chart	57	95	4	7.01	**36**	**63.15**	15	26.31	2	3.50	0	0
Mathematical Puzzle	40	66.66	3	7.5	**21**	**52.5**	16	40	0	0	0	0
Ruled Rightable Surface	51	85	4	7.84	**32**	**62.74**	14	27.45	1	1.96	0	0
Year Calendar	26	43.33	2	7.69	**16**	**61.63**	8	30.76	0	0	0	0
Magic Square	20	33.33	4	20	**6**	**30**	**9**	**45**	1	5	0	0
Green Board	49	81.66	8	16.32	**24**	**48.97**	15	30.61	0	0	0	0
Nutrition Chart	18	30	1	5.55	**8**	**44.44**	**9**	**50**	0	0	0	0
Solar System	36	60	5	13.88	**14**	**38.88**	12	33.33	5	1.38	0	0
Practice word	40	66.66	4	10	**20**	**50**	16	40	0	0	0	0
Traffic Signals	23	38.33	3	13.04	**11**	**47.82**	9	39.13	0	0	0	0
Pre Writing Pattern Group	33	55	4	12.12	**17**	**51.51**	10	30.30	1	3.03	1	3.03
Numerical Concept of Ascending and Descending Order	37	61.66	3	8.10	**19**	**51.35**	14	37.83	1	2.70	0	0
Distance	31	51.66	4	12.90	**14**	**45.16**	8	25.80	5	16.1	0	0
Numerical Tables	44	73.33	7	15.90	**21**	**47.72**	16	36.36	2	4.54	0	0
Height Measurement	57	95	9	15.78	**38**	**66.66**	10	17.54	0	0	0	0
Story Based Learning	39	65	9	23.07	**18**	**46.15**	12	30.76	0	0	0	0
Nutrition Chain	25	41.66	1	4	**15**	**60**	8	32	0	0	0	0
Sun Clock	11	18.33	**5**	**45.45**	**5**	**45.45**	1	9.09	0	0	0	0
Mystery Wall	48	80	12	25	**30**	**62.5**	5	10.41	1	2.08	0	0
Schedule Clock	17	28.33	1	5.88	7	41.17	**9**	**52.94**	0	0	0	0
Learning with fun	33	55	4	12.12	**17**	**51.51**	10	30.30	1	3.03	1	3.03
Kitchen Garden	33	55	2	6.06	9	27.27	**22**	**66.66**	0	0	0	0

Sand Pit	27	45	2	7.40	10	37.03	**13**	**48.14**	2	7.40	0	0
Run Way/ Path Way	52	86.66	13	25	17	32.69	**22**	**42.30**	0	0	0	0
Herb Garden	55	91.66	7	12.72	18	32.72	**25**	**45.45**	3	5.45	2	3.63
Green writing Board For Self-Learning	42	70	4	9..8	**22**	**52.38**	14	33.33	2	4.76	0	0
Long Jump	43	71.66	2	4.65	**20**	**46.51**	10	23.25	9	20.93	2	11.62
Angles	43	71.66	1	2.32	7	16.27	**19**	**44.18**	9	20.93	0	0
Amphitheatre	27	45	4	14.81	**11**	**40.74**	7	25.92	5	18.51	0	0
Me and My World	43	71.66	9	20.93	**22**	**51.16**	12	27.90	1	2.32	0	0
Low Height Seating	40	66.66	6	15	**19**	**47.5**	14	35	1	2.5	0	0

- Out of 60 schools, in 52 (86.66%) schools, **Dot Board** was available, out of 52 schools, in 35 (67.3%) schools it was found in good condition, in 3 (5.76%) schools it was found in very good and in 14 (26.92%) schools was found in average condition.

- Out of 60 schools, in 42 (70%) schools **Word Wall** was available, in 22 schools 11 (52.38%) it was found in good condition, in 5 (11.90%) schools it was found in very good and in 15 (35.71%) was found in average condition.

- Out of 60 schools, in 44 (73.33%) schools **Picture with fun** was available, in 21 (47.72%) schools it was found in good condition, in 7 (15.90%) schools was found in very good and in 16 (36.36%) schools found in average condition.

- Out of 60 schools, in 44 (73.33%) **Calendar of current, last and next month** was available, in 24 (54.54%) schools it was found in good condition, in 4 (9.09%) condition was very good and in 13 (29.54%) schools condition was average.

- Out of 60 schools, in 55 (91.66%) **Maps** were available, in 23 (41.81%) schools it was found in good condition, in 14 (25.45%) schools condition was found very good and in 16 (29.09%) schools condition was found average, in 2 (3.63%) schools condition was found poor.

- Out of 60 schools, in 49 (81.66%) **Geometrical Board** were available, in 21 (42.85%) schools it was found in good condition, in 6 (12.24%) schools condition

was found very good, in 21 (42.85%) schools condition was found average and only in 1 (2.85%) school condition was found poor.

- Out of 60 schools, in 35 (58.3%) schools **Traditional Motif and Visuals** were available, in 22 (62.85%) schools, it was found in good condition, in 2 (5.17%) schools condition was found very good, in 10(28.57%) condition was found average and in 1 (2.85%) school condition was poor.

- Out of 60 schools, in 57 (95%) schools **Shape Charts** were available, in 36 (63.15%) schools it was found in good condition, in 4 (7.01%) schools condition was very good in 15 (26.31%) schools condition was found average and in 2 (3.50%) schools condition was poor.

- Out of 60 schools, in 40 (66.66%) schools **Mathematical Puzzle** was available, in 21 (52.5%) schools it was found in good condition, in 3 (7.5%) schools condition was very good, in 16 (40 %) schools condition was found average.

- Out of 60 schools, in 51(85%) **Ruled Writable Surface** was available, in 32 (62.74%) schools it was found in good condition, in 4 (7.8%) schools condition was found very good, in 14 (27.45%) schools condition was found average, in 1 (1.96%) school condition was found poor.

- Out of 60 schools, in 26 (43.33%) **Year Calendar** was available, in 16 (61.63%) schools it was found in good condition, in 2 (7.69%) schools condition was found very good, in 8 (30.76%) schools condition was found average.

- Out of 60 schools, in 20 (33.33%) schools **Magic Square** was available, in 9(45%) schools condition was found average, in 6 (30%) schools it was found in good condition, in 4 (20%) schools condition was found very good and in 1(5%) school condition was found poor.

- Out of 60 schools, in 20 (33.33%) schools **Green Board** was available, in 24 (48.97%) schools it was found in good condition, in 8 (16.32%) schools condition was found very good, in 15 (30.61 %) schools condition was found average.

- Out of 60 schools, in 18 (30%) schools **Nutrition Chart** was available, in 9 (50%) schools condition was found average, in 8 (44.44%) schools it was found in good condition and in 1 (5.55%) school condition was found very good.

- Out of 60 schools, in 36 (60%) schools **Solar System** was available, in 14 (38.88%) schools it was found in good condition, in 1 (5.55%)school condition was found very good, in 5 (13.88%) schools condition was found very good, in 12 (33.33%) schools condition was found average and in 5 (1.38%) schools condition was found poor.

- Out of 60 schools, in 40 (66.66%) schools **Practice Word** was available, in 20 (50%) schools it was found in good condition in 4 (10%) schools condition was found very good, in 16 (40%) schools condition was found average.

- Out of 60 schools, in 23 (38.33%) schools **Traffic Signals** was available, in 11 (47.82%) schools it was found in good condition in 3 (13.04%) schools condition was found very good, and in 9 (39.13%) schools condition was found average.

- Out of 60 schools, in 35(55%) schools **Pre Writing Pattern Group** was available, in 17 (51.51%) schools it was found in good condition, in 4 (12.12%) schools condition was found very good, in 10 (30.30%) schools condition was found average and in 1 (3.03%) school condition was found poor.

- Out of 60 schools, in 37 (61.66%) schools **Numerical Concept of Ascending and Descending** order was available, in 19 (51.35%) schools it was found in good condition in 3 (8.10%) schools condition was found very good, in 14 (37.83%) schools condition was found average.

- Out of 60 schools, in 31 (51.66%) **Concept of Distance** was available, in 14 (45.16%) schools it was found in good condition, in 4 (12.90%) schools condition was found very good, in 8 (25.80%) schools condition was found average and in 2 (4.54%) schools condition was found poor.

- Out of 60 schools, in 44(73.33%) **Numerical Tables** was available, in 19 (51.35%) schools it was found in good condition in 7 (15.90%) schools condition was found very good, in 16(36.36%) schools condition was found average and in 2 (4.54%) schools condition was found poor.

- Out of 60 schools, in 57 (95%) **Height Measurement** was available, in 14 (45.16%) schools it was found in good condition in 9 (15.78%) schools condition was found very good, in 10(17.54%) schools condition was found average.

- Out of 60 schools, in 39 (65%) **Story Based Learning** was available, in 18 (46.15%) schools it was found in good condition in 9 (23.07%) schools condition was found very good, in 12 (30.76%) condition was found average.

- Out of 60 schools, in 25 (41.66%) schools **Nutrition Chain** was available, in 15 (60%) schools it was found in good condition in 1(4%) school condition was found very good and in 8 (32%) schools condition was found average.

- Out of 60 schools, in 11(18.33%) schools **Sun Clock** was available, in 5(45.45%) schools each condition was very good and good and in 1 (9.09%) school condition was found average.

- Out of 60 schools, in 48(80%) **Mystery Wall** was available, in 30 (62.5%) schools condition was very good in 12 (25%) schools condition was found very good, in 5(10.41%) condition was found average and in 1(2.08%) condition was found poor.

- Out of 60 schools, in 17 (28.33%) **Schedule Clock** was available, in 7(41.17%) schools condition was very good in 1 (5.88%) school condition was found very good, in 9(52.94%) condition was found average.

- Out of 60 schools, in 33 (55%) **Kitchen Garden** was available, in 22 (66.66%) condition was found average in 7 (41.17%) schools condition was found good and in 2 (6.06%) schools condition was found very good.

- Out of 60 schools, in 27(45%) **Sand Pit** was available, in 13 (48.14%) schools condition was found average in 10(37.03%) condition was found good in 2 (7.40%) schools condition was found very good, and in 2 (7.40%) schools condition was found poor.

- Out of 60 schools, in 52 (86.66%) **Run Way/Path Way** was available, in 22 (42.30%) schools condition was found average in 17 (32.69%) schools condition was found good, in 13 (25%) schools condition was found very good.

- Out of 60 schools, in 55 (91.66%) schools **Herb Garden** was available, in 25 (45.45%) schools condition was found average, in 18 (32.72%) schools condition was found good, in 7 (12.72%) schools condition was found was very good, and in 2 (3.63%) schools condition was found very poor.

- Out of 60 schools, in 42 (70%) schools **Green writing Board** for Self Learning was available, in 22 (52.38%) schools condition was found good, in 4 (9.8%) schools

condition was found very good, in 14 (33.333%) schools condition was found average and in 2 (4.76%) schools condition was found poor.

- Out of 60 schools, in 43 (71.66%) **Long Jump** was available, in 20 (46.51%) schools condition was found good, in 10 (23.25%) schools condition was found average in 2 (4.65%) schools condition was found very good and in 2 (11.62%) schools condition was found very poor.

- Out of 60 schools, in 43 (71.66%) concept of **Angles** was available, in 19 (44.18%) schools condition was found average and in 9 (20.93%) schools condition was found poor, in 7 (16.27%) schools condition was found good, and in 1 (2.32%) school condition was very good.

- Out of 60 schools, in 27 (45%) **Amphitheatre** was available, in 11(40.74%) schools condition was found good, in 4 (14.81%) schools condition was found very good, in 7 (25.92%) schools condition was found average and in 5 (18.51%) schools condition was found poor.

- Out of 60 schools, in 43 (71.66%) schools concept of **Me and My World** was available, in 22 (52.16%) schools condition was found good, in 9 (20.93%) schools condition was found very good, in 12 (27.90%) schools condition was found average and in 1 (2.32%) schools condition was found poor.

- Out of 60 schools, in 40 (66.66%) **Low Height Sitting** was available, in 19 (47.5%) schools condition was found good, in 6 (15%) schools condition was found very good, in 14 (35%) condition was found average and in 1 (2.5%) schools condition was found poor.

2.2 Availability of BaLA Resources in Schools and their Condition of Tribal Districts

The availability of BaLA resources and their Condition in the schools of selected Tribal Districts is as follows. There are total eleven i.e. seven of Dahod and four of Dang are selected.

Table 3: Availability of BaLA Resources and their Condition

Particulars	Yes		V.G.		G		AVG		P		V.P	
	No.	%	No.	%	No.	%	No.	%	No.	%	N	%
Dot Board	10	90.90	0	0	**6**	**60**	4	40	0	0	0	0
Word Wall	9	81.81	0	0	**5**	**55.55**	4	44.44	0	0	0	0
Picture With Fun	9	81.81	0	0	**5**	**55.55**	4	44.44	0	0	0	0
Calendar of Current, Last And Next Month	11	100	0	0	**6**	**54.54**	3	27.27	2	18.18	0	0
Map	9	81.81	2	22.22	1	11.11	**5**	**55.55**	1	11.11	0	0
Geometrical Board	9	81.81	0	0	3	33.33	**5**	**55.55**	1	11.11	0	0
Traditional Motif And Visual	7	63.63	0	0	**5**	**71.42**	2	28.57	0	0	0	0
Shape Chart	9	81.81	0	0	**7**	**77.77**	2	22.22	0	0	0	0
Mathematical Puzzle	6	54.54	0	0	**3**	**50**	**3**	**50**	0	0	0	0
Ruled Rightable Surface	11	100	0	0	**6**	**54.54**	5	45.45	0	0	0	0
Year Calendar	4	27.27	0	0	0	0	**4**	**100**	0	0	0	0
Magic Square	4	27.27	0	0	1	25	**3**	**75**	0	0	0	0
Green Board	10	90.90	1	10	**5**	**50**	4	40	0	0	0	0
Nutrition Chart	4	27.27	0	0	**2**	**50**	**2**	**50**	0	0	0	0
Solar System	8	72.72	1	12.5	**3**	**37.5**	2	25	2	25	0	0
Practice Word	10	90.90	2	20	**4**	**40**	**4**	**40**	0	0	0	0
Traffic Signals	5	45.45	0	0	**4**	**80**	1	20	0	0	0	0
Pre writing Pattern Group	6	54.54	0	0	**4**	**66.66**	2	33.33	0	0	0	0
Numerical Concept of Ascending And Descending Order	7	63.63	0	0	3	42.85	**4**	**57.14**	0	0	0	0
Distance	6	54.54	0	0	**4**	**66.66**	2	33.33	0	0	0	0

Numerical Tables	10	90.90	2	20	**6**	**60**	1	10	1	10	0	0
Height Measurement	11	100	3	27.27	**7**	**63.63**	1	9.09	0	0	0	0
Story Based Learning	7	63.63	1	14.28	**4**	**57.14**	2	28.57	0	0	0	0
Nutrition Chain	4	36.36	0	0	**2**	**50**	1	25	1	25	0	0
Sun Clock	3	27.27	0	0	**1**	**33.33**	**1**	**33.33**	0	0	**1**	**33.33**
Mystery Wall	9	81.81	2	22.22	**6**	**66.66**	1	11.11	0	0	0	0
Schedule Clock	3	27.27	0	0	1	33.33	**2**	**66.66**	0	0	0	0
Learning with fun	8	72.72	0	0	2	25	**6**	**75**	0	0	0	0
Kitchen Garden	6	54.54	0	0	2	33.33	**4**	**66.66**	0	0	0	0
Sand Pit	11	100	1	1.09	**6**	**54.54**	4	36.36	0	0	0	0
Run Way/ Path Way	11	100	2	18.18	3	27.27	**5**	**45.45**	0	0	1	1.09
Herb Garden	10	90.90	1	10	**5**	**50**	4	40	0	0	0	0
Green Writing Board for Self-Learning	9	81.81	1	11.11	**3**	**33.33**	**3**	**33.33**	2	22.22	0	0
Long Jump	10	90.90	0	0	3	30	**6**	**60**	1	10	0	0
Angles	0	0	0	0	0	0	0	0	0	0	0	0
Amphitheatre	7	63.63	2	28.57	**3**	**42.85**	2	28.57	0	0	0	0
Me and My World	7	63.63	3	42.85	1	14.28	**3**	**42.85**	0	0	0	0
Low Height Seating	6	54.54	1	16.66	**5**	**83.33**	0	0	0	0	0	0

- In 90.90% schools, **Dot Board** was available and in 60% schools it was found in good condition.

- In 81.81% schools, **Word Wall** was available and in 55.55% schools it was found in good condition.

- In 81.81% schools, **Picture with fun** was available and in 55.55% schools it was found in good condition.

- In all schools, **Calendar of current, last and next month** was available and in 54.54% schools it was found in good condition.

- In 81.81% schools, **Maps** were available and in 55.55% schools it was found in good condition.
- In 81.81% schools, **Geometrical Board** was available and in 55.55% schools it was found in good condition.
- In 63.63% schools, **Traditional Motif and Visuals** were available and in71.42% schools it was found in good condition.
- In 81.81% schools, **Shape Charts** were available and in 77.77% schools it was found in good condition.
- In 54.54% schools, **Mathematical Puzzle** was available and in 50% schools it was found in good condition and 50% was found average.
- In all schools, **Ruled Writable Surface** was available and in 54.54% schools it was found in good condition.
- Only in 27.27% schools, **Year Calendar** was found however in all such schools it was found in good condition.
- Only in 27.27% schools, **Magic Square** was found and in 75% schools it was found in good condition.
- In 90.90% schools, **Green Board** was available and in 75% schools it was found in good condition.
- Only in 27.27% schools, **Nutrition Chart** was found and in 50% schools it was found in good condition.
- In 72.72% schools, **Solar System** was available and in 25% schools it was found in good condition.
- In 90.90% schools, **Practice Word** was available, and in 60% schools it was found in good and very good condition.
- In 45.45 % schools, **Traffic Signals** were available and in 80% schools it was found in good condition.
- In 54.54% schools, **Pre Writing Pattern Group** was available and in 80% schools it was found in good condition.
- In 63.63% schools, **Numerical Concept of Ascending and Descending** order was available and in 42.85% schools was found in good condition.

- In 54.54% schools, **Concept of Distance** was available and in 66.66% schools it was found in good condition.

- In 90.90% schools, **Numerical Tables** were available and in 60% schools it was found in good condition.

- In 63.63% schools, **Story Based Learning** was available and in 57.14% schools it was found in good condition.

- Only in 36.36% schools, **Nutrition Chain** was found and in 50% schools it was found in good condition.

- Only in 27.27% schools, **Sun Clock** was available and in 33.33% schools each it was found in good average and poor condition.

- In 81.81% schools, **Mystery Wall** was available and in 66.66% schools it was found in good condition.

- Only in 27.27% schools, **Schedule Clock** was available and in 66.66% schools it was found in good condition.

- In 72.72% schools, **Kitchen Garden** was available and in 75% schools condition was found average.

- In all schools, **Run Way/Path Way** was available and in 54.54% condition was found in good condition.

- In 54.54% schools, **Sand pit** was available and in 54.54% schools it was found in good condition.

- In all schools, **Herb Garden** was made and in 45.45% schools were found in average.

- In 90.90% schools, **Green Writing Board** for Self Learning was available and in 50% schools it was found in good condition.

- In 81.81% schools, **Long Jump** was available and in 33.33% school each it was found good and average condition.

- In 90.90% schools, **Concept of Angles** was available and in 60% schools it was found in average.

- In no school **Amphitheatre** was found.

- In 63.63% schools, concept of **Me and My World** was available and 42.85% schools it was found in good condition.
- In 63.63% schools, **Low Height Sitting** was available and in 42.85% schools condition was found average.
- In 54.54% schools, **Ramdukan** was found and in 83.33% it was found in good condition.

2.3 Information Provided by Teachers of All 8 Districts

Table 4: Information Provided by Teachers

Particulars I	V.G.		Good		AVG		Poor		V.P.		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Condition of BaLA resources in class room	9	15	**42**	**70**	7	11.67	2	3.33	0	0	60
Utilization of BaLA resources in class room	8	13.33	**43**	**71.67**	8	13.33	1	1.67	0	0	60

- Out of total 60 schools teachers, 42 (70%) stated that **Condition of BaLA resources in class room** was found good.

- Out of total 60 schools teachers, 43 (71.67%) stated that **Utilization of BaLA resources in class room** was found good.

2.4 Information on the basis of Observation of All 8 Districts

Table 5: Information Provided by Observer

Particulars I	V.G.		Good		AVG		Poor		V.P.		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Condition of BaLA resources in class room	8	13.33	**27**	**45**	23	38.33	2	3.33	0	0	60
Utilization of BaLA resources in class room	8	13.33	**25**	**41.66**	24	40	2	3.33	1	1.66	60

- According to observation, in 27 (45%) schools **condition of BaLA resources in classroom** was found good.

- According to observation, in 25 (41.66%) schools **utilization of BaLA resources in classroom** was found good.

2.5 Information Provided by Teachers of Tribal Districts

Table 6: Information Provided by Teachers

Particulars I	V.G.		Good		AVG		Poor		V.P.		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Condition of BaLA resources in class room	1	9.09	**7**	**63.63**	3	27.27	0	0	0	0	11
Utilization of BaLA resources in class room	0	0	**7**	**63.63**	4	36.36	0	0	0	0	11

- Out of total 11 schools teachers, 7 (63.63%) stated that **condition of BaLA resources in class room** was found good.
- Out of total 11 schools teachers, 7 (63.63%) stated that **utilization of BaLA resources in class room** was found good.

2.6 Information on the Basis of Observation of Tribal Districts

Table 7: Information Provided by Observer

Particulars I	V.G.		Good		AVG		Poor		V.P.		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Condition of BaLA resources in class room	2	18.18	2	18.18	**7**	**63.63**	0	0	0	0	11
Utilization of BaLA resources in class room	1	9.09	4	36.36	**5**	**45.45**	1	9.09	0	0	11

- According to observation, in 7 (63.63%) schools **condition of BaLA resources** was found average.
- According to observation, in 5 (45.45%) schools **condition of BaLA resources** was found average.

CHAPTER 3

ENROLMENT AND RETENTION IN BaLA SCHOOLS

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3.0 Introduction

To study the enrolment and retention trend in primary schools the other aspects which affect the enrolment and retention should be considered. The various factors like Number of Government Primary Schools in the area, Number of Private Schools in the area, Population of the area, Social factors like students' involvement in household and agricultural activities, lack of awareness among parents etc. are important variables affecting enrolment and retention. As we presume BaLA as one of the aspects which may affect the enrolment and retention in the school therefore it should be studied along with other factors. Therefore we hereby request and inform the readers that the following analysis should be referred along with other factors and trends of enrolment and retention at Taluka level, District level and State level. Due to unavailability of these records in stipulated time period it has not been incorporated.

To study the impact of BaLA on enrolment and retention, the data from official record of school documents on enrolment and retention of seven years i.e. three years before and after implementation of BaLA activity was collected. The collected information was divided into following categories.

1 Schools where BaLA was implemented in 2006-07
2 Schools where BaLA was implemented in 2007-08
Therefore the analysis and interpretation can be made under following heads:

A. The enrolment and retention in those schools where BaLA was implemented in 2006-2007 (All 8 Districts)

B. The enrolment and retention in those schools where BaLA was implemented in 2007-2008 (All 8 Districts)

C. The enrolment and retention in those schools where BaLA was implemented in 2006-2007 (Tribal Districts)

D. The enrolment and retention in those schools where BaLA was implemented in 2007-2008 (Tribal Districts)

3.1 Information Provided on Enrolment and Retention by Principals of All 8 Districts:

Table 8: Information Provided on Enrolment and Retention by Principals

Particulars	Yes	No	V.G.	Good	AVG	Poor	V.P.	Total
Impact of BaLA on enrolment of students in school	58 (96.67%)	2 (3.33%)	**27 (46.55%)**	18 9 (31.03%)	13 (22.41%)	0 (0%)	0 (0%)	60
Impact of BaLA on retention of students in school	57 (95%)	3 (5%)	**33 (57.89%)**	14 (24.56%)	10 (17.54%)	0 (0%)	0 (0%)	60
Impact of BaLA on enrolment of Boys in school	58 (96.67%)	2 (3.33%)	**35 (60.34%)**	15 (25.86%)	8 (13.79%)	0 (0%)	0 (0%)	60
Impact of BaLA on enrolment of Girls in school	54 (90%)	6 (10%)	**32 (59.25%)**	12 (22.22%)	10 (18.51%)	0 (0%)	0 (0%)	60
Impact of BaLA on retention of Boys students in school	57 (95%)	3 (5%)	**37 (64.91%)**	11 (19.29%)	9 (15.78%)	0 (0%)	0 (0%)	60
Impact of BaLA on Retention of Girls students in school	54 (90%)	6 (10%)	**37 (68.51%)**	8 (14.81%)	9 (16.66%)	0 (0%)	0 (0%)	60

- More than 90% principals stated that there is impact of BaLA on enrolment and retention in the school.
- Around 60% principals stated that they have observed very good impact of BaLA on enrolment of Boys and Girls in their school.
- Similarly 65% principals stated that there is very good impact of BaLA on retaining Boys in the school whereas 69% stated about the very good impact of BaLA on retaining Girls in the school.

3.2 Information Provided on Enrolment and Retention by Principal of Tribal Districts

Table 9: Information Provided on Enrolment and Retention by Principal

Perceptions	Yes	No	V.G.	Good	AVG	Poor	V.P.	Total
Impact of BaLA on enrolment of students in school	11 (100%)	0 (0%)	2 (18.18%)	**5 (45.45%)**	4 (36.36%)	0 (0%)	0 (0%)	11
Impact of BaLA on retention of students in school	11 (100%)	0 (0%)	1 (9.09%)	**6 (54.54%)**	4 (36.36%)	0 (0%)	0 (0%)	11
Impact of BaLA on enrolment of Boys in school	11 (100%)	0 (0%)	1 (9.09%)	**6 (54.54%)**	4 (36.36%)	0 (0%)	0 (0%)	11
Impact of BaLA on enrolment of Girls in school	11 (100%)	0 (0%)	2 (18.18%)	**7 (63.63%)**	2 (18.18%)	0 (0%)	0 (0%)	11
Impact of BaLA on retention of Boys students in school	11 (100%)	0 (0%)	2 (18.18%)	**6 (54.54%)**	3 (27.27%)	0 (0%)	0 (0%)	11
Impact of BaLa on Retention of Girls students in school	11 (100%)	0 (0%)	2 (18.18%0	**8 (72.72%)**	1 (9.09)	0 (0%)	0 (0%)	11

- All unanimously stated that there is an impact of BaLA on enrolment and retention in the school.
- Around 55% principals stated that they have observed good impact of BaLA on enrolment and retention of Boys in their school.
- Similarly 64% principals stated that there is good impact of BaLA on enrolment Girls in the school whereas 73% stated about the good impact of BaLA on retaining Girls in the school.

3.3 Enrolment and Retention in BaLA Schools of All 8 Districts

3.3.1 Enrolment and Retention (2006-07) in BaLA Schools of All 8 Districts

The enrolment and retention in the schools where BaLA was implemented in 2006- 2007 is as follows:

Table 10: Enrolment and Retention (2006-07) in BaLA schools

Year	2003-04	2004-05	2005-06	2006-07 (Implement ation year of BaLA)	2007-08	2008-09	2009-10
Total no. of students in the year	364	342.27	372.54	379.54	382.27	387.90	373.455
Total Enrolment in the year	95.43	89.52	93.62	76.65	109.85	92.11	87.28
Enrolment of Girls in the year	51.73	49.82	48.82	37.45	53.45	50.91	45.18
Enrolment of Boys in the year	43.70	39.70	44.80	39.20	56.40	41.20	42.10
Total Retention in the year	364.17	368.9	378.22	384.8	408.83	390.97	382.75
Retention of Girls in the year	202.27	202.00	206.82	208.00	215.73	210.27	211.45
Retention of Boys in the year	161.90	166.90	171.40	176.80	193.10	180.70	171.30

Graph 2: Enrolment (2006-07) in BaLA Schools

Total Enrolment

Avg. no. of Students

95.43   89.52   93.62   76.65   109.85   92.11   87.28

2003-04   2004-05   2005-06   2006-07   2007-08   2008-09   2009-10

Year

Enrolment of Girls

Avg. no. of Girls

51.73 49.82 48.82   37.45   53.45 50.91   45.18

2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10

Year

Enrolment of Boys

Avg. no. of Boys

56.4

43.7   39.7   44.8   39.2   41.2 42.1

2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10

Year

Impact on **enrolment** in those schools where BaLA was implemented in **2006-2007** is as follows:

- When BaLA was implemented in 2006-07, Total enrolment was low but after implementation of BaLA in three years i.e. from 2007-2008 significant increase total enrolment is observed followed by gradual decrease in successive years.

- Among the Boys fluctuation from 44 to 42 was observed in seven years. In 2007-08 highest enrolment was observed.

- It is found that there is no remarkable impact of BaLA on Total enrolment in schools.

Graph 3: Retention (2006-07) in BaLA Schools
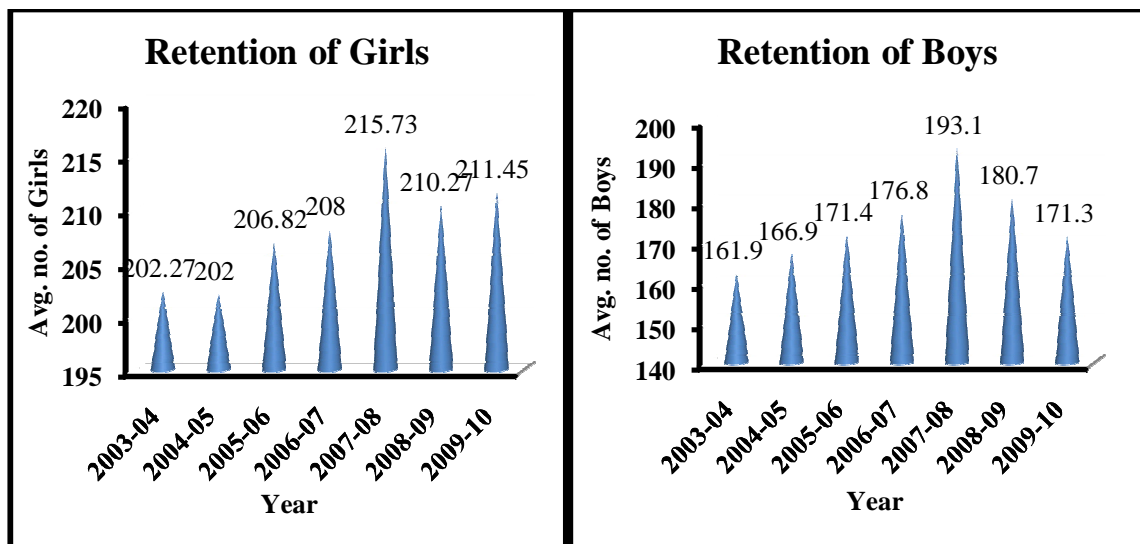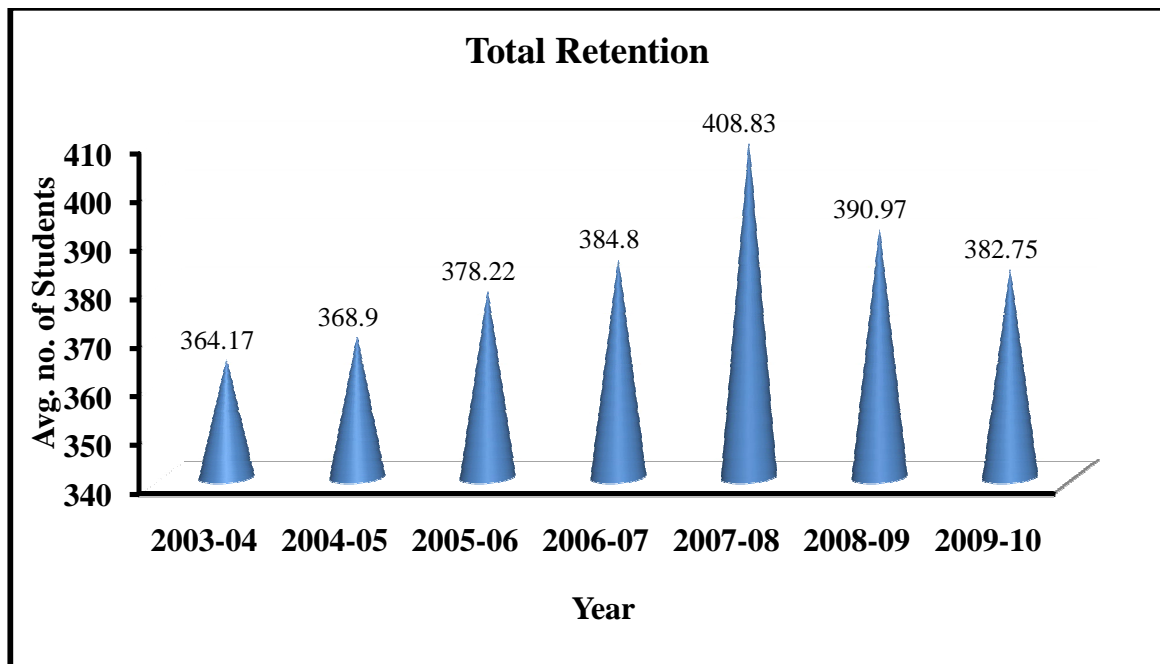
Total Retention

Avg. no. of Students

Year	Value
2003-04	364.17
2004-05	368.9
2005-06	378.22
2006-07	384.8
2007-08	408.83
2008-09	390.97
2009-10	382.75

Retention of Girls

Avg. no. of Girls

Year	Value
2003-04	202.27
2004-05	202
2005-06	206.82
2006-07	208
2007-08	215.73
2008-09	210.27
2009-10	211.45

Retention of Boys

Avg. no. of Boys

Year	Value
2003-04	161.9
2004-05	166.9
2005-06	171.4
2006-07	176.8
2007-08	193.1
2008-09	180.7
2009-10	171.3

Impact on **retention** in those schools where BaLA was implemented in **2006-2007** is as follows:

- It was found that there was remarkable impact of BaLA on retention. The total retention is increased after implementation of BaLA. However gradual decrease in total retention in last three years was also observed.

- Among the Girls gradual increase was observed from 2003-04 to 2007-08. However variance in retention from 215 to 211 is observed from 2007-08 to 2009-10.

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- Among the Boys gradual increase was observed from 2003-04 to 2007-08. However notable decrease in retention from 193 to 171 was observed from 2007-08 to 2009-10.

3.3.2 Enrolment and Retention (2007-08) in BaLA Schools of All 8 Districts

The enrolment and retention in the schools where BaLA was implemented in 2007-2008 is as follows:

Table 11: Enrolment and Retention (2007-08) in BaLA Schools

Year	2004-05	2005-06	2006-07	2007-08 (Implementation year of BaLA)	2008-09	2009-10	2010-11
Total no. of students in the year	305.07	319.24	321.58	308.92	305.31	308.63	309.63
Total Enrolment in the year	72.73	81.48	79.2	74.7	74.75	76.19	71.59
Enrolment of Girls in the year	30.90	39.17	36.27	34.22	33.54	33.88	33.54
Enrolment of Boys in the year	41.83	42.31	42.93	40.48	41.21	42.31	38.05
Total Retention in the year	364.84	313.49	302.62	302.08	299.86	305.1	302.65
Retention of Girls in the year	194.18	141.56	144.17	140.39	139.41	140.46	141.41
Retention of Boys in the year	170.66	171.93	158.45	161.69	160.45	164.64	161.24

Graph 4: Enrolment (2007-08) in BaLA Schools
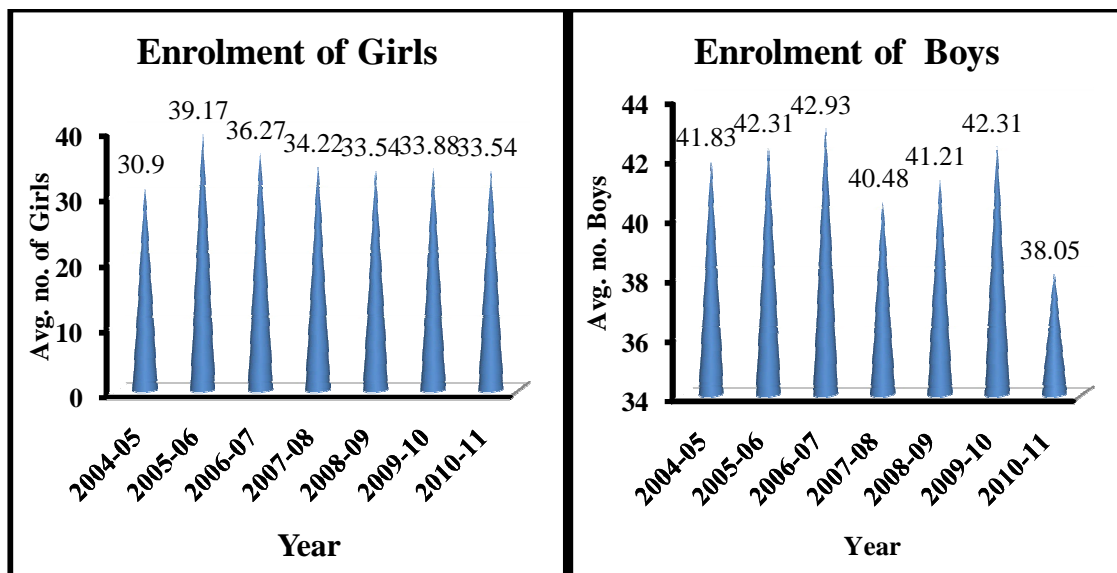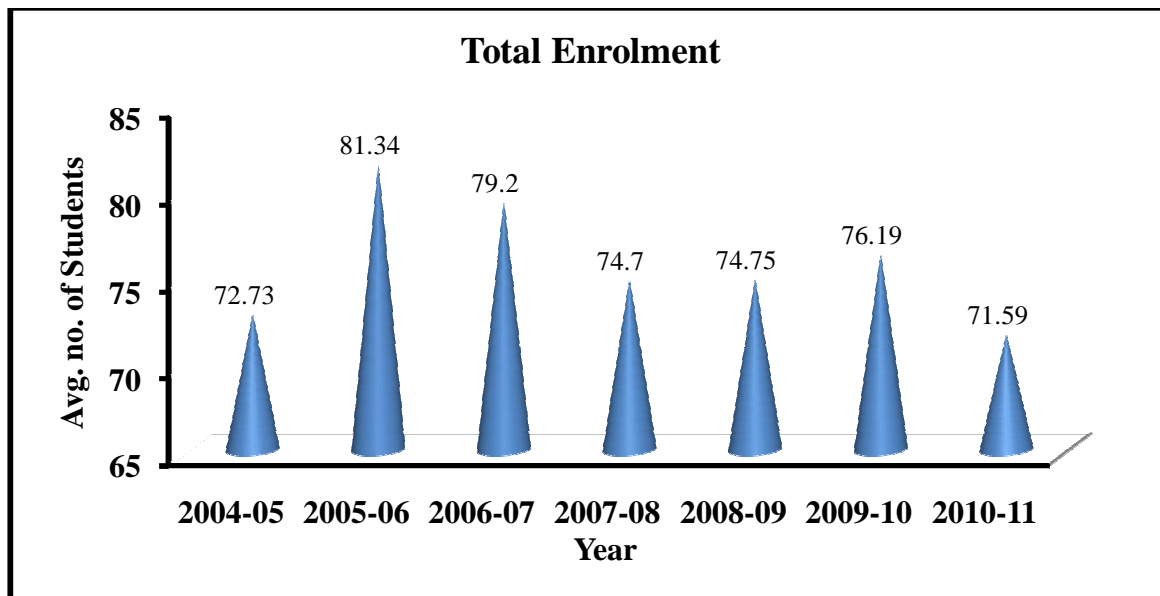
Total Enrolment

Avg. no. of Students

85
81.34
79.2
80
76.19
75
72.73
74.7
74.75
71.59
70
65

2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11
Year

Enrolment of Girls

Avg. no. of Girls

39.17
40   36.27 34.22 33.54 33.88 33.54
30.9
30
20
10
0

2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11
Year

Enrolment of Boys

Avg. no. Boys

44   42.93
41.83 42.31
42   42.31
40.48 41.21
40
38   38.05
36
34

2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11
Year

Impact on **enrolment** in those schools where BaLA was implemented in **2007-2008** is as follows:

- In 2005-06 maximum enrolment was observed. In 2007-08 when BaLA was implemented in the school the average enrolment was 75 however after implementation of BaLA consistency total enrolment with average of 74 to 76 was observed. In 2010-11 the enrolment was found minimum in 7 years of the study.

- Among the Girls remarkable consistency was observed with the average of 34 in last three years.
- Among the Boys enrolment fluctuation was observed with the average of 40 to 38 after implementation of BaLA. It was found that enrolment decreased after 2007-08.
- However there was not much effect of BaLA on Total Enrolment in the schools.

Graph 5: Retention (2007-08) in BaLA Schools

Total Retention

Year	Avg. no. of Students
2004-05	364.84
2005-06	313.49
2006-07	302.62
2007-08	302.08
2008-09	299.86
2009-10	305.1
2010-11	302.65

Retention of Girls

Year	Avg. no. of Girls
2004-05	194.18
2005-06	141.56
2006-07	144.17
2007-08	140.39
2008-09	139.41
2009-10	140.46
2010-11	141.41

Retention of Boys

Year	Avg. no. of Boys
2004-05	170.66
2005-06	171.93
2006-07	158.45
2007-08	161.69
2008-09	160.45
2009-10	164.64
2010-11	161.24
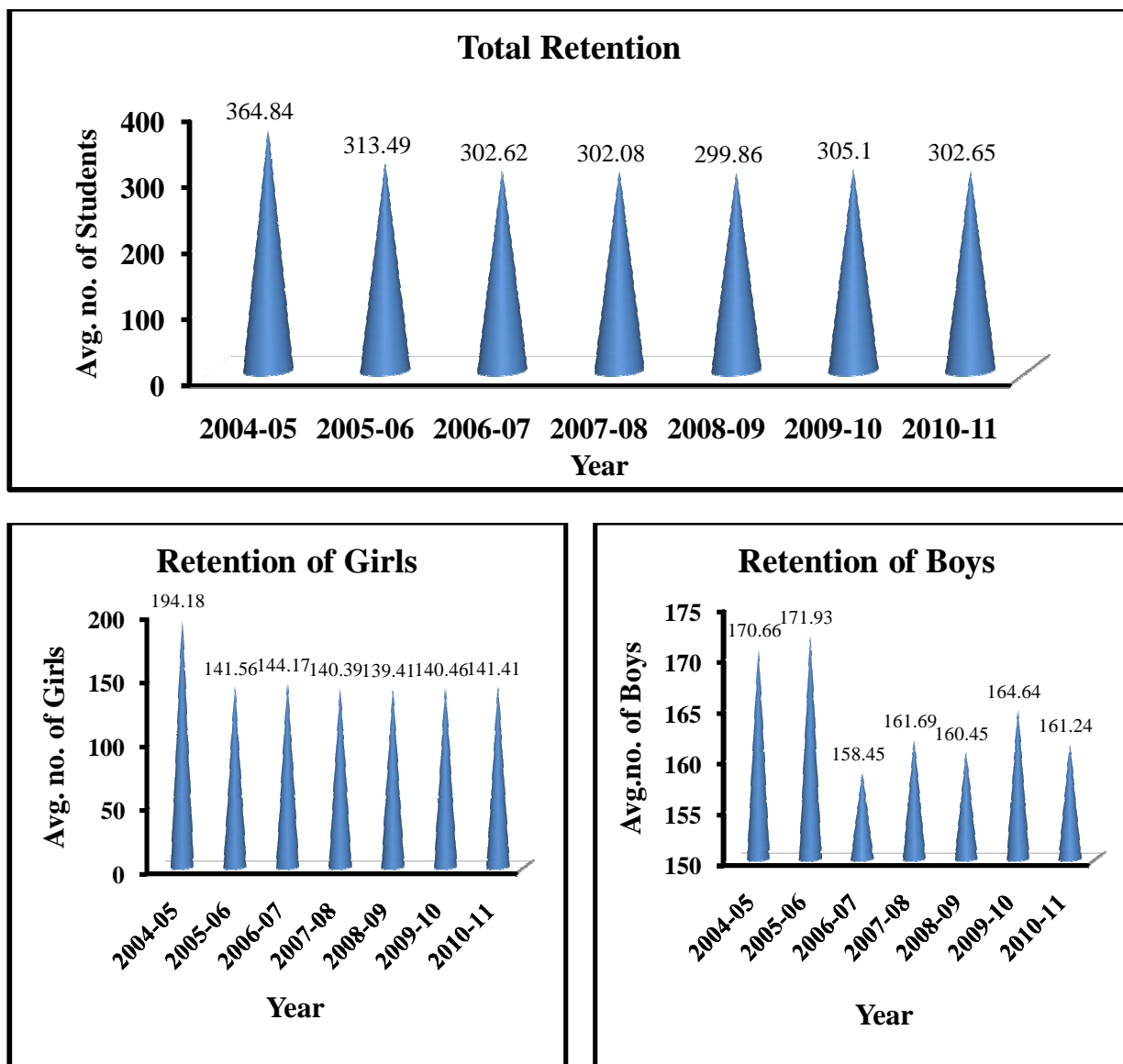
Impact on **retention** in those schools where BaLA was implemented in **2007-2008** is as follows:

- Consistency in total retention was observed from 2006-07 to 2010-11 with the averageof 302 to 306.

- In last three years i.e. from 2008 to 2011 consistency in retention with average of 140 to 141 among Girls was observed.

- Among the Boys remarkable decrease in retention was observed from 2006-07 and after implementation of BaLA gradual increase was observed in the year when BaLA was implemented in the schools. Fluctuation from 160 to 161 was observed in last three years.

3.4 Enrolment and Retention in BaLA Schools of Tribal Districts

3.4.1 Enrolment and Retention (2006-07) in BaLA Schools of Tribal Districts

The enrolment and retention in the schools where BaLA was implemented in 2006- 2007 is as follows:

Table 12: Enrolment and Retention (2006-07) in BaLA Schools

Year	2003-04	2004-05	2005-06	2006-07 (Implementa tion year of BaLA)	2007-08	2008-09	2009-10
Total no. of students in the year	357.33	311.33	389.66	424	445.33	450.33	407
Total Enrolment in the year	70	73.33	95.24	88.34	71	60.34	63
Enrolment of Girls in the year	36.67	39.33	36.67	29.67	30.67	36.67	27.00
Enrolment of Boys in the year	33.33	34.00	35.00	58.67	40.33	23.67	36.00
Total Retention in the year	323	335.67	342	390.67	404	392	368
Retention of Girls in the year	176.33	168.67	175.67	186.67	196.33	198.00	189.00
Retention of Boys in the year	146.67	167.00	166.33	204.00	207.67	194.00	179.00

Graph 6: Enrolment (2006-07) in BaLA Schools

Total Enrolment

Avg. no. of Students

Year	Value
2003-04	70
2004-05	73.33
2005-06	95.24
2006-07	88.34
2007-08	71
2008-09	60.34
2009-10	63

Enrolment of Boys

Avg. no. of Boys

Year	Value
2003-04	33.33
2004-05	34
2005-06	35
2006-07	58.67
2007-08	40.33
2008-09	23.67
2009-10	36

Enrolment of Girls

Avg. no. of Girls

Year	Value
2003-04	36.67
2004-05	39.33
2005-06	36.67
2006-07	29.67
2007-08	30.67
2008-09	36.67
2009-10	27
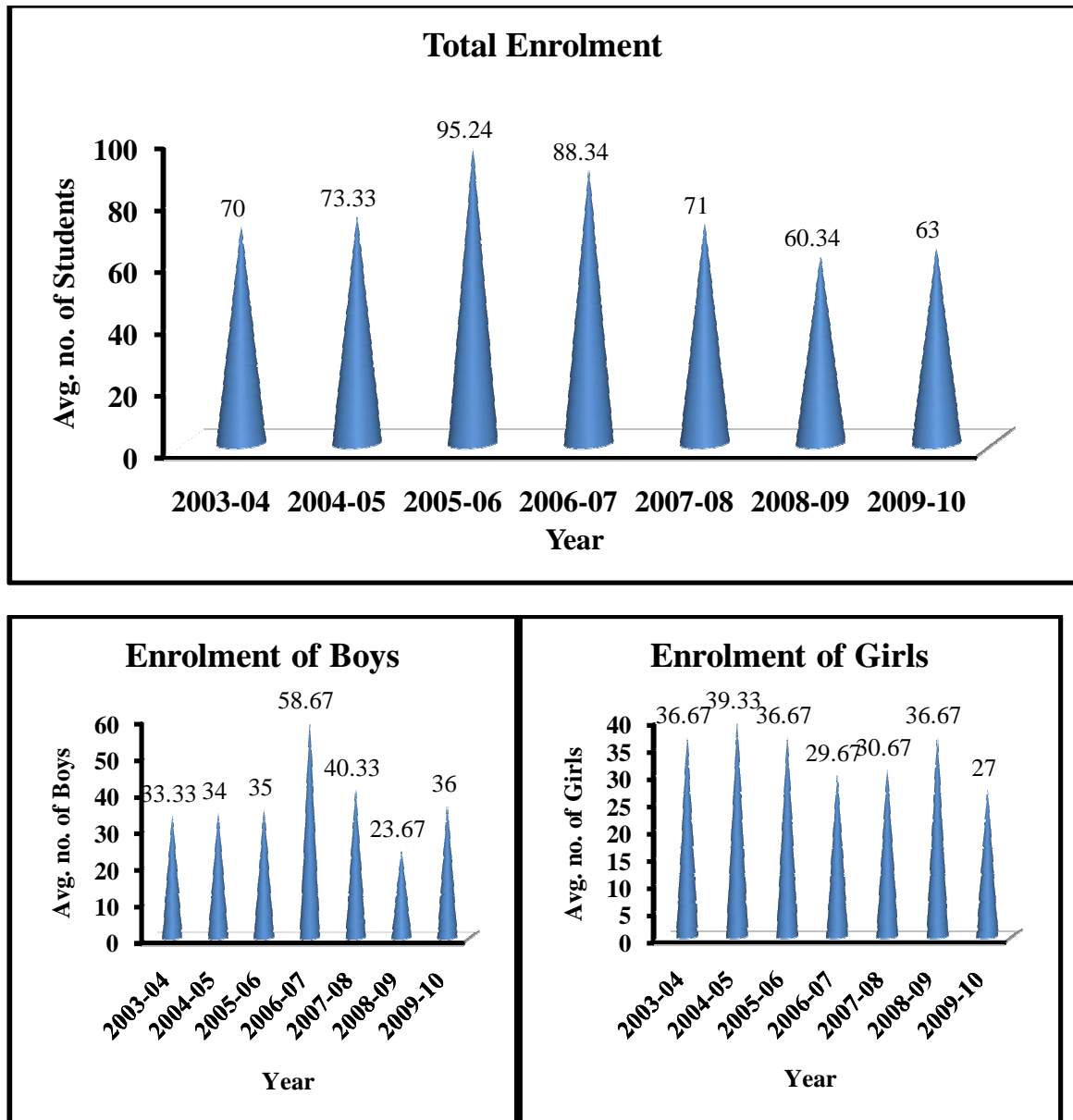
Impact on e**nrolment** in those schools where BaLA was implemented in 2006-2007 is as follows:

- No significant impact of BaLA was observed as gradual decrease occurs in total enrolment in schools from 2005-06 to 2008-09.
- Among the Boys minor but significant impact on enrolment was observed after implementation of BaLA.

- Enrolment among the Girls was high before implementation of BaLA. After implementation of BaLA for two years gradual increase was found, however it again decreased in 2009-10.

Graph 7: Retention (2006-07) in BaLA Schools
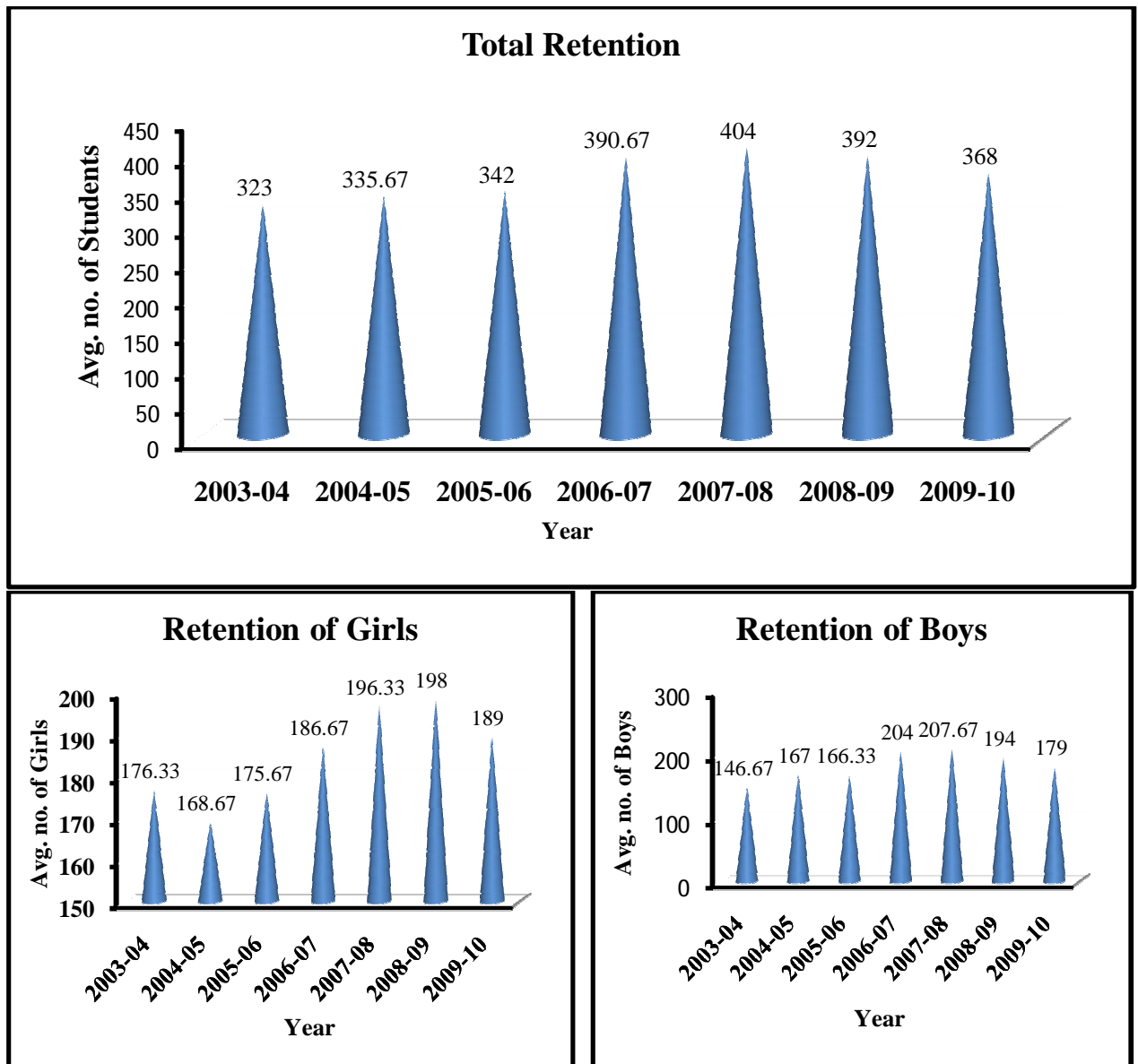
Total Retention

Year	Avg. no. of Students
2003-04	323
2004-05	335.67
2005-06	342
2006-07	390.67
2007-08	404
2008-09	392
2009-10	368

Retention of Girls

Year	Avg. no. of Girls
2003-04	176.33
2004-05	168.67
2005-06	175.67
2006-07	186.67
2007-08	196.33
2008-09	198
2009-10	189

Retention of Boys

Year	Avg. no. of Boys
2003-04	146.67
2004-05	167
2005-06	166.33
2006-07	204
2007-08	207.67
2008-09	194
2009-10	179

Impact on **retention** in those schools where BaLA was implemented in **2006-2007** is as follows:

- It was found that after implementation of BaLA major increase in total retention was observed. This trend also continued in the next year. It seems that there is consistency with minor decrease in retention with the average 404 to 368 in last three years.
- After implementation of BaLA remarkable increase in retention was observed. It seems that there is consistency with noticeable decrease in retention.
- After implementation of BaLA gradual increase was observed in retention of girl. This trend also continued in next two years.
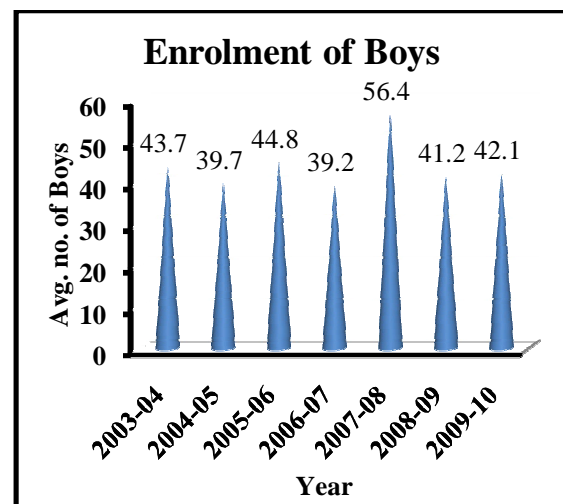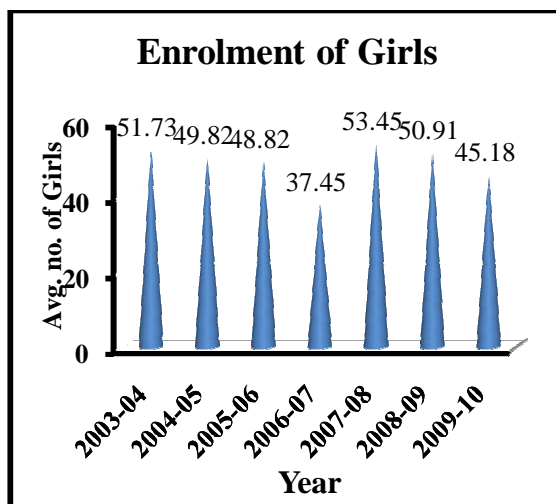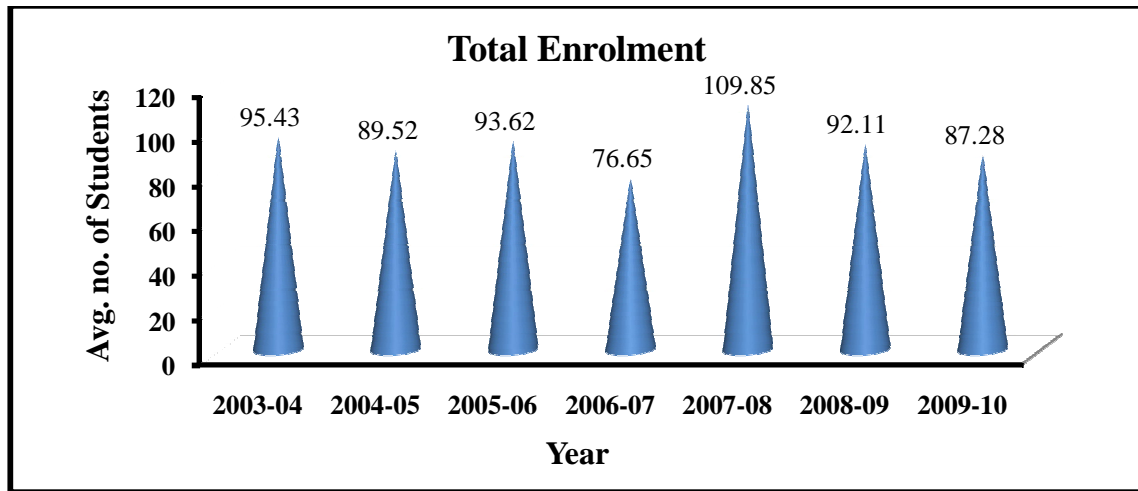
3.4.2 Enrolment and Retention (2007-08) in BaLA Schools of Tribal Districts

The enrolment and retention in the schools where BaLA was implemented in 2007- 2008 is as follows:

Table 13: Enrolment and Retention (2007-08) in BaLA Schools

Year	2004-05	2005-06	2006-07	2007-08 (Implementation year of BaLA)	2008-09	2009-10	2010-11
Total no. of students in the year	384	390.5	394.15	396.5	388.75	395.25	394.5
Total Enrolment in the year	94.43	110	98.72	98	101.15	106.43	86.86
Enrolment of Girls in the year	35.14	46.71	45.29	40.43	43.86	43.57	41.57
Enrolment of Boys in the year	59.29	63.29	53.43	57.57	57.29	62.86	45.29
Total Retention in the year	376.14	399	371.28	394	399	403.29	391.57
Retention of Girls in the year	156.14	174.29	177.14	175.71	178.71	178.86	179.57
Retention of Boys in the year	220	224.71	194.14	218.29	220.29	224.43	212

Graph 8: Enrolment (2007-08) in BaLA Schools
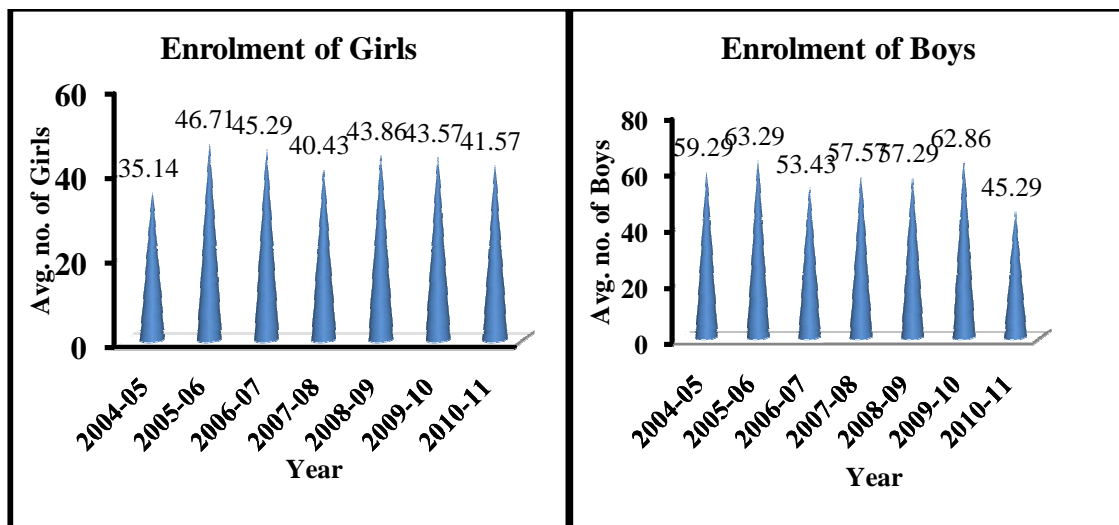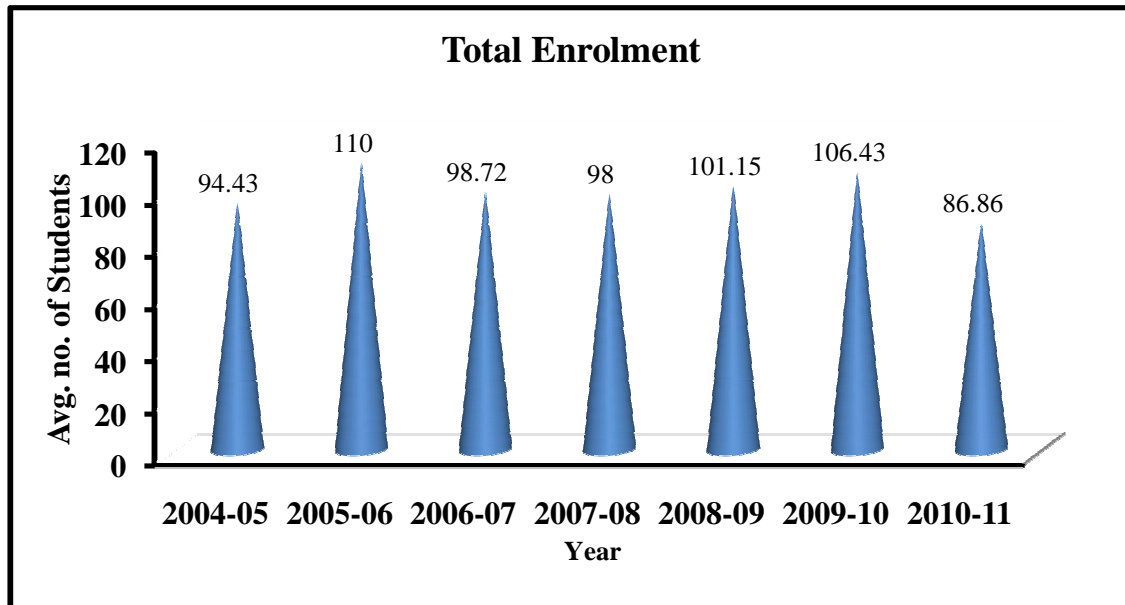
Total Enrolment

Avg. no. of Students

94.43 · 110 · 98.72 · 98 · 101.15 · 106.43 · 86.86

120 · 100 · 80 · 60 · 40 · 20 · 0

2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11

Year

Enrolment of Girls

Avg. no. of Girls

35.14 · 46.71 · 45.29 · 40.43 · 43.86 · 43.57 · 41.57

60 · 40 · 20 · 0

2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11

Year

Enrolment of Boys

Avg. no. of Boys

59.29 · 63.29 · 53.43 · 57.57 · 57.29 · 62.86 · 45.29

80 · 60 · 40 · 20 · 0

2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11

Year

Impact on **enrolment** in those schools where BaLA was implemented in **2007-2008** is as follows:

- It was found that after implementation of BaLA there was a variance in total enrolment with average of 98 to 106 from 2007-08 to 2009-10. In 2010-11, lowest total enrolment with average of 87 was observed.

- Among the Girls variance in enrolment from 2005-06 to 2010-11 was observed. In last three years gradual decrease with average of 44 to 42 was seen.
- Among the Boys no remarkable impact of BaLA on enrolment was seen. In 2010-11 lowest enrolment with average of 45 was observed.

Graph 9: Retention (2007-08) in BaLA Schools
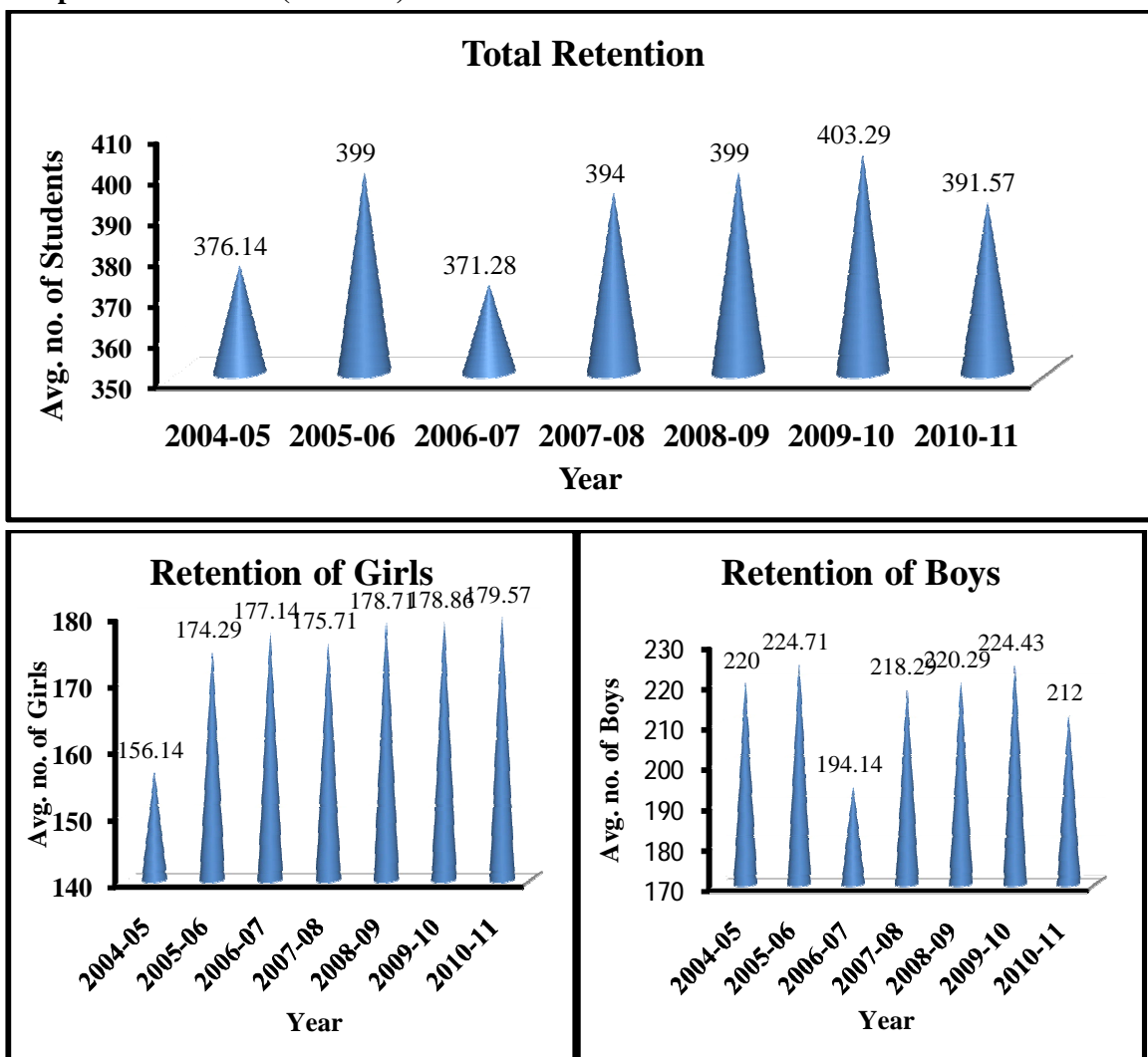
Total Retention

Year	Avg. no. of Students
2004-05	376.14
2005-06	399
2006-07	371.28
2007-08	394
2008-09	399
2009-10	403.29
2010-11	391.57

Retention of Girls

Year	Avg. no. of Girls
2004-05	156.14
2005-06	174.29
2006-07	177.14
2007-08	175.71
2008-09	178.71
2009-10	178.86
2010-11	179.57

Retention of Boys

Year	Avg. no. of Boys
2004-05	220
2005-06	224.71
2006-07	194.14
2007-08	218.29
2008-09	220.29
2009-10	224.43
2010-11	212

Impact on **retention** in those schools where BaLA was implemented in **2007-2008** is as follows:

- It is found that after implementation of BaLA there was a gradual increase in total retention. However notable decrease was seen in 2010-1 with average of 392.
- Retention among the Girls is more stable comparing with that of Boys.
- Among the Boys variance in retention from 219 to 212 was observed after implementation of BaLA.

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Chapter 4

Different Concepts Learnt by Students through BaLA

……………………………………………………………………………………

4.1 Analysis and Interpretation of CMT of All 8 Districts
4.1.1 Analysis and Interpretation of CMT: Subject wise of All 8 Districts
    4.1.1.1 CMT for Numerical Concept
    4.1.1.2 CMT for Alphabets
    4.1.1.3 CMT for Story Based Learning
    4.1.1.4 CMT for Gujarati
    4.1.1.5 CMT for Environmental Science
    4.1.1.6 CMT for Social Science
    4.1.1.7 CMT for Science
    4.1.1.8 CMT for Mathematics
4.1.2 Analysis and Interpretation of CMT: Class wise of All 8 Districts
    4.1.2.1 CMT for Class 1
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4.2.1 Analysis and Interpretation of CMT: Subject wise of Tribal Districts
    4.2.1.1 CMT for Numerical Concept
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    4.2.1.4 CMT for Gujarati
    4.2.1.5 CMT for Environmental Science
    4.2.1.6 CMT for Social Science
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4.2.2. Analysis and Interpretation of CMT: Class wise of Tribal Districts
    4.2.2.1 CMT for Class 1
    4.2.2.2 CMT for Class 2
    4.2.2.3 CMT for Class 3
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    4.2.2.5 CMT for Class 5
    4.2.2.6 CMT for Class 6
    4.2.2.7 CMT for Class 7

4.1 Analysis and Interpretation of CMT of All 8 Districts

To study the different concept learned by students through BaLA, Concept Mapping Test were designed and for each selected sample school total 21 CMTs were planned. For each standard 3 tests were designed on the basis of their education curriculum.

The details of the same are as follows:

- For standard I CMT on Numerical Concept, Alphabets and story based learning were conducted.

- For standard II CMT on Gujarati, Mathematics and Environmental Science were conducted.

- For standard III CMT on Gujarati, Mathematics and Environmental Science were conducted.

- For standard IV CMT on Gujarati, Mathematics and Environmental Science were conducted.

- For standard V CMT on Social Science, Science and Mathematics were conducted.

- For standard VI CMT on Social Science, Science and Mathematics were conducted.

- For standard VII CMT on Social Science, Science and Mathematics were conducted.

For each CMT three questions were asked to understand the ability of students to identify the concept, explanation of the concept and basic understanding of the concept. During CMT observations were made to identify group participation of the students while learning various concepts through BaLA, individual participation of the student and use of BaLA resources while answering the questions.

For participation in CMT from Class I to VII students having roll numbers in multiple of 5 i.e. 5, 10, 15, 20,25 were selected and for classes where the strength was above fifty multiple of 10 i.e. 10, 20, 30, 40, 50 were selected for participation in CMT. In case of absence of any identified selected roll number preceding and succeeding roll numbers were selected respectively.

Thus for total 60 schools, 1260 CMTs were designed. However due to lack of BaLA resources in some of the schools certain tests were not conducted. Standard wise details of the same are mentioned below.

CMT was rated with five scale rating system i.e. Very Good, Good, Average, Poor and Very Poor. The maximum found rating is colored with green box, middle rating is colored with yellow box and minimum rating is colored with pink box.

4.1.1 Analysis and Interpretation of CMT: Subject wise of All 8 Districts

4.1.1.1 CMT for Numerical Concept

Table 14: CMT for Numerical Concept

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	16.16	39.36	35.25	8.63	0.6	100	10
Explanation of Concept	1.85	29.64	49.97	17.89	0.65	100	10
Understanding of Concept	1.86	27.36	49.2	20.32	1.26	100	10
Group Participation	5.57	25.33	43.03	24.27	1.8	100	10
Use of Concept	4.04	22.01	47.36	22.07	4.52	100	10
Individual Participation	5.82	28.66	42.05	19.79	3.68	100	10

Graph 10: CMT for Numerical Concept

Numerical Concept (All Districts)

Legend:
- Identification of Concept
- Explanation of Concept
- Understanding of Concept
- Group Participation
- Use of Concept
- Individual Participation

X-axis: Students' Performance (V.G., Good, AVG, Poor, V.P., N.A.B.R.)
Y-axis: Percentage (%)
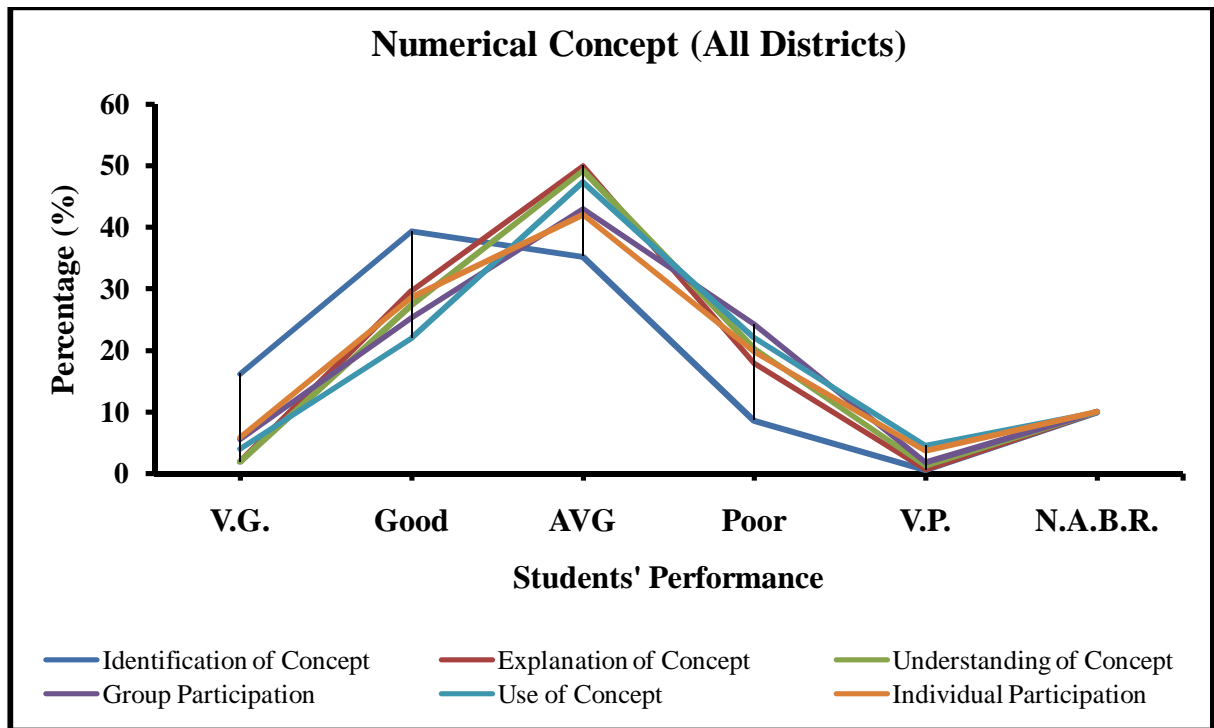
1. In 39.36% schools, Identification of Numerical Concept by students was good and in 32.25% schools it was average.

2. In 49.97% schools, Explanation of Numerical Concept by students was average and in 29.64% schools it was good.

3. In 49.2% schools, Understanding of Numerical Concept by students was average and in 27.36 % schools it was good.

4. In 43.03% schools, Group participation by students was average and in 25.33% schools it was good.

5. In 47.36% schools, use of Numerical Concept by students was good and in 22.07% schools it was poor.

6. In 42.05% schools, Individual participation by students was average and in 28.66% schools it was good.

Result: In 32.95% schools, students' knowledge of **Numerical** concept was found good and in 36.08% schools, it was found average.

4.1.1.2 CMT for Alphabets

Table 15: CMT for Alphabets

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	14.2	**38.87**	**42.85**	4.08	**0**	100	18.33
Explanation of Concept	4.08	**32.65**	**46.93**	16.34	**0**	100	18.33
Understanding of Concept	**0**	**36.73**	**44.89**	16.34	2.04	100	18.33
Group Participation	6.14	**26.53**	**40.81**	24.48	**2.04**	100	18.33
Use of Concept	**0**	**30.63**	**40.81**	24.48	4.08	100	18.33
Individual Participation	5.8	**31.83**	**40.4**	17.49	**4.48**	100	18.33

Graph 11: CMT for Alphabets

Alphabets (All Districts)

1. In 42.85% schools, Identification of Alphabet Concept by students was average and in 38.87% schools it was good.
2. In 46.93% schools, Explanation of Alphabet Concept by students was average and in 32.65% schools it was good.
3. In 44.89% schools, Understanding of Alphabet Concept by students was average and in 36.73% schools it was good.
4. In 40.81% schools, Group participation by students was average and in 30.63% schools it was good.
5. In 40.81% schools, use of Alphabet Concept by students was average and in 30.63% schools it was good.
6. In 40.4% schools, Individual participation by students was average and in 31.83% schools it was good.

Result: In 33.55% schools, students' knowledge of **Alphabet** concept was found good and in 35.98% schools, it was found average.

4.1.1.3 CMT for Story Based Learning

Table 16: CMT for Story based Learning

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	6.06	39.4	45.45	6.06	3.03	100	45
Explanation of Concept	0	27.28	36.36	30.3	6.06	100	45
Understanding of Concept	0	27.28	42.42	24.24	6.06	100	45
Group Participation	3.03	30.3	33.33	27.28	6.06	100	45
Use of Concept	0	12.12	51.52	30.3	6.06	100	45
Individual Participation	9.69	27.87	33.33	21.24	7.87	100	45

Graph 12: CMT for Story based Learning
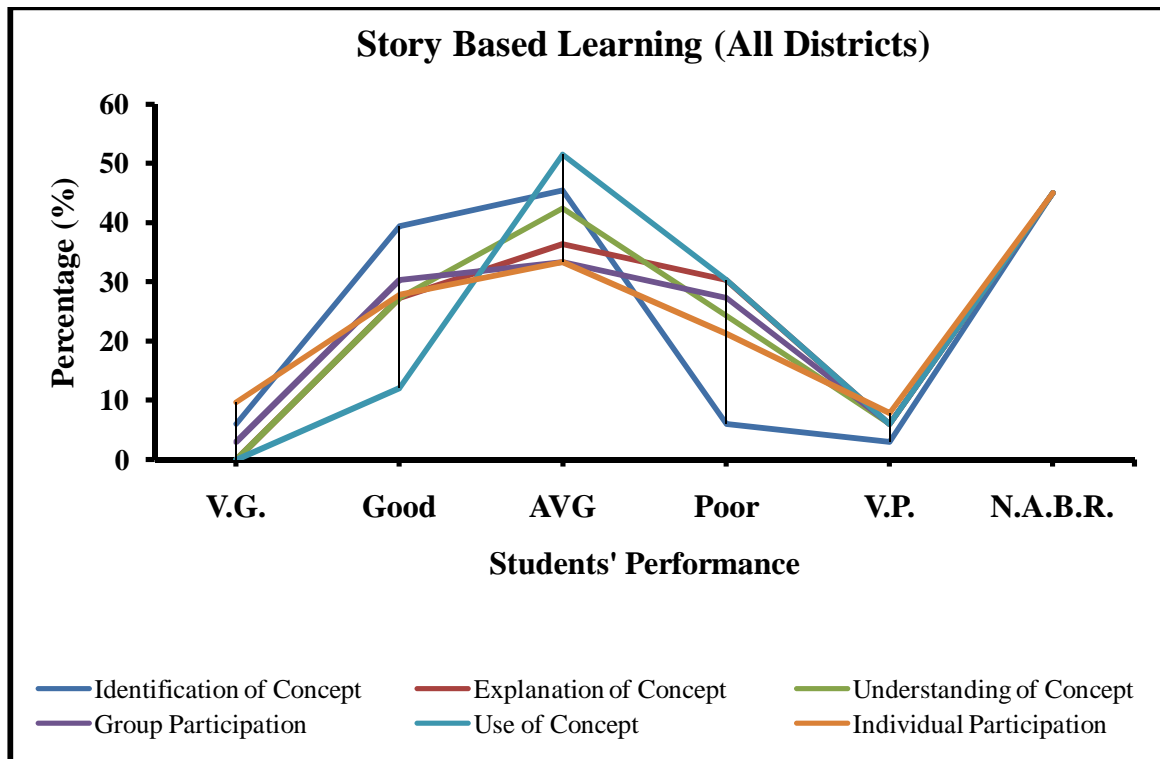
Story Based Learning (All Districts)

1. In 45.45% schools, Identification of Story based Learning Concept by students was average and in 39.4% schools it was good.

2. In 36.36% schools, Explanation of Story based Learning Concept by students was average and in 27.28% schools it was good.

3. In 42.42% schools, Understanding of Story based Learning Concept by students was average and in 27.28% schools it was good.

4. In 33.33% schools, Group participation by students was average and in 30.3% schools it was good.

5. In 51.52% schools, use of Story based Learning Concept by students was average and in 12.12% schools it was good.

6. In 33.33% schools, Individual participation by students was average and in 27.87% schools it was good.

Result: In 27.37% schools, students' knowledge of **Story Based Learning** concept was found good and in 40.40% schools, it was found average.

4.1.1.4 CMT for Gujarati

Table 17: CMT for Gujarati

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	16.16	39.36	35.25	8.63	0.6	100	10
Explanation of Concept	1.85	29.64	49.97	17.89	0.65	100	10
Understanding of Concept	1.86	27.36	49.2	20.32	1.26	100	10
Group Participation	5.57	25.33	43.03	24.27	1.8	100	10
Use of Concept	4.04	22.01	47.36	22.07	4.52	100	10
Individual Participation	5.82	28.66	42.05	19.79	3.68	100	10

Graph 13: CMT for Gujarati

Graph 13: CMT for Gujarati
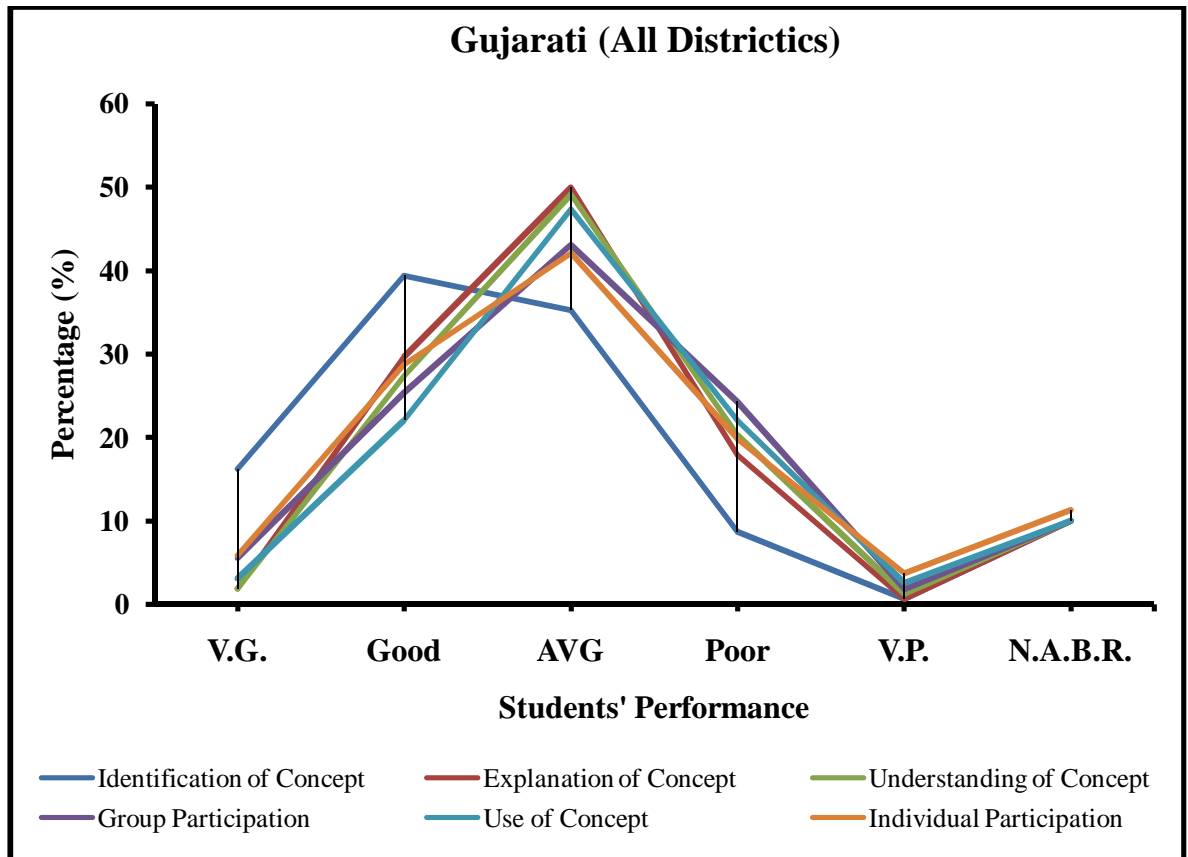
1. In 39.36% schools, Identification of Gujarati Concept by students was good and in 35.25 % schools it was average.
2. In 49.97% schools, Explanation of Gujarati Concept by students was average and in 29.64 % schools it was good.
3. In 49.2 % schools, Understanding of Gujarati Concept by students was average and in 27.36 % schools it was good.
4. In 43.03% schools, Group participation by students was average and in 25.33% schools it was good.
5. In 47.36% schools, use of Gujarati Concept by students was average and in 22.07% schools it was poor.
6. In 42.05% schools, Individual participation by students was average and in 28.66% schools it was good.

Result: In 30.07% schools, students' the knowledge of **Guajarati** concept was found good and in 44.47% schools, it was found average.

4.1.1.5 CMT for Environmental Science

Table 18: CMT for Environmental Science

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	16.32	40.84	33.84	8.4	0.6	100	18.85
Explanation of Concept	3.49	33.56	42.54	17.82	2.59	100	18.85
Understanding of Concept	1.21	27.28	54.59	16.16	0.76	100	18.85
Group Participation	3.97	28.53	42.03	24.86	0.61	100	18.85
Use of Concept	3.33	23.68	39.75	28.67	4.57	100	18.85
Individual Participation	7.29	28.17	41.55	18.57	4.42	100	18.85

Graph 14: CMT for Environmental Science

Environmental Science (All Districts)
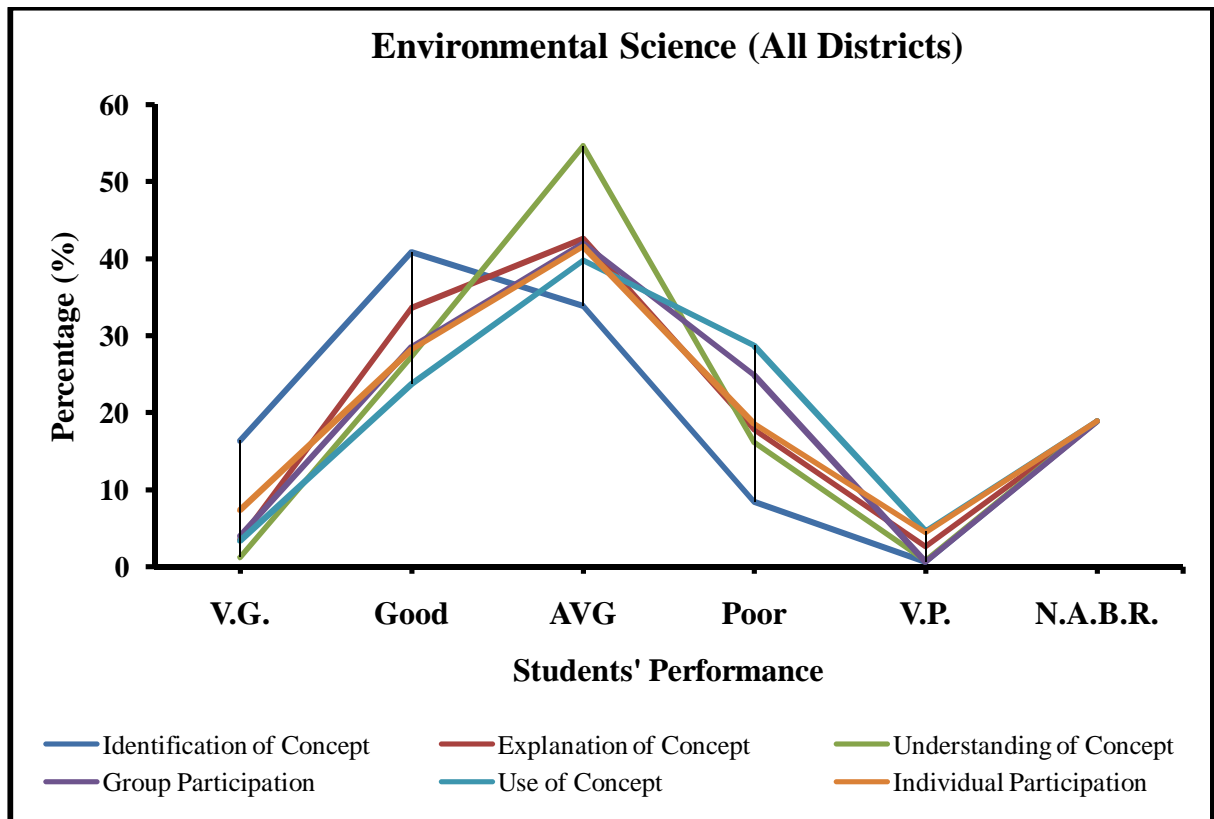
1. In 40.84% schools, Identification of Environmental Science Concept by students was good and in 33.84% schools it was average.

2. In 42.54% schools, Explanation of Environmental Science Concept by students was average and in 33.56% schools it was good.

3. In 54.59% schools, Understanding of Environmental Science Concept by students was average and in 27.28% schools it was good.

4. In 42.03% schools, Group participation by students was average and in 28.53% schools it was good.

5. In 39.75% schools, use of Environmental Science Concept by students was average and in 28.67% schools it was poor.

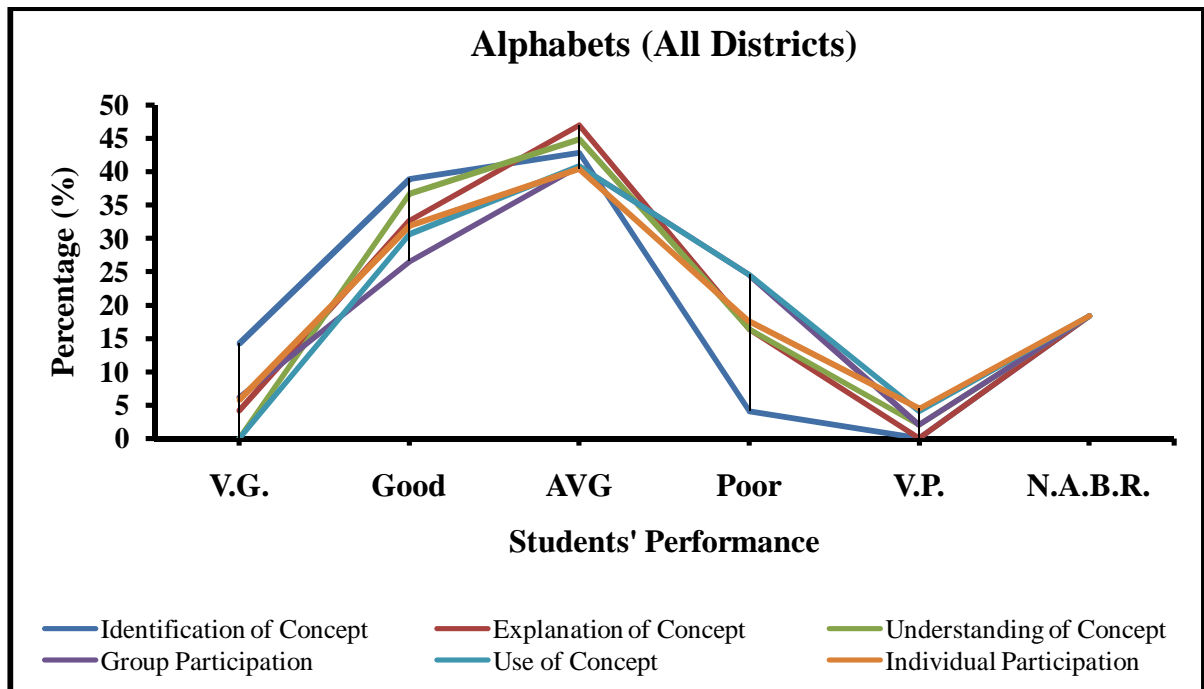6. In 41.55% schools, Individual participation by students was average and in 28.17% schools it was good.

Result: In 31.67% schools, students' knowledge of **Environmental Science** concept was found good and in 42.38% schools, it was found average.

4.1.1.6 CMT for Social Science

Table 19: CMT for Social Science

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	26.08	**39.5**	**31.21**	3.21	**0**	100	12.77
Explanation of Concept	3.17	**31.95**	**50.4**	14.48	**0**	100	12.77
Understanding of Concept	2.51	**25.52**	**54.27**	16.47	**1.23**	100	12.77
Group Participation	7.04	20.34	**45.78**	**25.58**	**1.26**	100	12.77
Use of Concept	3.19	**20.32**	**51.7**	18.39	**6.4**	100	12.77
Individual Participation	7.2	**29.56**	**45.52**	14.83	**2.89**	100	12.77

Graph 15: CMT for Social Science

Graph 15: CMT for Social Science

1. In 39.5% schools, Identification of Social Science Concept by students was average and in 31.21% schools it was good.
2. In 50.4% schools, Explanation of Social Science Concept by students was average and in 31.95% schools it was good.
3. In 54.27% schools, Understanding of Social Science Concept by students was average and in 25.52% schools it was good.
4. In 45.78% schools, Group participation by students was average and in 25.58% schools it was poor.
5. In 51.7% schools, use of Social Science Concept by students was average and in 20.32% schools it was good.
6. In 45.52% schools, Individual participation by students was average and in 29.56% schools it was good.

Result: In 57.01% schools, students' knowledge of **Social Science** concept was found average and in 42.13% schools, it was found good.

4.1.1.7 CMT for Science

Table 20: CMT for Science

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	17.05	**38.41**	**34.7**	7.99	**1.85**	100	7.22
Explanation of Concept	3.58	**27.56**	**52.05**	15.6	**1.21**	100	7.22
Understanding of Concept	**3.58**	**27.85**	**45.48**	20.04	3.05	100	7.22
Group Participation	**4.06**	**25.09**	**46.8**	19.76	4.29	100	7.22
Use of Concept	**25.73**	13.02	**39.3**	**17.15**	4.8	100	7.22
Individual Participation	5.53	**40.88**	**35.2**	13.98	**4.41**	100	7.22

Graph 16: CMT for Science

Science (All Districts)
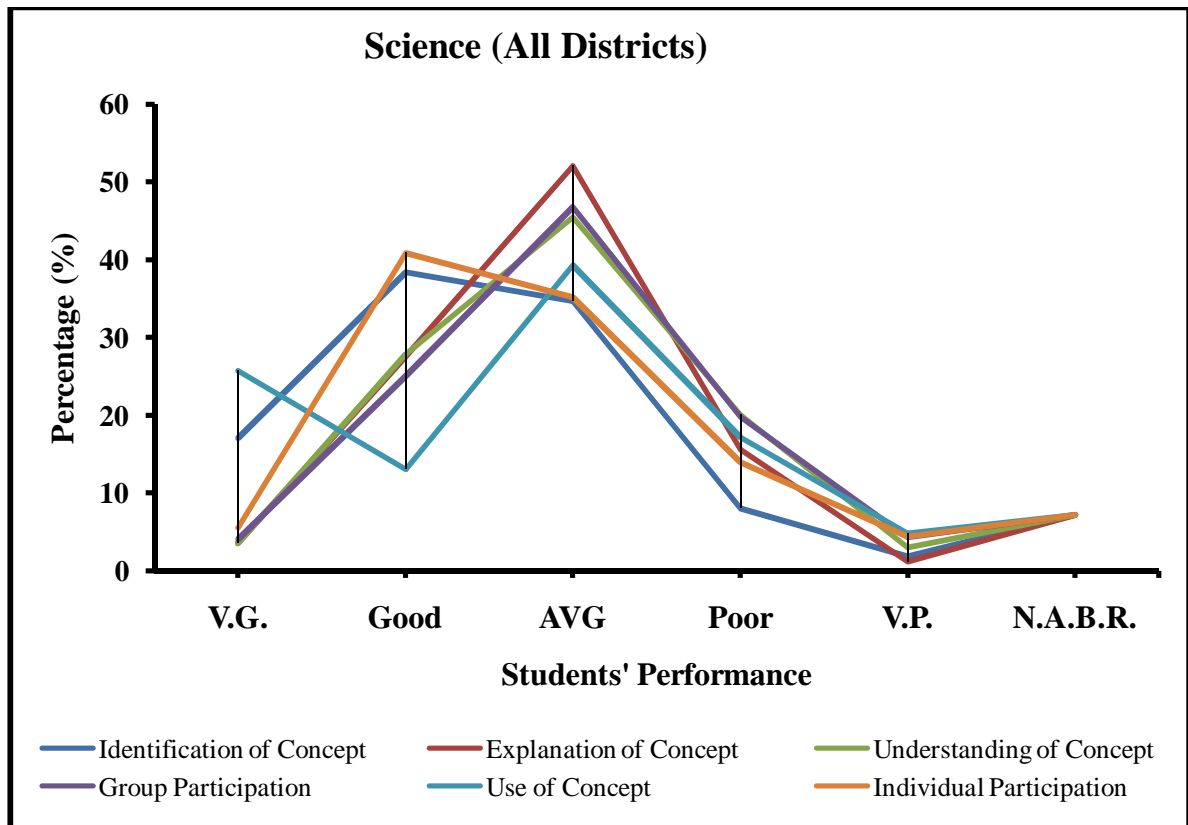
1. In 38.41% schools, Identification of Science Concept by students was good and in 34.7% schools it was average.

2. In 52.05% schools, Explanation of Science Concept by students was average and in 27.56% schools it was good.

3. In 45.48% schools, Understanding of Science Concept by students was average and in 27.48 % schools it was good.

4. In 46.8% schools, Group participation by students was average and in 25.0% schools it was good.

5. In 39.3% schools, use of Science Concept by students was average and in 25.73% schools it was very good.

6. In 40.88% schools, Individual participation by students was good and in 35.2% schools it was poor.

Results: In 31.88% schools, students' knowledge of **Science** concept was found good and in 43.66% schools, it was found average.

4.1.1.8 CMT for Mathematics

Table 21: CMT for Mathematics

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	18.29	33.7	40.49	6.91	0.61	100	10.27
Explanation of Concept	1.95	34.45	45.65	16.96	0.99	100	10.27
Understanding of Concept	5.77	35.3	30.55	24.44	3.94	100	10.27
Group Participation	4.03	25.26	45.34	22.9	2.47	100	10.27
Use of Concept	3.7	23.79	42.08	21.64	8.79	100	10.27
Individual Participation	5.45	28.01	42.26	18.14	6.14	100	10.27

Graph 17: CMT for Mathematics

1. In 40.49% schools, Identification of Mathematics Concept by students was good and in 33.7% schools it was average.

2. In 45.65% schools, Explanation of Mathematics Concept by students was average and in 34.45% schools it was good.

3. In 35.3% schools, Understanding of Mathematics Concept by students was good and in 30.55% schools it was average.

4. In 45.78% schools, Group participation by students was average and in 25.26% schools it was good.

5. In 42.08% schools, use of Mathematics Concept by students was average and in 21.64% schools it was poor.

6. In 42.26% schools, Individual participation by students was average and in 28.01% schools it was good.

Results: In 32.70% schools, students' knowledge **of Mathematics** concept it was found good and in 40% schools, students it was found average.

4.1.2 Analysis and Interpretation of CMT: Class wise of All 8 Districts

4.1.2.1 CMT for Class 1

Table 22: CMT for Class 1

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	12.14	**39.21**	**41.18**	6.26	**1.21**	100	24.43
Explanation of Concept	1.98	**29.86**	**44.42**	21.51	**2.23**	100	24.43
Understanding of Concept	0.62	**30.46**	**45.5**	20.3	**3.12**	100	24.43
Group Participation	4.91	**27.38**	**39.05**	25.34	3.32	100	24.43
Use of Concept	**1.35**	21.58	**46.56**	**25.62**	4.89	100	24.43
Individual Participation	7.12	**29.45**	**38.59**	19.5	**5.34**	100	24.43

Graph 18: CMT for Class 1

Class 1 (All Districts)
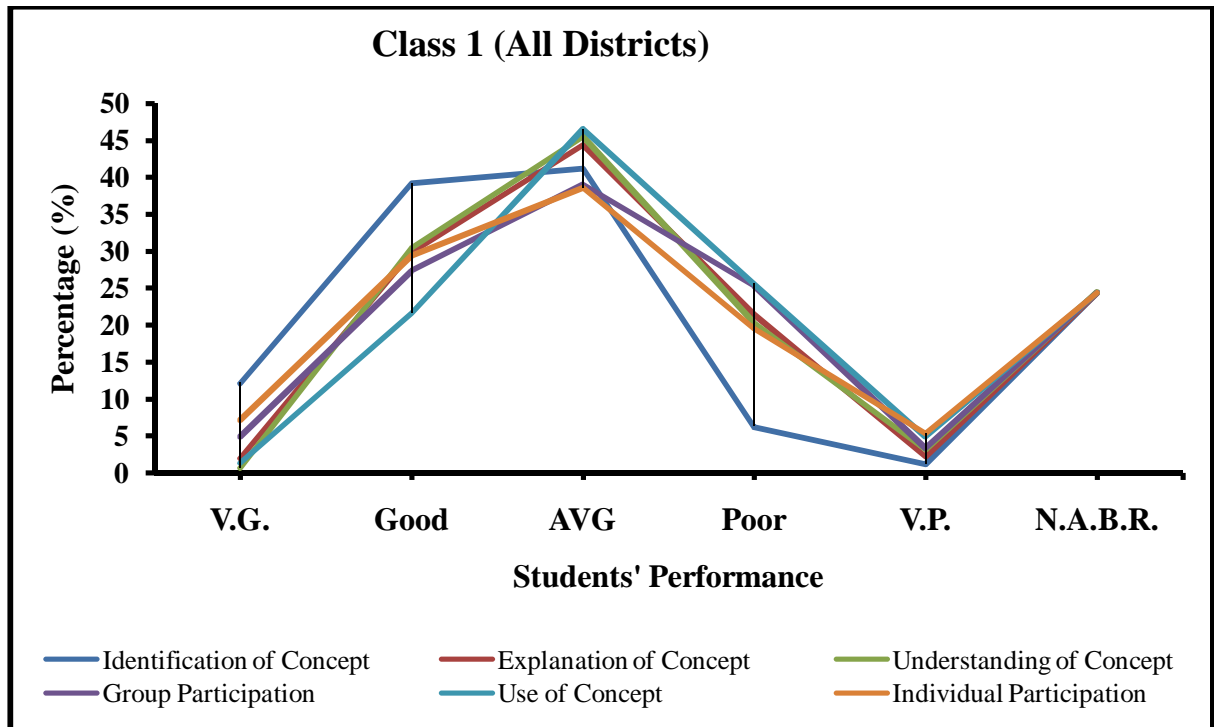
1. In 41.18% schools, Identification of Concepts by students was average and in 39.21% schools it was good.
2. In 44.42% schools, Explanation of Concepts by students was average and in 29.86% schools it was good
3. In 45.5% schools, Understanding of Concepts by students was average and in 30.46 % schools it was good.
4. In 39.05% schools, Group participation by students was average and in 27.38% schools it was good.
5. In 46.56% schools, use of Concept by students was average and in 25.62% schools it was poor.
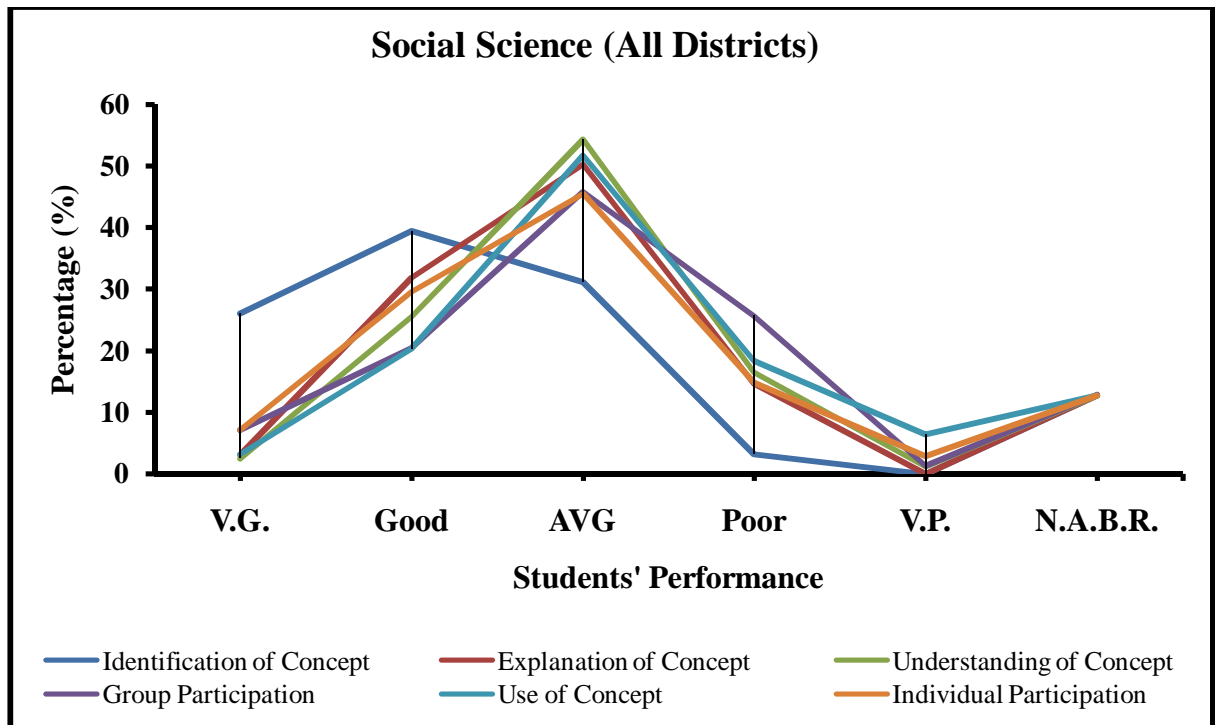6. In 38.59% schools, Individual participation by students was average and in 29.45% schools it was good.

Results: In 31.27% schools the knowledge of **Class 1** students was found good and in 42.55% schools it was found average.

4.1.2.2 CMT for Class 2

Table 23: CMT for Class 2

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	16.95	**37.8**	**36.5**	8.75	**0**	100	21.5
Explanation of Concept	4.21	**32.82**	**43.73**	17.19	**2.05**	100	21.5
Understanding of Concept	1.2	**32.75**	**48.35**	15.65	**2.05**	100	21.5
Group Participation	4.11	**27.74**	**42.77**	25.38	**0**	100	21.5
Use of Concept	3.44	16.93	**53.49**	**22.67**	3.47	100	21.5
Individual Participation	7.5	**28.25**	**43.21**	18.6	**2.44**	100	21.5

Graph 19: CMT for Class 2
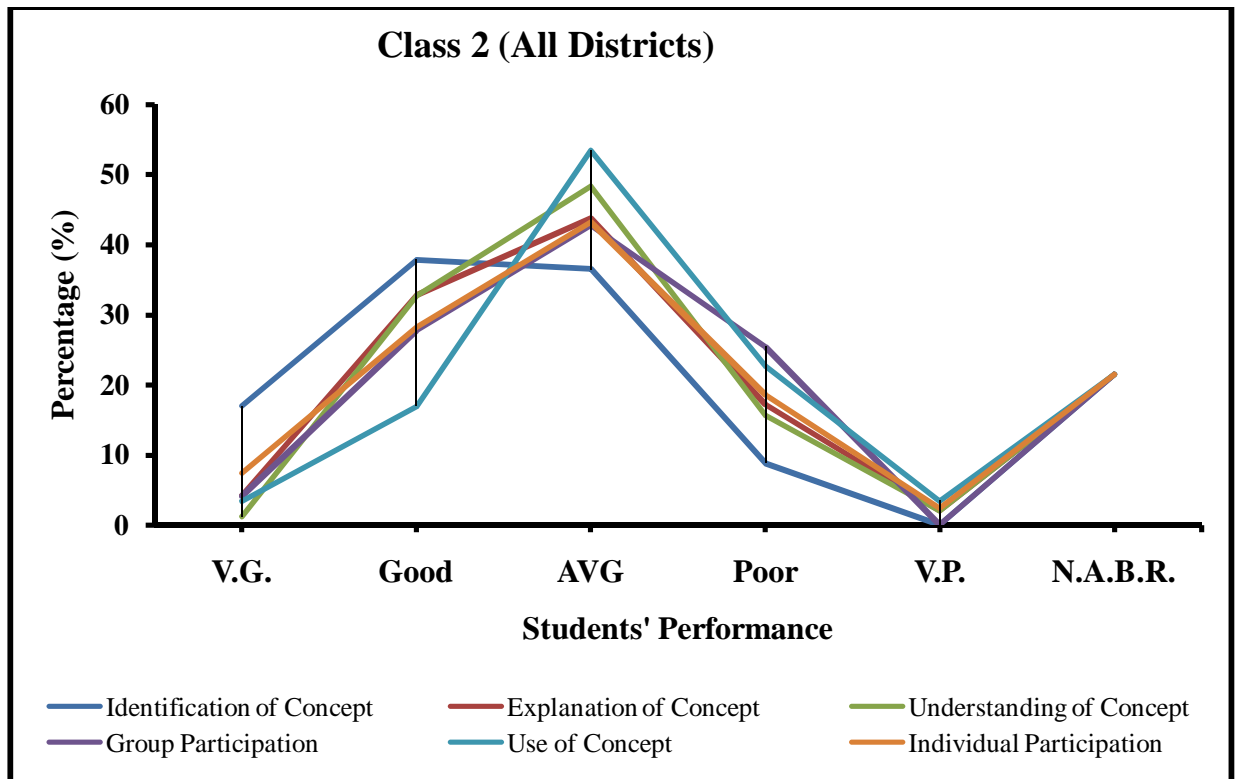
1. In 37.8% schools, Identification of Concepts by students was good and in 36.5% schools it was average.

2. In 43.73% schools, Explanation of Concepts by students was average and in 32.82% schools it was good.

3. In 48.35% schools, Understanding of Concepts by students was average and in 32.75% schools it was good.

4. In 42.77% schools, Group participation by students was average and in 27.74% schools it was good.

5. In 53.49% schools, use of Concept by students was average and in 22.67% schools it was poor.

6. In 43.21% schools, Individual participation by students was average and in 28.25% schools it was good.

Results: In 31.87% schools the knowledge of **Class 2** students was found good and in 44.67% it was found average.

4.1.2.3 CMT for Class 3

Table 24: CMT for Class 3

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	**15.68**	**38.55**	**38.54**	6.03	**1.2**	100	8.03
Explanation of Concept	**3.01**	**31.35**	**45.14**	19.88	0.62	100	8.03
Understanding of Concept	1.81	**27.72**	**50.57**	19.9	**0**	100	8.03
Group Participation	4.81	**28.91**	**40.96**	22.3	**3.02**	100	8.03
Use of Concept	**4.2**	27.13	**34.34**	**28.92**	5.41	100	8.03
Individual Participation	**4.44**	**27.25**	**43.87**	18.65	5.79	100	8.03

Graph 20: CMT for Class 3

Class 3 (All Districtics)

1. In 38.55% schools, Identification of Concepts by students was both good and average where as in 15.68% schools it was very good.

2. In 45.14% schools, Explanation of Concepts by students was average and in 31.35% schools it was good.

3. In 50.57% schools, Understanding of Concepts by students was average and in 27.72% schools it was good.

4. In 40.96% schools, Group participation by students was average and in 28.91% schools it was good.

5. In 34.34% schools, use of Concept by students was average and in 28.92% schools it was poor.

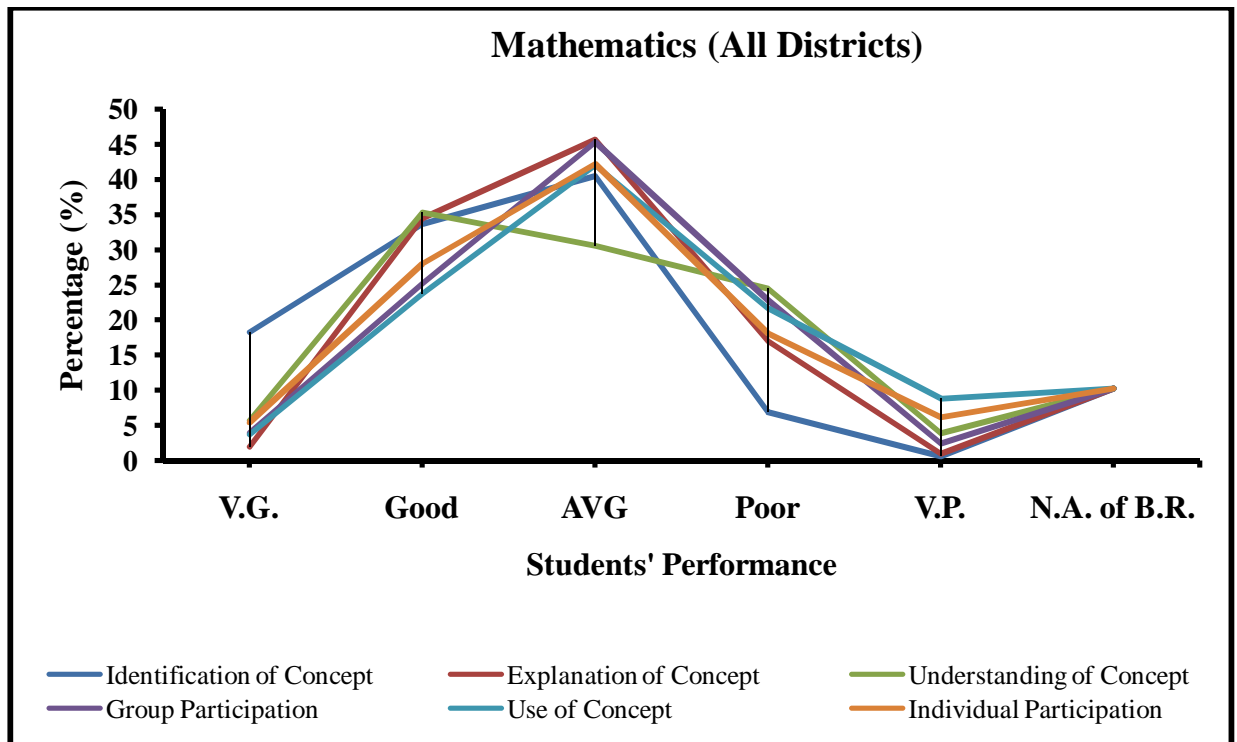6. In 43.87% schools, Individual participation by students was average and in 27.25% schools it was good.

Results: In 30.85% schools the knowledge of **Class 3** students was found good and in 36.13% it was found average.

4.1.2.4 CMT for Class 4

Table 25: CMT for Class 4

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	16.86	**40.4**	**33.64**	7.923	**1.19**	100	8.15
Explanation of Concept	1.187	**35.54**	**46.38**	15.08	**1.82**	100	8.15
Understanding of Concept	1.21	**27.59**	**50.12**	20.48	**0.6**	100	8.15
Group Participation	3.64	**25.92**	**43.92**	24.72	**1.8**	100	8.15
Use of Concept	**2.36**	26.04	**43.78**	**22.99**	4.83	100	8.15
Individual Participation	5.92	**30.95**	**39.77**	19.14	**4.22**	100	8.15

Graph 21: CMT for Class 4

Graph 21: CMT for Class 4
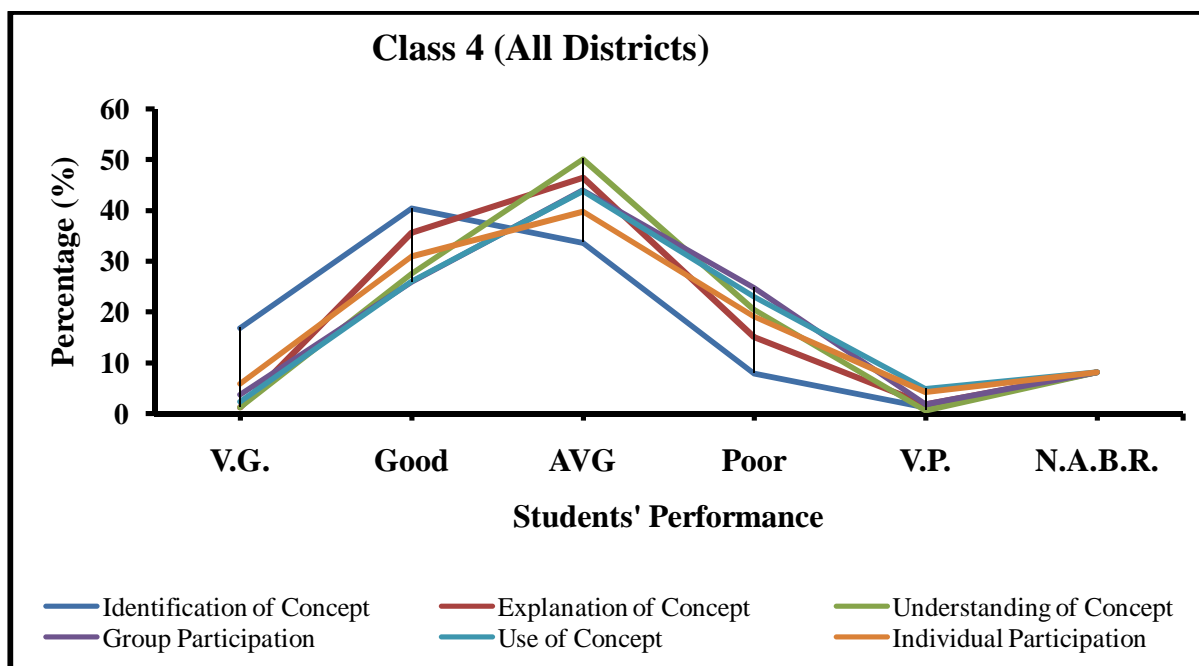
1. In 40.4% schools, Identification of Concepts by students was good and in 33.64% schools it was average.

2. In 46.38% schools, Explanation of Concepts by students was average and in 35.54% schools it was good.

3. In 50.12% schools, Understanding of Concepts by students was average and in 27.59% schools it was good.

4. In 43.92% schools, Group participation by students was average and in 25.92% schools it was good.

5. In 43.78% schools, use of Concept by students was average and in 22.99% schools it was poor.

6. In 39.77% schools, Individual participation by students was average and in 30.95% schools it was good.

Result: In 32.08% schools the knowledge of **Class 4** students was found good and in 36.30% it was found average.

4.1.2.5 CMT for Class 5

Table 26: CMT for Class 5

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	20.98	33.33	36.41	7.43	1.85	100	6.67
Explanation of Concept	3.08	29.63	51.23	15.44	0.62	100	6.67
Understanding of Concept	4.32	23.47	48.76	20.37	3.08	100	6.67
Group Participation	4.93	20.99	52.48	18.52	3.08	100	6.67
Use of Concept	2.45	23.46	41.35	25.95	6.79	100	6.67
Individual Participation	6.79	29.74	42.47	17.42	3.58	100	6.67

Graph 22: CMT for Class 5

Class 5 (All Districts)

Y-axis: Percentage (%)

X-axis: Students' Performance (V.G., Good, AVG, Poor, V.P., N.A.B.R.)

Legend: Identification of Concept, Explanation of Concept, Understanding of Concept, Group Participation, Use of Concept, Individual Participation
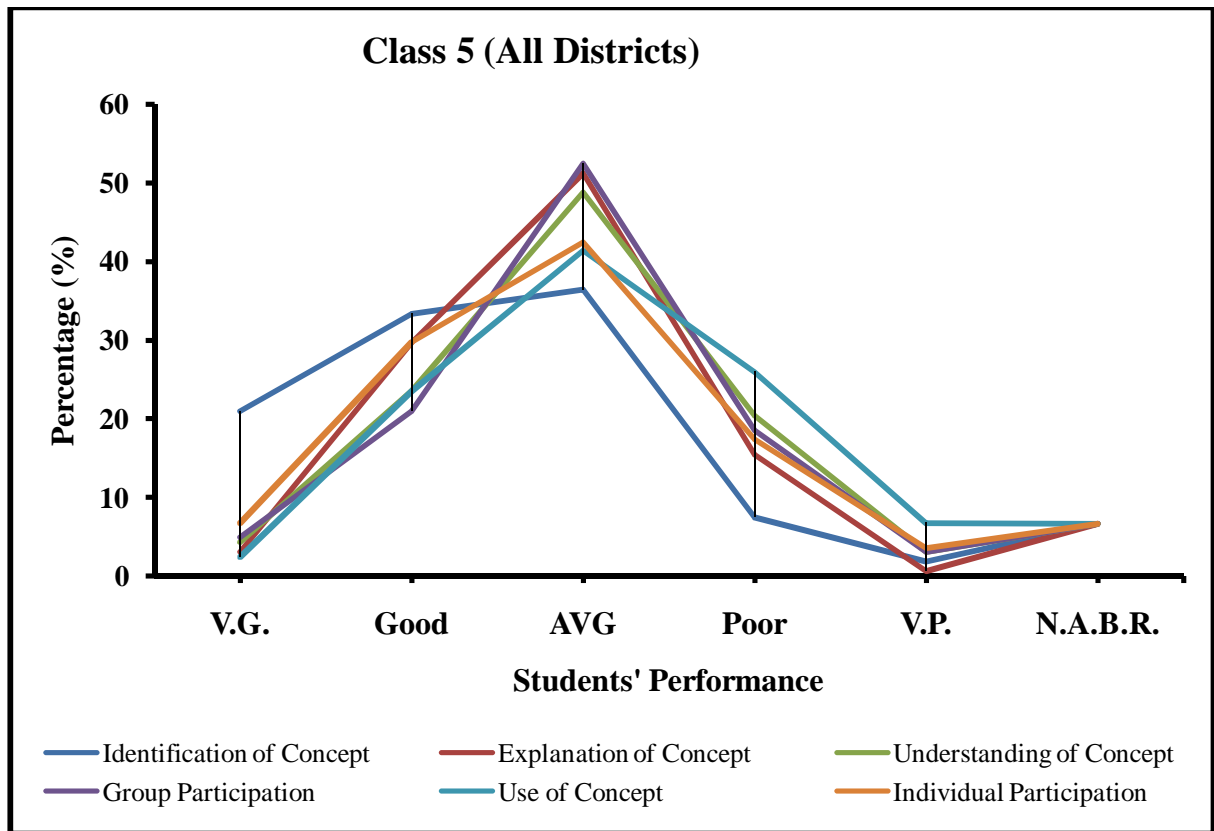
1. In 36.41% schools, Identification of Concepts by students was average and in 33.33% schools it was good.

2. In 51.23% schools, Explanation of Concepts by students was average and in 29.63% schools it was good

3. In 48.76% schools, Understanding of Concepts by students was average and in 23.47% schools it was good.

4. In 52.48% schools, Group participation of students was average and in 20.99% schools it was good.

5. In 41.35% schools, use of Concept by students was average and in 25.95% schools it was good and 25.95% of schools it was poor.

6. In 42.47% schools, Individual participation of students was average and in 29.74% schools it was good.

Result: In 27.18% schools the knowledge of **class 5** students was found good and in 45.45% it was found average.

4.1.2.6 CMT for Class 6

Table 27: CMT for Class 6

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	22.04	**37.87**	**34.44**	5.65	**0**	100	11.66
Explanation of Concept	1.27	**37.94**	**45.89**	14.31	**0.59**	100	11.66
Understanding of Concept	**0.59**	**29.55**	**54.36**	14.37	1.13	100	11.66
Group Participation	6.98	20.6	**44.06**	**27.16**	**1.2**	100	11.66
Use of Concept	**5.01**	**20.2**	**49.59**	18.88	6.32	100	11.66
Individual Participation	5.44	**28.84**	**43.82**	18.39	**3.51**	100	11.66

Graph 23: CMT for Class 6

Graph 23: CMT for Class 6
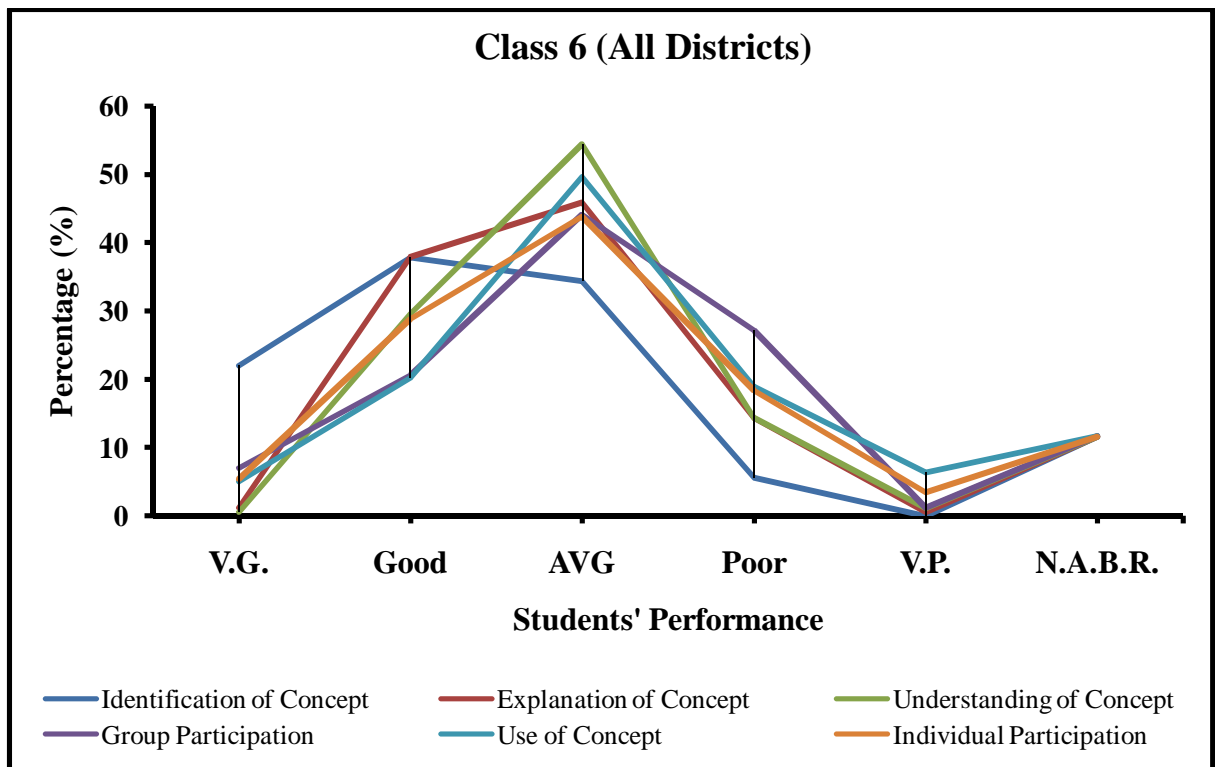
1. In 38.87% schools, Identification of Concepts by students was good and in 34.44% schools it was average.

2. In 45.89% schools, Explanation of Concepts by students was average and in 37.94% schools it was good

3. In 54.36% schools, Understanding of Concepts by students was average and in 29.55% schools it was good.

4. In 44.06% schools, Group participation by students was average and in 27.16% schools it was poor. Only in 20 % schools it was found good.

5. In 49.59% schools, use of Concepts by students was average and in 20.2% schools it was good.

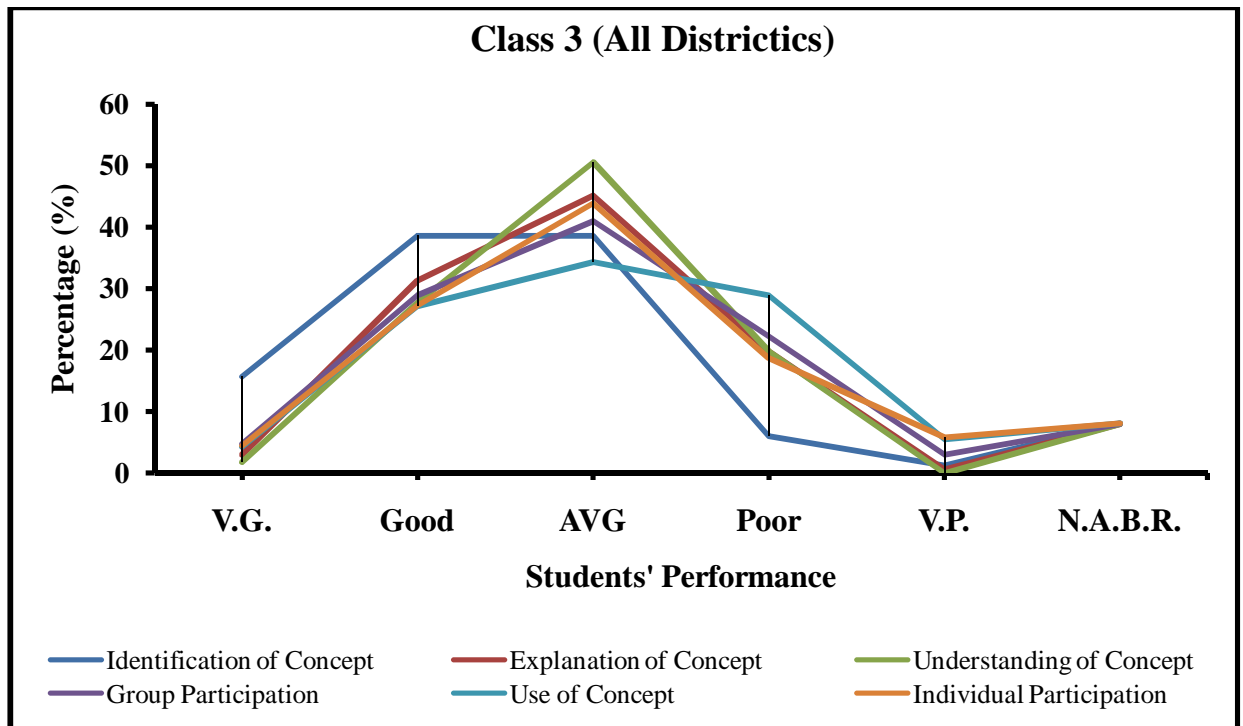6. In 43.82% schools, Individual participation by students was average and in 28.84% schools it was good.

Result: In 29.23% schools the knowledge of **Class 6** students was found good and in 45.36% it was found average.

4.1.2.7 CMT for Class 7

Table 28: CMT for Class 7

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	20.71	**35.59**	**36.5**	7.2	**0**	100	10
Explanation of Concept	20.71	**35.59**	**36.5**	7.2	**0**	100	10
Understanding of Concept	3.03	**22.9**	**52.03**	20.82	**1.22**	100	10
Group Participation	3.03	22.9	**52.03**	**20.82**	**1.22**	100	10
Use of Concept	**2.5**	**18.97**	**46**	26.91	5.62	100	10
Individual Participation	6.33	**29.47**	**40.65**	18.71	**4.84**	100	10

Graph 24: CMT for Class 7

Class 7 (All Districts)

Legend:
- Identification of Concept
- Explanation of Concept
- Understanding of Concept
- Group Participation
- Use of Concept
- Individual Participation

X-axis: Students' Performance (V.G., Good, AVG, Poor, V.P., N.A.B.R.)
Y-axis: Percentage (%)

1. In 36.5% schools, Identification of Concepts by students was average and in 35.59% schools it was good.

2. In 36.5% schools, Explanation of Concepts by students was average and in 35.59% schools it was good.

3. In 52.03% schools, Understanding of Concepts by students was average and in 22.9% schools it was good.

4. In 52.03% schools, Group participation by students was average and in 20.82% schools it was poor.

5. In 46% schools, use of Concepts by students was average and in 18.97% schools it was good.

6. In 40.65% schools, Individual participation by students was average and in 29.47% schools it was good.

Result: In 28.50% schools the knowledge of **Class 7** students was found good and in 43.95% it was found average.

4.2 Analysis and Interpretation of CMT of Tribal Districts

To study the different concept learned by students through BaLA, Concept Mapping Test were designed and for each selected sample school total 21 CMTs were planned. For each standard 3 tests were designed on the basis of their education curriculum.

The details of the same are as follow:

- For standard I CMT on Numerical Concept, Alphabets and story based learning were conducted.

- For standard II CMT on Gujarati, Mathematics and Environmental Science were conducted.

- For standard III CMT on Gujarati, Mathematics and Environmental Science were conducted.

- For standard IV CMT on Gujarati, Mathematics and Environmental Science were conducted.

- For standard V CMT on Social Science, Science and Mathematics were conducted.

- For standard VI CMT on Social Science, Science and Mathematics were conducted.

- For standard VII CMT on Social Science, Science and Mathematics were conducted.

For each CMT three questions were asked to understand the ability of students to identify the concept, explanation of the concept and basic understanding of the concept. During CMT observations were made to identify group participation of the students while learning various concepts through BaLA, individual participation of the student and use of BaLA resources while answering the questions.

For participation in CMT from Class I to VII students having roll numbers multiple of 5 i .e. 5, 10, 15, 20,25 were selected and for classes where the strength was above fifty multiple of 10 i.e. 10, 20, 30, 40, 50 were selected for participation in CMT. In case of absence of any identified selected roll number preceding and succeeding roll numbers were selected respectively.

Thus for total 11 schools, 231 CMTs were designed. However due to lack of BaLA resources in some of schools certain tests were not conducted. Standard wise details of the same are mentioned below.

4.2.1 Analysis and Interpretation of CMT: Subject wise of Tribal Districts

4.2.1.1 CMT for Numerical Concept

Table 29: CMT for Numerical Concept

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	**30**	**50**	10	10	**0**	100	9.09
Explanation of Concept	**0**	**40**	**30**	**30**	**0**	100	9.09
Understanding of Concept	**0**	**20**	**60**	**20**	**0**	100	9.09
Group Participation	**0**	**30**	**50**	20	**0**	100	9.09
Use of Concept	**0**	**30**	**40**	20	10	100	9.09
Individual Participation	**6**	20	**38**	**30**	**6**	100	9.09

Graph 25: CMT for Numerical Concept

Graph 25: CMT for Numerical Concept
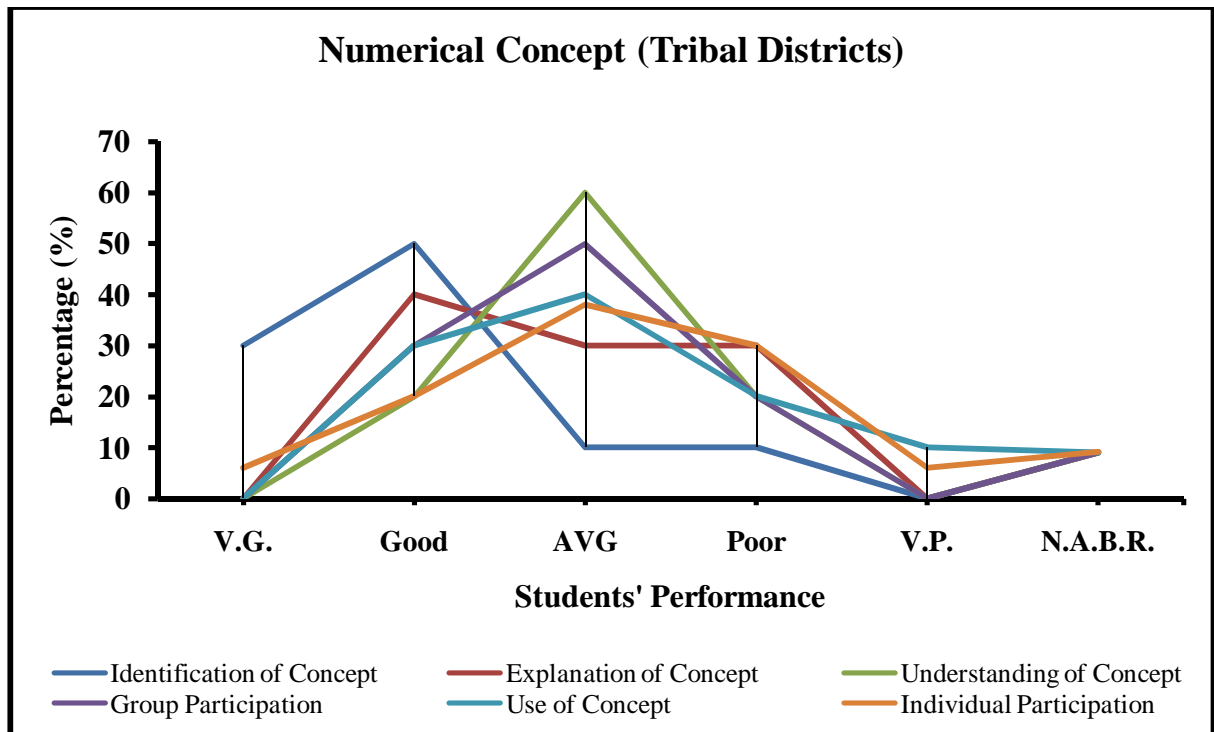
1. In 50% schools, Identification of Numerical Concept by students was good and in 30% schools it was very good.

2. In 40% schools, Explanation of Numerical Concept by students was good where as in 30% schools it was both average and poor.

3. In 60% schools, Understanding of Numerical Concept by students was average where as in 20% schools it was both good and poor.

4. In 50% schools, Group participation by students was average and in 30% schools it was good.

5. In 40% schools, use of Numerical Concept by students was average and in 30% schools it was good.

6. In 38% schools, Individual participation by students was average and in 30% schools it was poor.

Result: In 34% schools, students' knowledge of **Numerical** concept was found good and in 43.6% schools it was found average.

4.2.1.2 CMT for Alphabets

Table 30: CMT for Alphabets

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	18.18	36.36	36.36	9.1	0	100	0
Explanation of Concept	0	9.1	72.72	18.18	0	100	0
Understanding of Concept	0	36.36	54.54	9.1	0	100	0
Group Participation	9.1	18.18	45.45	27.27	0	100	0
Use of Concept	0	18.18	27.27	45.45	9.1	100	0
Individual Participation	3.63	21.81	50.9	18.18	5.48	100	0

Graph 26: CMT for Alphabets

Graph 26: CMT for Alphabets — Alphabets (Tribal Districts). X-axis: Students' Performance (V.G., Good, AVG, Poor, V.P., N.A.B.R.); Y-axis: Percentage (%). Series: Identification of Concept, Explanation of Concept, Understanding of Concept, Group Participation, Use of Concept, Individual Participation.

1. In 36.36% schools, Identification of Alphabet Concept by students was both good and average where as in 18.18% schools it was very good.

2. In 72.72% schools, Explanation of Alphabet Concepts by students was average and in 18.18% schools it was poor.

3. In 54.54% schools, Understanding of Alphabet Concept by students was average and in 36.36% schools it was good.

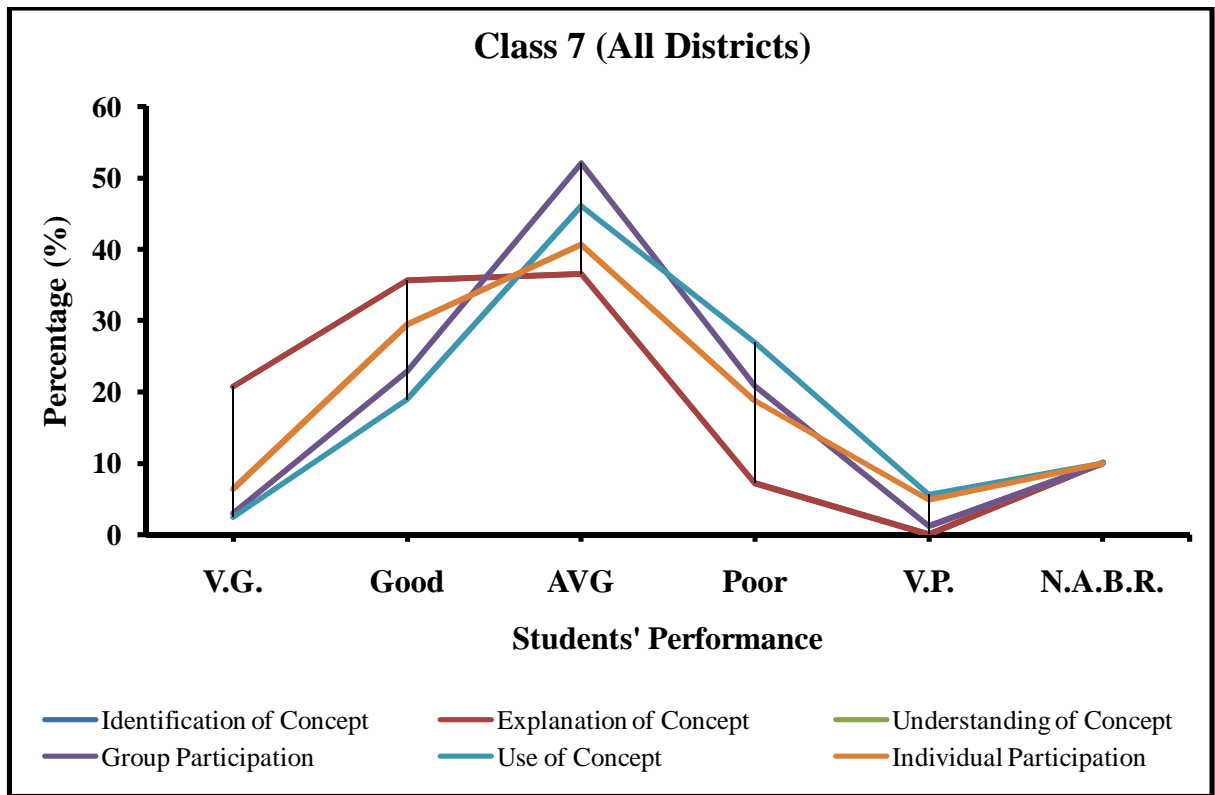4. In 45.45% schools, Group participation by students was average and in 27.27% schools it was poor.

5. In 45.45% schools, use of Alphabet Concept by students was poor and in 27.27% schools it was average.

6. In 50.9% schools, Individual participation by students was average and in 21.8 % schools it was good.

Result: In 31.51% schools, students' the knowledge of **Alphabetical** concept was found good and in 47.87% schools it was found average.

4.2.1.3 CMT for Story Based Learning

Table 31: CMT for Story based Learning

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	12.5	50	25	12.5	0	100	27.27
Explanation of Concept	0	25	37.5	12.5	25	100	27.27
Understanding of Concept	0	12.5	75	0	12.5	100	27.27
Group Participation	0	12.5	62.5	12.5	12.5	100	27.27
Use of Concept	0	12.5	62.5	12.5	12.5	100	27.27
Individual Participation	5.31	20.85	29.42	15	29.42	100	27.27

Graph 27: CMT for Story based Learning
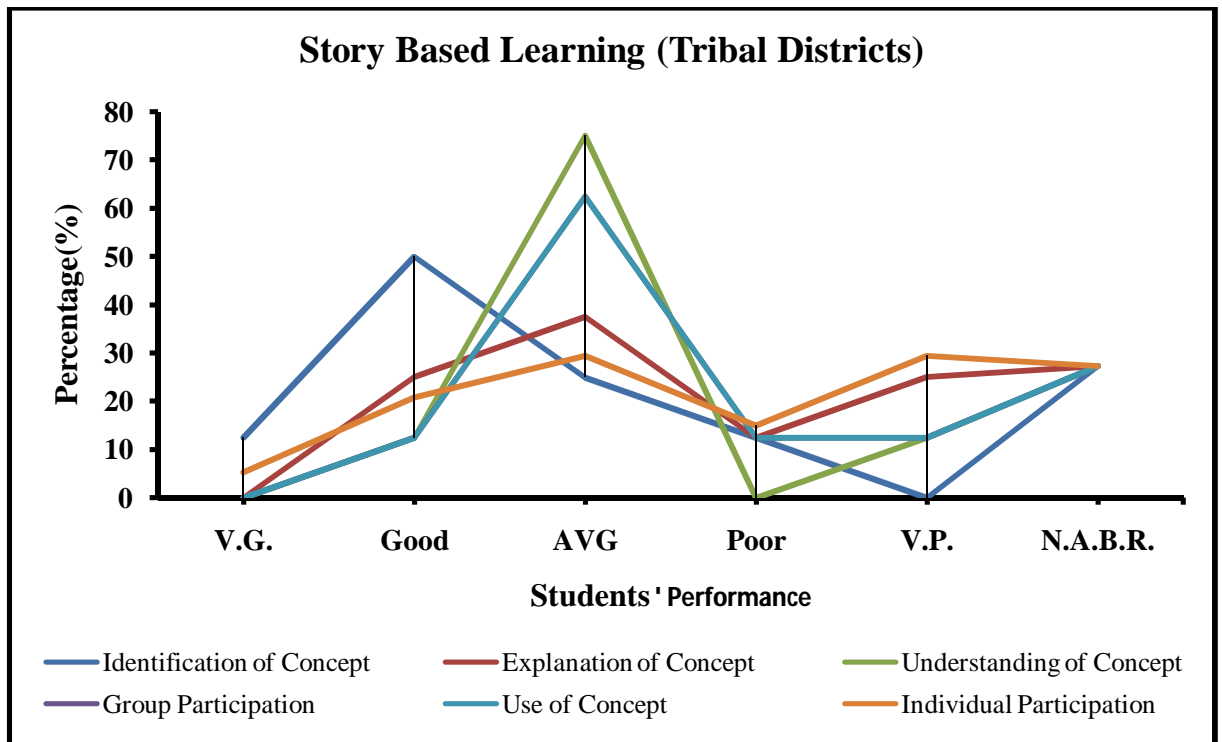
73

1. In 50% schools, Identification of Story based Learning Concept by students was good and in 25% schools it was average.

2. In 37.5% schools, Explanation of Story based Learning Concept by students was average where as in 25% schools it was both good and very poor.

3. In 75% schools, Understanding of Story based Learning Concept by students was average where as in 12.5% schools it was both good and very poor.

4. In 62.5% schools, Group participation by students was average where as in 12.5% schools it was good, poor and very poor.

5. In 62.5% schools, use of Story based Learning Concept by students was average where as in 12.5% schools it was good, poor and very poor.

6. In 29.42% schools, Individual participation by students was both average and very poor where as in 20.85% schools it was good.

Result: In 22.22% schools, students' knowledge of **Story based learning** concept was found good and in 58.38% schools it was found average and in 18.38 % it was found very poor.

4.2.1.4 CMT for Gujarati

Table 32: CMT for Gujarati

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	19.1	**41.61**	**22.82**	16.47	**0**	100	6.36
Explanation of Concept	**0**	16.49	**53.63**	**24.85**	5.03	100	6.36
Understanding of Concept	**5.03**	**24.38**	**47.07**	18.49	**5.03**	100	6.36
Group Participation	**5.03**	4.33	**53.63**	**30.65**	6.36	100	6.36
Use of Concept	**0**	10.7	**43.67**	**31.21**	14.42	100	6.36
Individual Participation	**7.75**	18.45	**41.94**	**21.2**	10.66	100	6.66

Graph 28: CMT for Gujarati

Gujarati (Tribal Districts)
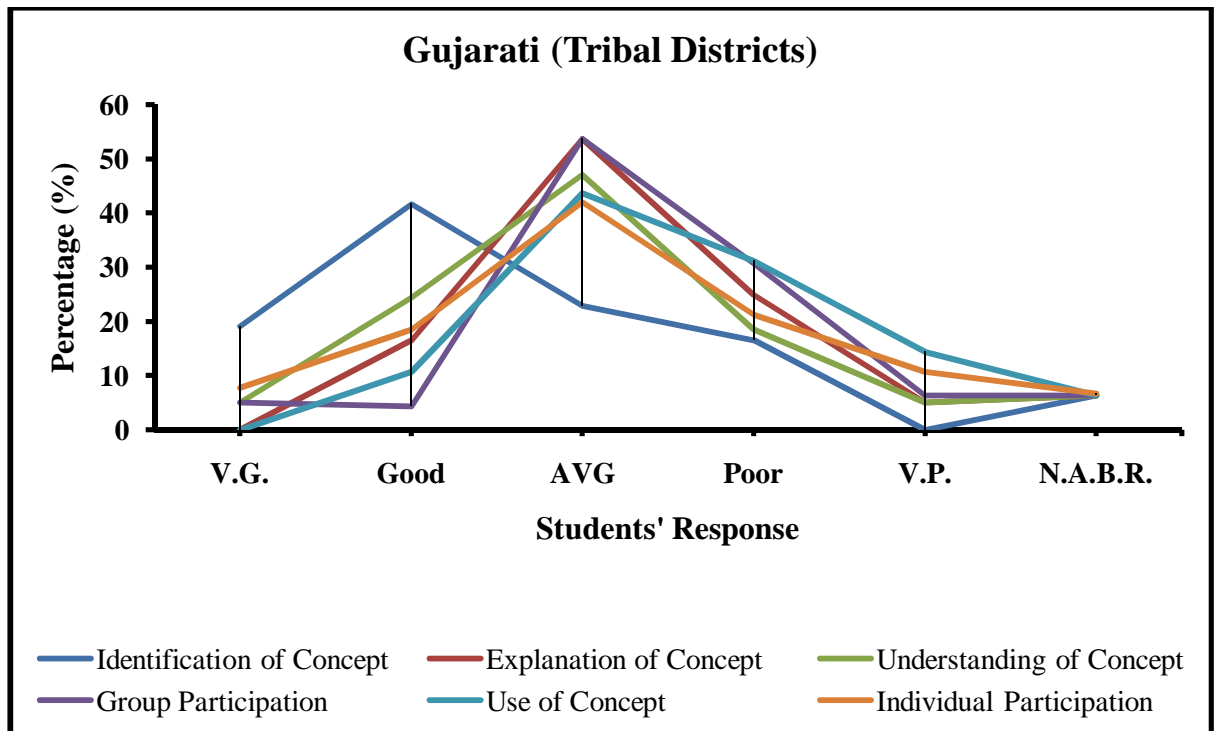
1. In 41.61% schools, Identification of Gujarati Concept by students was good and in 22.82% schools it was average.

2. In 53.63% schools, Explanation of Gujarati Concept by students was average and in 24.85% schools it was poor.

3. In 47.07% schools, Understanding of Gujarati Concept by students was average and in 24.38 % schools it was good.

4. In 53.63% schools, Group participation by students was average and in 30.65% schools it was poor.

5. In 43.67% schools, use of Gujarati Concept by students was average and in 31.21% schools it was poor.

6. In 41.94% schools, Individual participation by students was average and in 21.2% schools it was poor.

Result: In 43.79% schools, students' knowledge of **Gujarati** concept was found average and in 26.97% schools it was found poor.

4.2.1.5 CMT for Environmental Science

Table 33: CMT for Environmental Science

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	24.33	24.33	39.17	12.17	0	100	24.25
Explanation of Concept	0	40.21	39.15	12.17	8.47	100	24.25
Understanding of Concept	18.52	25.4	43.92	7.4	4.76	100	25.25
Group Participation	3.7	18.52	58.2	14.82	4.76	100	24.25
Use of Concept	4.76	29.63	36.51	24.34	4.76	100	24.25
Individual Participation	9.54	21.9	50.47	10.05	8.04	100	33.86

Graph 29: CMT for Environmental Science
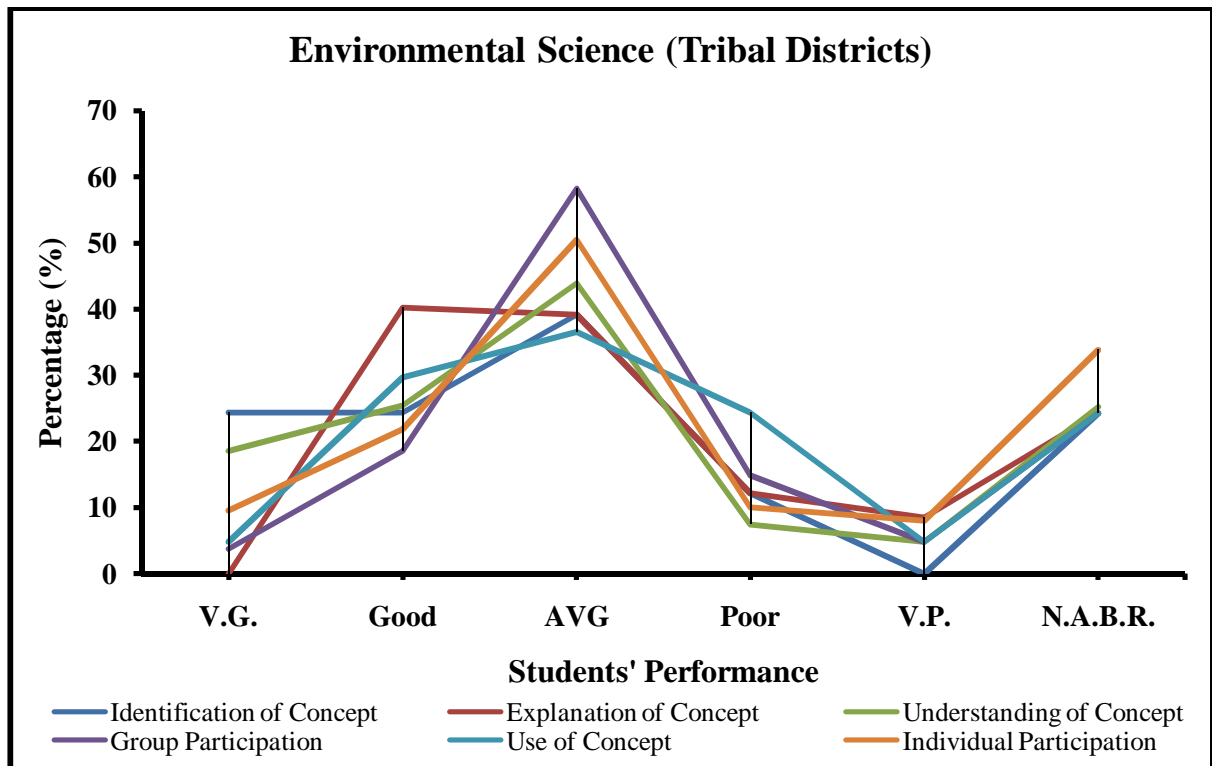
1. In 39.17% schools, Identification of Environmental Science Concept by students was average where as in 24.33% schools it was both very good and good.

2. In 40.21% schools, Explanation of Environmental Science Concept by students was good and in 39.15% schools it was average.

3. In 43.92% schools, Understanding of Environmental Science Concept by students was average and in 25.4% schools it was good.

4. In 58.2% schools, Group participation by students was average and in 18.52% schools it was good.
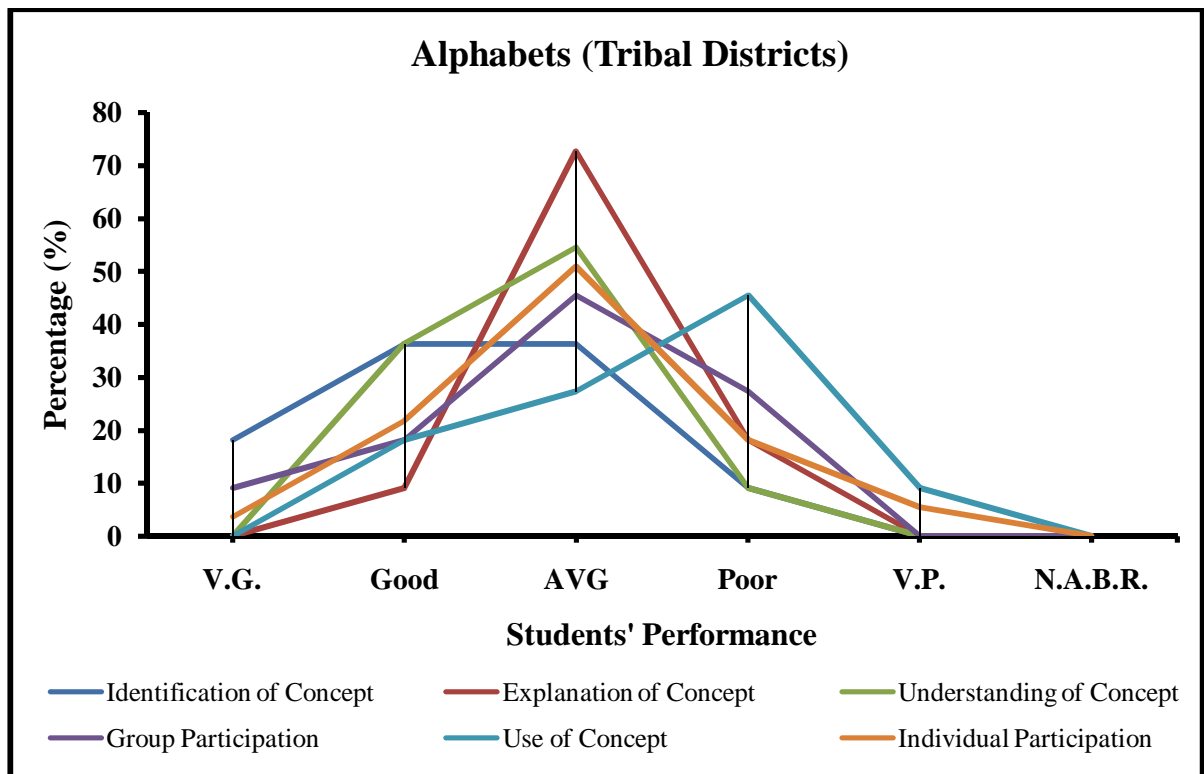
5. In 36.51% schools, use of Environmental Science Concept by students was average and in 29.63% schools it was good.

6. In 50.47% schools, Individual participation by students was average and in 21.9% schools it was good.

Result: In 26.66% schools, students' knowledge of **Environmental Science** concept was found good and in 44.57% schools it was found average.

4.2.1.6 CMT for Social Science

Table 34: CMT for Social Science

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	20.37	**45.56**	**34.07**	**0**	**0**	100	12.12
Explanation of Concept	3.33	**24.82**	**61.85**	10	**0**	100	12.12
Understanding of Concept	0	**27.78**	**58.89**	13.33	**0**	100	12.12
Group Participation	**0**	6.67	**61.85**	**28.15**	3.33	100	12.12
Use of Concept	**3.7**	10.37	**58.15**	10.74	**17.04**	100	12.12
Individual Participation	**4.07**	**25.4**	**42.82**	18.6	9.11	100	12.12

Graph 30: CMT for Social Science

Social Science (Tribal Districts)
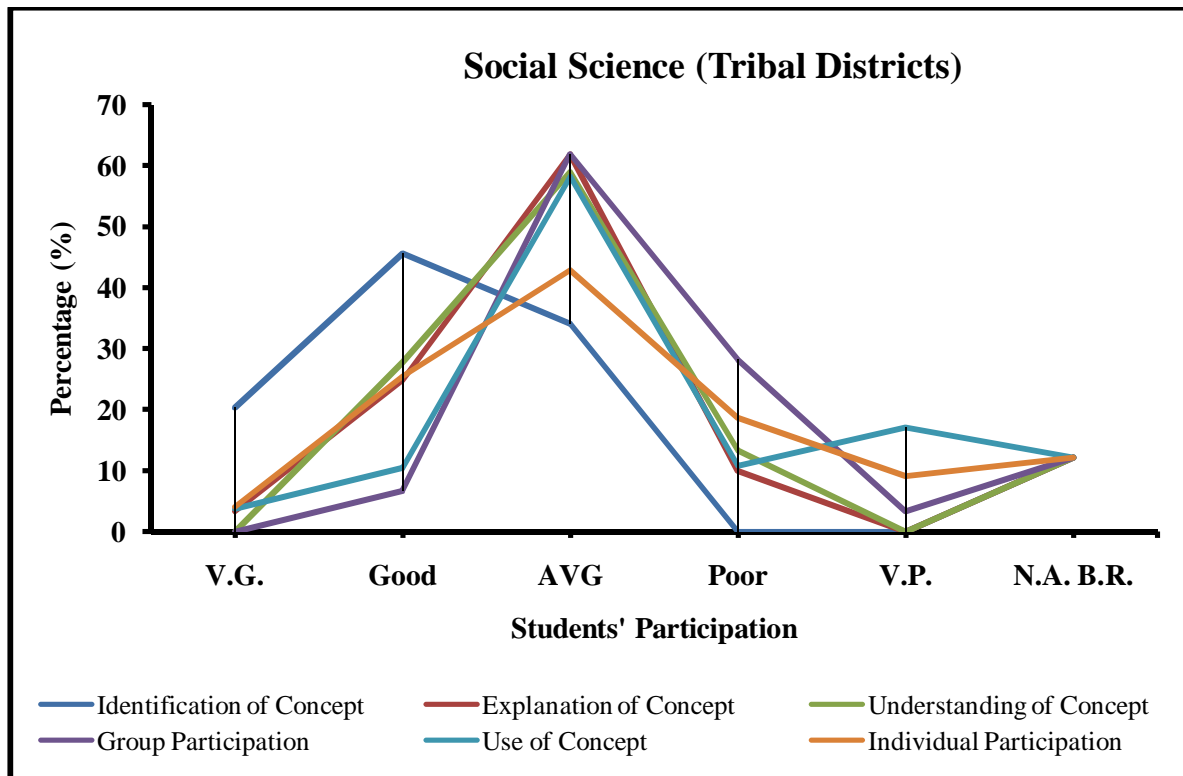
1. In 45.56% schools, Identification of Social Science Concept by students was good and in 34.07% schools it was average.
2. In 61.85% schools, Explanation of Social Science Concept by students was average and in 24.82% schools it was good.
3. In 58.89% schools, Understanding of Social Science Concept by students was average and in 27.78% schools it was good.
4. In 61.85% schools, Group participation by students was average and in 28.15% schools it was poor.
5. In 58.15% schools, use of Social Science Concept by students was average and in 17.04% schools it was very poor.
6. In 42.82% schools, Individual participation by students was average and in 25.4% schools it was good.

Result: In 30.89% schools, students' knowledge of **Social Science** concept was found good and in 52.93% schools it was found average.

4.2.1.7 CMT for Science

Table 35: CMT for Science

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	9.41	**26.18**	**46.9**	15.18	**2.33**	100	3
Explanation of Concept	**1.15**	25.38	**37.57**	**30.57**	5.33	100	3
Understanding of Concept	**0**	**37.27**	**37.59**	12.42	12.72	100	3
Group Participation	**3.03**	21.83	**43.63**	**25.15**	6.36	100	3
Use of Concept	**0**	15.47	**40.6**	**34.54**	9.39	100	3
Individual Participation	**6.6**	**20.6**	**47.81**	14.27	10.72	100	3

Graph 31: CMT for Graph Science
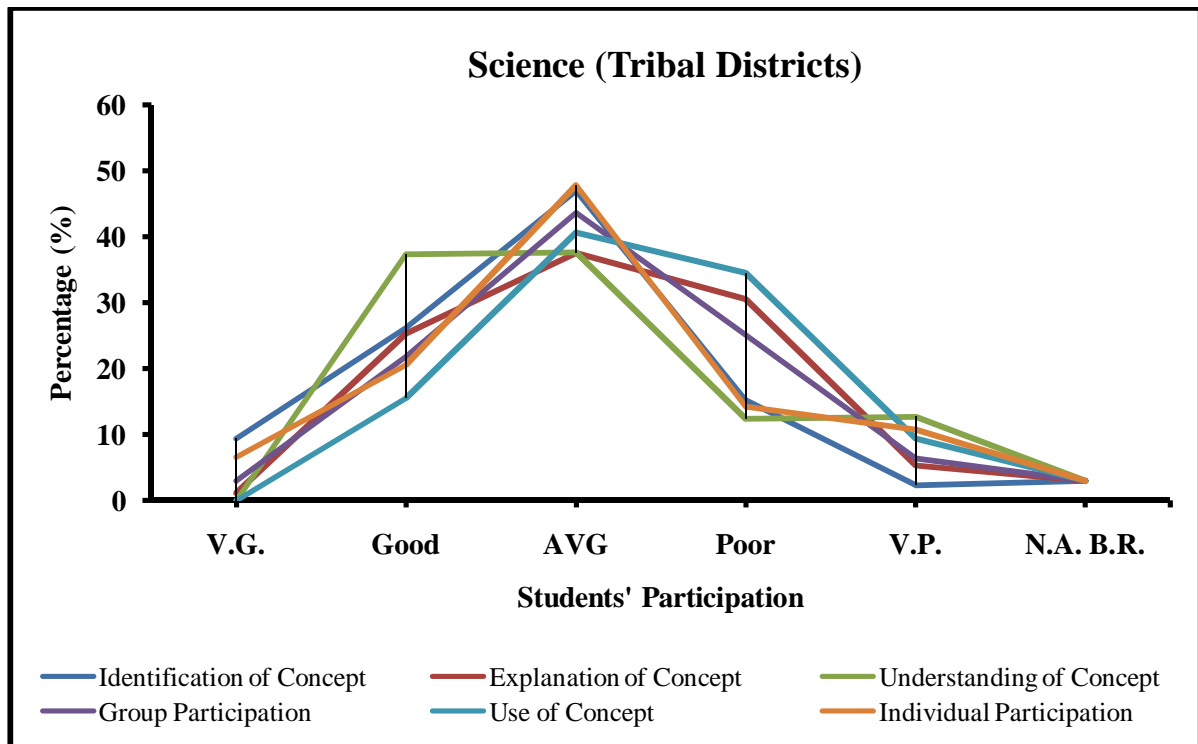
1. In 46.9% schools, Identification of Science Concept by students was average and in 26.18% schools it was good.

2. In 37.57% schools, Explanation of Science Concept by students was average and in 30.57% schools it was poor.

3. In 37.59% schools, Understanding of Science Concept by students was average and in 37.27 % schools it was good.

4. In 43.63% schools, Group participation by students was average and in 25.15% schools it was poor.

5. In 40.6% schools, use of Science Concept by students was average and in 34.54% schools it was poor.

6. In 47.81% schools, Individual participation by students was average and in 20.6% schools it was good.

Result: In 28.01% schools, students' knowledge of **Science** concept was found good, in 30.08% schools it was found poor and in 42.35% schools it was found average.

4.2.1.8 CMT for Mathematics

Table 36: CMT for Mathematics

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	22.02	**27.87**	**38.78**	8.15	3.18	100	4.45
Explanation of Concept	**2.51**	21.51	**44.69**	**22.26**	9.03	100	4.45
Understanding of Concept	4.06	**32.52**	**43.33**	17.01	**3.08**	100	4.45
Group Participation	**3.03**	21.75	**37.78**	**34.11**	3.33	100	4.45
Use of Concept	**7.28**	21.98	**29.94**	**30.91**	9.89	100	4.45
Individual Participation	**6.33**	**22.18**	**45.57**	18.5	7.42	100	4.45

Graph 32: CMT for Mathematics

Graph title: Mathematics (Tribal Districts)
Y-axis: Percentage (%)
X-axis: Students' Participation — V.G., Good, AVG, Poor, V.P., N.A. B.R.
Legend: Identification of Concept, Explanation of Concept, Understanding of Concept, Group Participation, Use of Concept, Individual Participation
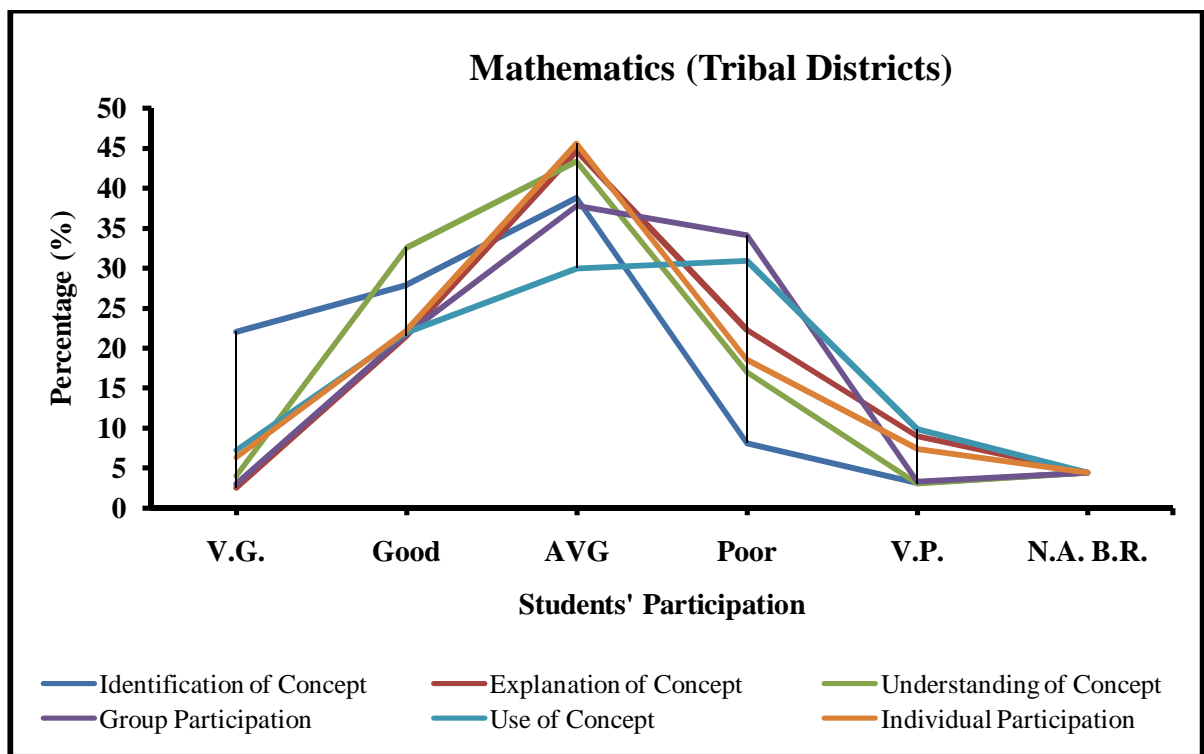
1. In 38.78% schools, Identification of Mathematics Concept by students was average and in 27.87% schools it was good.

2. In 44.69% schools, Explanation of Mathematics Concept by students was average and in 22.26% schools it was poor.

3. In 43.33% schools, Understanding of Mathematics Concept by students was average and in 32.52% schools it was good.

4. In 37.78% schools, Group participation by students was average and in 34.11% schools it was poor.

5. In 29.94% schools, use of Mathematics Concept by students was average and in 30.91% schools it was poor.

6. In 45.57% schools, Individual participation by students was average and in 22.18% schools it was good.

Result: In 27.52% schools, students' knowledge of **Mathematics** concept was found good, in 29.09% schools it was found poor and in 40.01% schools it was found average.

4.2.2 Analysis and Interpretation of CMT: Class wise of Tribal Districts

4.2.2.1 CMT for Class 1

Table 37: CMT for Class 1

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	20.23	45.45	23.79	10.53	0	100	12.12
Explanation of Concept	0	24.7	46.74	20.23	8.33	100	12.12
Understanding of Concept	0	22.95	63.18	9.7	4.17	100	12.12
Group Participation	3.03	20.23	52.65	19.92	4.17	100	12.12
Use of Concept	0	20.23	43.26	25.98	10.53	100	12.12
Individual Participation	4.98	20.89	39.44	21.06	13.63	100	12.12

Graph 33: CMT for Class 1
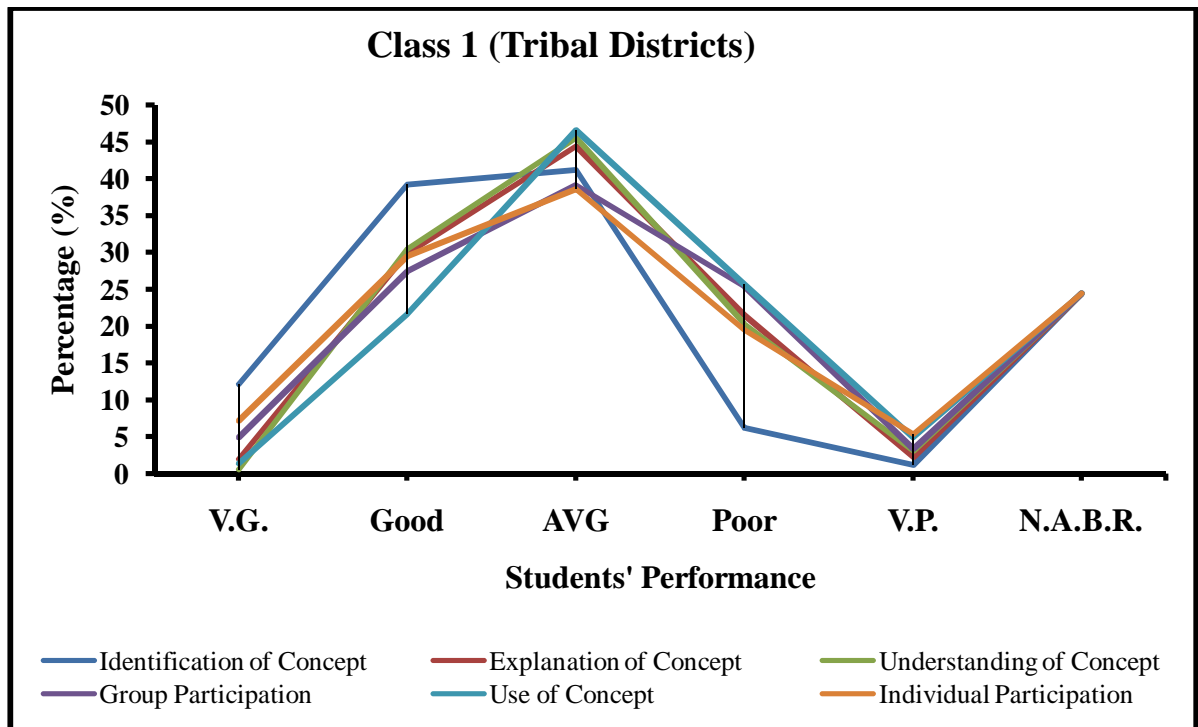
1. In 45.45% schools, Identification of Concepts by students was good and in 23.79% schools it was average.

2. In 46.74% schools, Explanation of Concepts by students was average and in 24.70% schools it was good.

3. In 63.18% schools, Understanding of Concepts by students was average and in 22.95% schools it was good.

4. In 52.65% schools, Group participation by students was average and in 20.23% schools it was good.

5. In 43.26% schools, use of Concept by students was average and in 25.98% schools it was poor.

6. In 39.44% schools, Individual participation by students was average and in 21.06% schools it was poor.

Result: In 28.33% schools knowledge of **Class 1** students was found good and in 44.84% it was found average.

4.2.2.2 CMT for Class 2

Table 38: CMT for Class 2

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	27.71	21.65	30.73	19.91	0	100	12.12
Explanation of Concept	0	23.37	39.83	25.98	10.82	100	12.12
Understanding of Concept	3.03	23.38	44.59	21.22	7.78	100	12.12
Group Participation	0	6.06	43.72	45.45	4.77	100	12.12
Use of Concept	4.76	9.09	38.53	36.8	10.82	100	12.12
Individual Participation	4.07	15.84	49.26	23.12	7.71	100	12.12

Graph 34: CMT for Class 2

Class 2 (Tribal Districts)
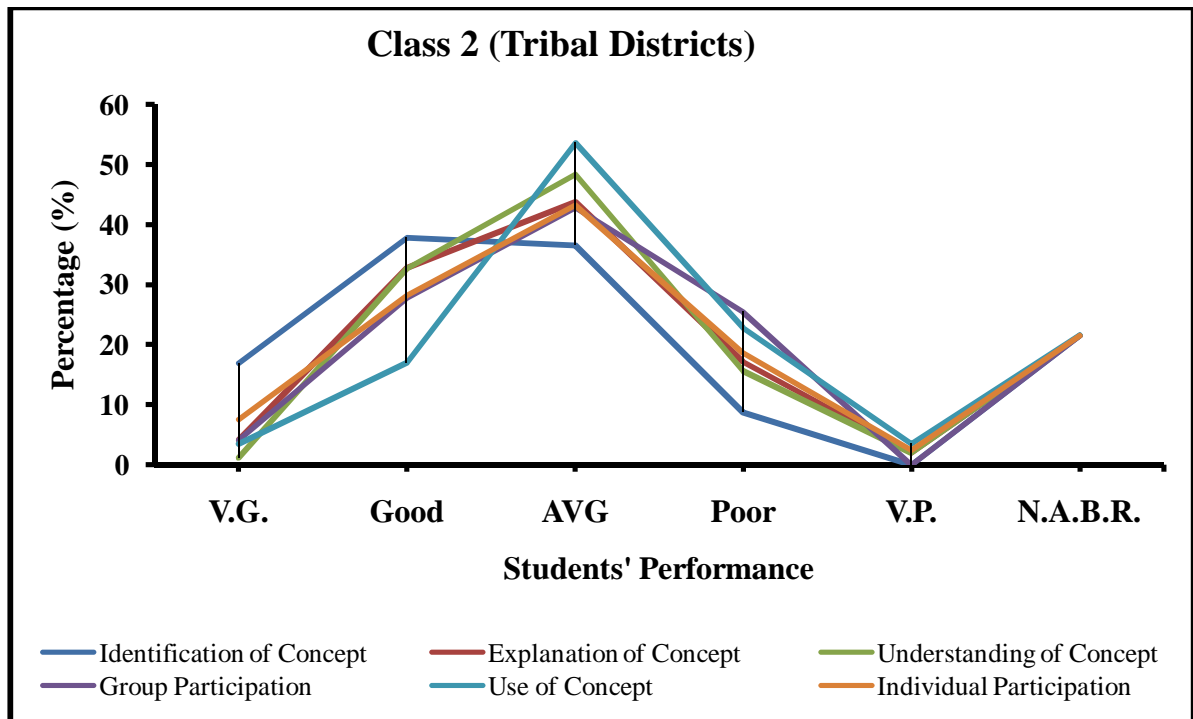
1. In 30.73% schools, Identification of Concepts by students was average and in 27.7% schools it was very good.

2. In 39.83% schools, Explanation of Concepts by students was average and in 25.98% schools it was poor.

3. In 44.59% schools, Understanding of Concepts by students was average and in 23.38% schools it was good.

4. In 45.45% schools, Group participation by students was poor and in 43.72% schools it was average.

5. In 38.53% schools, use of Concept by students was average and in 36.8% schools it was poor.

6. In 49.26% schools, Individual participation by students was average and in 23.12% schools it was poor.

Result: In 32.83% schools knowledge of **Class 2** students was found poor and in 33.82% it was found average.

4.2.2.3 CMT for Class 3

Table 39: CMT for Class 3

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	24.07	**37.4**	**28.15**	7.05	**3.33**	100	12.43
Explanation of Concept	**0**	**34.82**	**51.85**	13.33	**0**	100	12.43
Understanding of Concept	18.52	**27.04**	**37.41**	17.03	**0**	100	12.43
Group Participation	**3.7**	17.41	**54.44**	**17.78**	6.67	100	12.43
Use of Concept	**0**	31.48	**41.48**	23.71	3.33	100	12.43
Individual Participation	**4.74**	18.67	**51.19**	16.44	8.96	100	12.43

Graph 35: CMT for Class 3

Graph 35: CMT for Class 3

1. In 37.4% schools, Identification of Concepts by students was good and in 28.15% schools it was average.

2. In 51.85% schools, Explanation of Concepts by students was average and in 34.82% schools it was good.

3. In 37.41% schools, Understanding of Concepts by students was average and in 27.04% schools it was good.

4. In 54.44% schools, Group participation by students was average and in 17.78% schools it was poor.

5. In 41.48% schools, use of Concept by students was average and in 31.48% schools it was good.

6. In 51.19% schools, Individual participation by students was average and in 18.67% schools it was good.

Result: In 29.88% schools knowledge of **Class 3** students was found good and in 44.0% it was found average.

4.2.2.4 CMT for Class 4

Table 40: CMT for Class 4

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	19.53	34.68	29.97	9.77	3.03	100	9.09
Explanation of Concept	3.03	26.26	41.41	19.53	6.73	100	9.09
Understanding of Concept	0	34.68	49.5	12.79	3.03	100	9.09
Group Participation	0	34.34	46.13	19.53	0	100	9.09
Use of Concept	3.03	35.69	32.99	25.26	3.03	100	9.09
Individual Participation	12.46	24.24	44.18	12.86	6.26	100	9.09

Graph 36: CMT for Class 4

Class 4 (Tribal Districts)
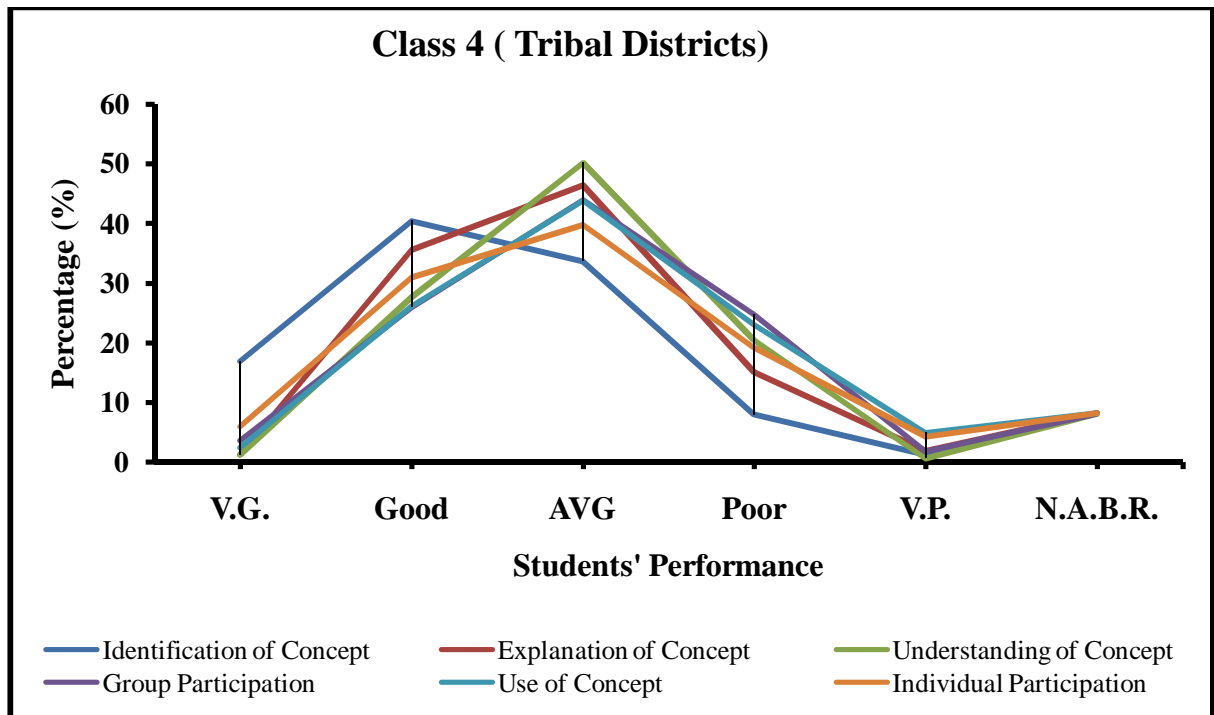
1. In 34.68% schools, Identification of Concepts by students was good and in 29.97% schools it was average.

2. In 41.41% schools, Explanation of Concepts by students was average and in 26.26% schools it was good.

3. In 49.5% schools, Understanding of Concepts by students was average and in 34.68% schools it was good.

4. In 46.13% schools, Group participation by students was average and in 34.34% schools it was good.

5. In 35.69% schools, use of Concept by students was good and in 32.99% schools it was average.

6. In 44.18% schools, Individual participation by students was average and in 24.24% schools it was good.

Result: In 31.64% schools knowledge of **Class 4** students was found good and in 40.69% it was found average.

4.2.2.5 CMT for Class 5

Table 41: CMT for Class 5

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	19.39	**26.06**	**45.15**	6.07	**3.33**	100	6.06
Explanation of Concept	**3.33**	**20**	**54.24**	19.1	**3.33**	100	6.06
Understanding of Concept	**0**	**32.12**	**45.15**	13.03	9.7	100	6.06
Group Participation	**0**	16.06	**54.55**	**22.72**	6.67	100	6.06
Use of Concept	**3.03**	12.72	**42.47**	**22.38**	19.4	100	6.06
Individual Participation	**4.54**	**27.09**	**43.82**	18.61	5.94	100	6.06

Graph 37: CMT for Class 5
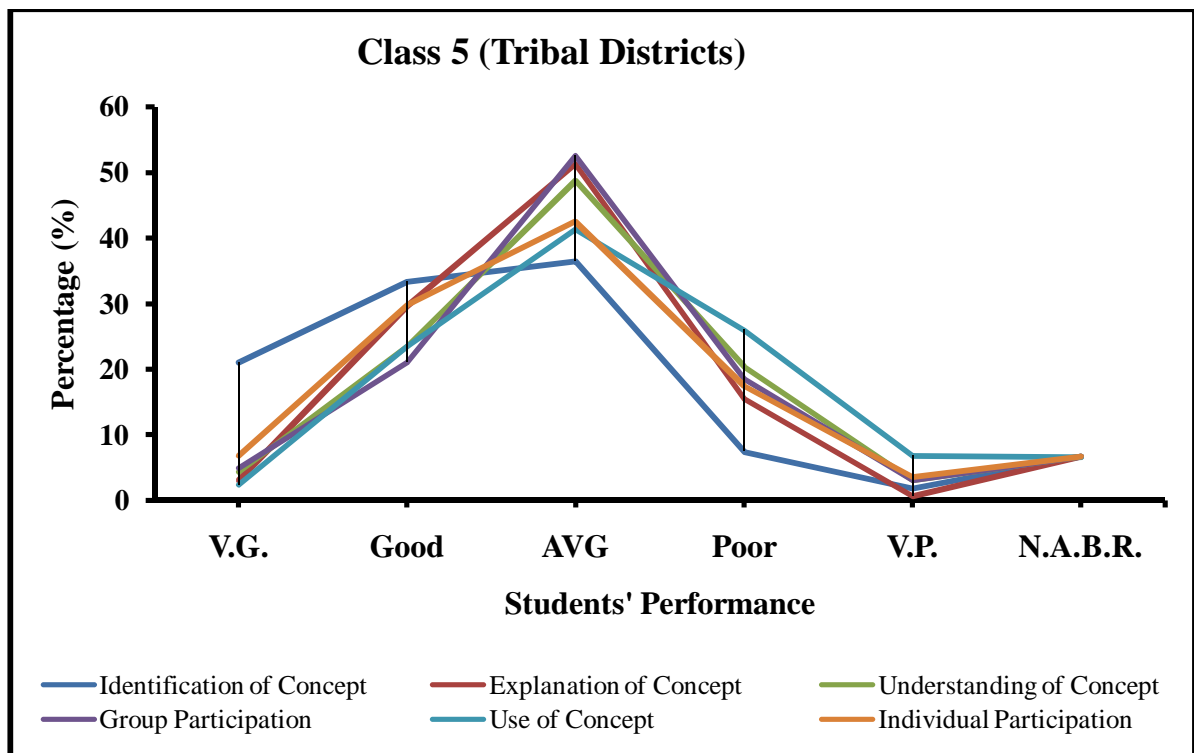
1. In 45.15% schools, Identification of Concepts by students was average and in 26.06% schools it was good.

2. In 54.24% schools, Explanation of Concepts by students was average and in 20% schools it was good.

3. In 45.15% schools, Understanding of Concepts by students was average and in 32.12% schools it was good.

4. In 54.55% schools, Group participation by students was average and in 22.72% schools it was poor.

5. In 42.47% schools, use of Concept by students was average and in 22.38% schools it was poor.

6. In 43.82% schools, Individual participation by students was average and in 27.02% schools it was good.

Result: In 26.3% schools knowledge of **Class 5** students was found good and in 47.56% it was found average.

4.2.2.6 CMT for Class 6

Table 42: CMT for Class 6

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	16.73	41.62	38.62	3.03	0	100	9.09
Explanation of Concept	0	34.21	40.94	24.85	0	100	9.09
Understanding of Concept	0	32.93	48.28	12.73	6.06	100	9.09
Group Participation	0	15.76	50.34	30.87	3.03	100	9.09
Use of Concept	3.7	16.43	49.67	20.13	10.07	100	9.09
Individual Participation	3.96	18.37	50.33	17.93	9.41	100	9.09

Graph 38: CMT for Class 6

Class 6 (Tribal Districts)
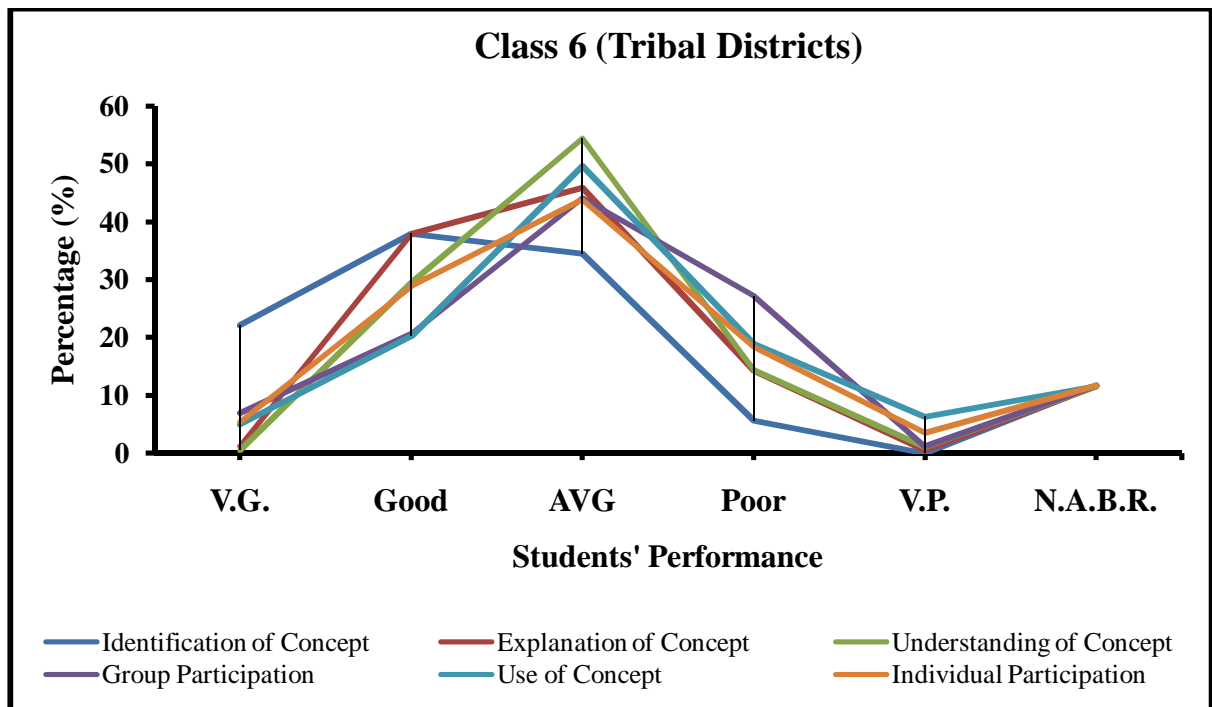
1. In 41.62% schools, Identification of Concepts by students was good and in 38.62% schools it was average.

2. In 40.94% schools, Explanation of Concepts by students was average and in 34.21% schools it was good.

3. In 48.28% schools, Understanding of Concepts by students was average and in 32.93% schools it was good.

4. In 50.34% schools, Group participation by students was average and in 30.87% schools it was poor.

5. In 49.67% schools, use of Concept by students was average and in 20.13% schools it was poor.

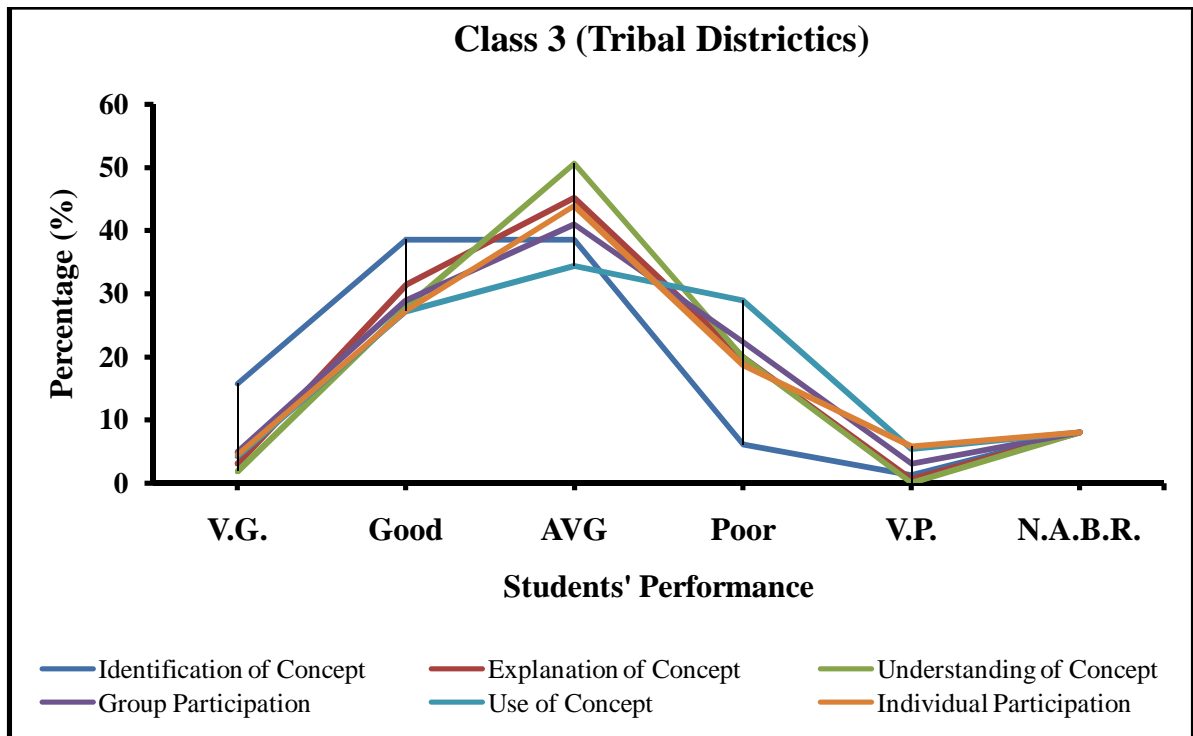6. In 50.33% schools, Individual participation by students was average and in 18.37% schools it was good.

Result: In 31.78% schools knowledge of **Class 6** students was found good and in 46.36% it was found average.

4.2.2.7 CMT for Class 7

Table 43: CMT for Class 7

Particulars	V.G.	Good	AVG	Poor	V.P.	Total	N.A. B.R.
Identification of Concept	22.73	**32.12**	**38.79**	6.36	**0**	100	6.06
Explanation of Concept	**0**	6.36	**77.58**	**16.06**	**0**	100	6.06
Understanding of Concept	**0**	**28.79**	**48.18**	19.7	3.33	100	6.06
Group Participation	**3.03**	19.4	**45.15**	**29.09**	3.33	100	6.06
Use of Concept	**3.33**	12.73	**39.09**	**31.82**	13.03	100	6.06
Individual Participation	**3.22**	20.61	**45.63**	**23.39**	7.15	100	6.06

Graph 39: CMT for Class 7

Graph 39: CMT for Class 7
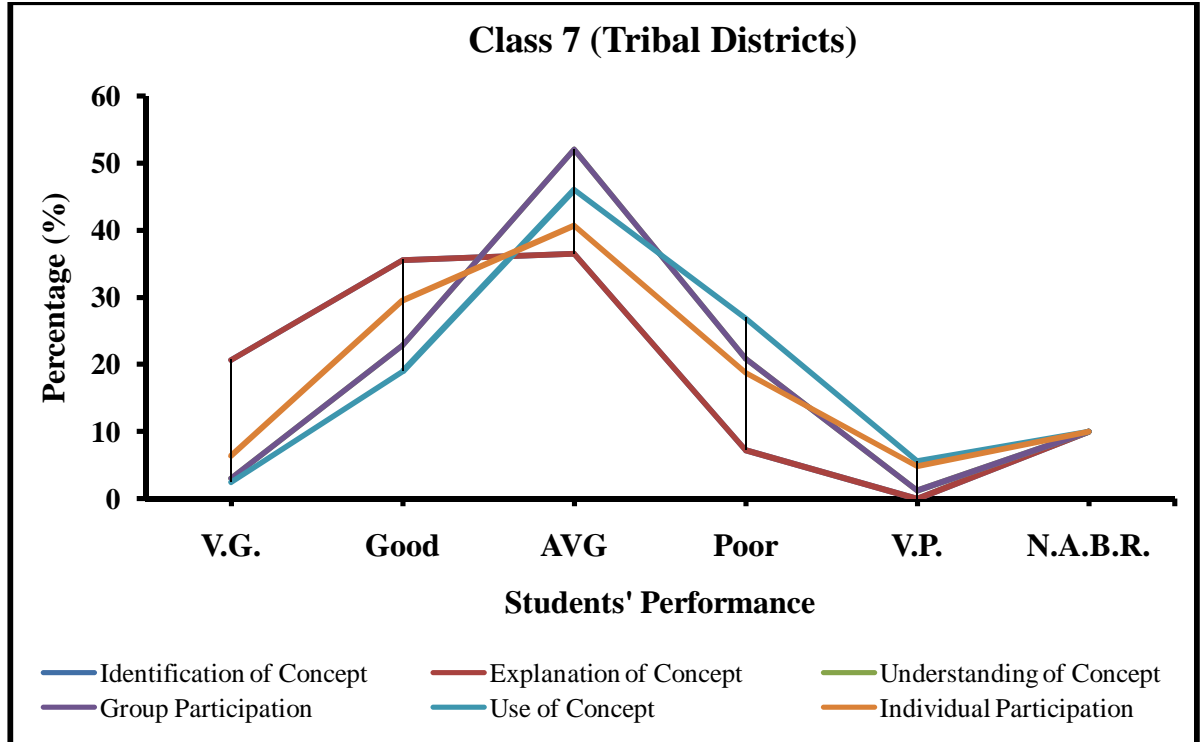
1. In 38.79% schools, Identification of Concepts by students was average and in 32.12% schools it was good.

2. In 77.58% schools, Explanation of Concepts by students was average and in 16.06% schools it was poor.

3. In 48.18% schools, Understanding of Concepts by students was average and in 28.79% schools it was good.

4. In 45.15% schools, Group participation by students was average and in 29.09% schools it was poor.

5. In 39.09% schools, use of Concept by students was average and in 31.82% schools it was poor.

6. In 45.63% schools, Individual participation by students was average and in 23.39% schools it was poor.

Result: In 49.07% schools knowledge of **Class 7** students was found average and in 25.09% it was found poor.

CHAPTER 5

Perceptions of teachers regarding usefulness of BaLA
…………………………………………………………………………..

5.0 Introduction
5.1 Information provided by Principal of All 8 Districts
5.2 Information Provided by Teacher of All 8 Districts
5.3 Information Provided by Principal and Teacher of All 8 Districts
5.4 Information Provided by Principal, Teacher and Observer (All 8 Districts)
5.5 Information Provided by Principal of Tribal Districts
5.6 Information Provided by Teacher of Tribal Districts
5.7 Information Provided by Principal and Teacher of Tribal Districts
5.8 Information Provided by Principal, Teacher and Observer (Tribal Districts)
5.9 Analysis of the Responses, of 16 Principals, who were Personally Interviewed
5.10 Analysis of the Responses of 80 Teachers, who Participated in Focus Group Discussion (FGD)

5.0 Introduction

To gather the information on above objective Questionnaire for principal and teacher were made. For analysis and interpretation, the information gathered from them is divided in following categories.

Analysis and Interpretation of Common questions asked to Principal and Teacher

A. Analysis and Interpretation of Common questions asked to Principal and Observer

B. Analysis and Interpretation of information provided by Principal, Teacher and Observer

C. Analysis and Interpretation of specific questions asked to Principal

D. Analysis and Interpretation of specific questions asked to Teacher

5.1. Information Provided by Principal of All 8 Districts
Table 44: Information Provided by Principal

Particular I	Yes		To some extent		No		Total
	No.	%	No.	%	No.	%	No.
School has become more happy and joyful place for students	58	96.66	2	3.33	0	0	60
BaLA gives holistic space to students for development	57	95	3	5	0	0	60
BaLA crowding existing space of your school	11	18.33	13	21.66	36	60	60
BaLA school sensitive to accomplish needs of all children from I to VII standard	47	78.33	13	21.66	0	0	60
School getting any donation for maintains of BaLA resources	12	20	1	1.66	47	78.33	60

- 58 (96.66%) of principals stated that school has become more happy and joyful place for students.
- 57 (95%) believes that BaLA gives holistic space to students for development.
- 36 (60%) said that BaLA is not crowding existing space of your school while rest 24 (40 %) believes affirmatively or to some extent BaLA is crowding the existing space.

- 47 (78.33%) believes BaLA schools are sensitive to accomplish needs of all children from I to VII standard.
- 47 (78.33%) principals said that school is not getting any donation for maintenance of BaLA resources.

5.2 Information Provided by Teacher of All 8 Districts
Table 45: Information Provided by Teacher (A)

Particulars	Yes		To some extent		No		Total
	N	%	N	%	N	%	N
Use of BaLA Resources in teaching	51	85	9	15	0	0	60
Received any training to utilize BaLA resources	5	8.33	2	3.33	53	88.34	60
BaLA crowding existing space of your classroom	11	18.33	11	18.33	38	63.34	60
Concepts learnt through BaLA by student in Class room easily	51	85	9	15	0	0	60
Your contribution to learning through BaLA	42	70	12	20	6	10	60
Impact of BaLA on attendance	48	80	5	8.33	7	11.67	60

- 51 (85%) teachers replied affirmatively when asked for use of BaLA resources in teaching.
- 54 (88.34%) teachers said they didn't receive any training to utilize BaLA resources.
- 38 (63.34%) teachers said that BaLA is not crowding existing space of their school while 11 (18.33%) believes affirmatively or to some extent BaLA is crowding the existing space.
- 51 (85%) of teachers replied affirmatively when asked for concepts learnt through BaLA by student in Class room easily.
- 42 (70%) teachers replied affirmatively when asked for their contribution to learning through BaLA.
- 48 (80%) teachers accepted that there is an impact of BaLA in school.

Table 46: Information Provided by Teacher (B)

Particular	V.G.		Good		AVG		Poor		V. P.		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Impact of BaLA in Classroom Participation of Students	4	6.67	**49**	**81.66**	7	11.67	0	0	0	0	60

- Out of total 60 schools teachers, 81.66% stated that Impact of BaLA in Classroom Participation of Students is good.

5.3 Information Provided by Principal and Teacher of All 8 Districts
Table 47: Information Provided by Principal and Teacher (A)

Particulars	Principal			Teacher		
	Yes	To some extent	No	Yes	To some extent	No
BaLA activity helpful in encouraging slow learners	**40 (66.67%)**	12 (20%)	8 (13.33%)	**43 (71.67%)**	17 (28.33%)	0 (0%)
BaLA efficiently planned in your school	**52 (86.66%)**	8 (13.34%)	0 (0%)	**46 (76.67%)**	14 (23.33%)	0 (0%)
BaLA efficiently executed in your school	**51 (85%)**	9 (15 %)	0 (0%)	**49 (81.67%)**	11 (18.33%)	0 (0%)
School Maintenance BaLA resources	**48 (80%)**	11 (18.34%)	1 (1.66%)	**51 (85%)**	8 (13.33%)	1 (1.67%)
BaLA crowding existing space of your school	11 (18.33 %)	13 (12.66%)	**36 (60%)**	11 (18.33%)	11 (18.33%)	**38 (63.34%)**

- Out of total 60 schools, 40 (66.67%) principals stated affirmatively that BaLA is helpful in encouraging slow learners and 43 (71.67%) teachers also opined the same.

- In opinion of 52 (86.66%) principals BaLA is efficiently planned in the school. However 46 (76.67%) teachers opined the same.

- In opinion of 51 (85%) principals BaLA is efficiently executed in the school and 49 (81.67%) teachers opined the same.

- 48 (80%) principals stated that school maintains the BaLA resources and 51 (85%) teachers opined the same.

- 36 (60%) principals replied that BaLA is not crowding existing space of the school where as 38 (63.34%) teachers opined the same.

Table 48: Information provided by Principal and Teacher (B)

Perception	Impact of BaLA on basic learning standard in school							
	Yes	No	V.G.	Good	AVG	Poor	V.P.	Total
Principal	50 (83.33 %)	10 (16.67%)	**40 (80%)**	9 (18%)	1 (2%)	0 (0%)	0 (0%)	60
Teacher	60 (100 %)	0 (0%)	14 (23.33%)	**37 (61.67%)**	9 (15%)	0 (0%)	0 (0%)	60

- Out of total 60 schools, in 40 (81.66%) schools' principals stated that Impact of BaLA in Classroom Participation of Students is very good. However 37 (61.67%) teachers stated that Impact of BaLA in Classroom Participation of Students is good.

5.4 Information Provided by Principal, Teacher and Observer (All 8 Districts)
Table 49: Information Provided by Principal, Teacher and Observer (A)

Perception	Students' participation in self- engaged learning							
	Yes	No	V.G	Good	AVG	Poor	V.P.	Total
Principal	59 (98.33%)	1 (1.67%)	8 (13.56%)	**36 (61.02%)**	15 (25.42 %)	0 (0%)	0 (0%)	60
Teacher	60 (100%)	0 (0%)	10 (16.67%)	**39 (65%)**	11 (18.33%)	0 (0%)	0 (0%)	60
Observer	59 (93.33%)	1 (1.67%)	4 (6.77%)	**26 (44.07%)**	26 (44.07%)	0 (0%)	3 (5.09%)	60

- Out of total 60 schools principals, 36 (61.02%) stated that students' participation in **self- engaged learning** is good and 39 (65%) teachers opined the same. However as per observation it is only 26 (44.06%).

Table 50: Information provided by Principal, Teacher and Observer (B)

Perception	Students' participation in group – learning							
	Yes	No	V.G.	Good	Average	Poor	V.P.	Total
Principal	60 (100%)	0 (0%)	11 (18.33%)	**41 (68.33%)**	8 (13.34%)	0 (0%)	0 (0%)	60
Teacher	60 (100%)	0 (0%)	8 (13.33%)	**43 (71.67%)**	25 (15%)	0 (0%)	0 (0%)	60
Observer	59 (93.33%)	1 (1.67%)	4 (6.77%)	**28 (47.46%)**	27 (45.77%)	0 (0%)	0 (0%)	60

- Out of total 60 schools principals 68.33% stated that students' participation in group-learning is good and 71.67% teachers opined the same. However as per observation it is only 47.46%.

5.5 Information Provided by Principal of Tribal Districts

Table 51: Information Provided by Principal

Particular I	Yes		To some extent		No		Total
	No.	%	No.	%	No.	%	No.
School has become more happy and joyful place for students	**10**	**90.90**	1	9.09	0	0	11
BaLA gives holistic space to students for development	**10**	**90.90**	1	9.09	0	0	11
BaLA crowding existing space of your school	1	9.09	2	18.18	**8**	**72.72**	11
BaLA school sensitive to accomplish needs of all children from I to VII standard	**10**	**90.90**	1	9.09	0	0	11
School getting any donation for maintains of BaLA resources	1	9.09	0	0	**9**	**90.90**	11

- 10 (90.90%) principals stated that school has become more happy and joyful place for students and believe that BaLA gives holistic space to students for development.
- 8 (72.72%) principals said that BaLA is not crowding existing space of their school while rest 3 (27.27%) believe affirmatively or to some extent BaLA is crowding the existing space.
- 10 (90.90%) principals believe BaLA schools are sensitive to accomplish needs of all children from I to VII standard.
- 9 (90.90%) principals said that they are not getting any donation for maintenance.

5.6 Information Provided by Teacher of Tribal Districts

Table 52: Information Provided by Teacher (A)

Particulars	Yes		To some extent		No		Total
	N	%	N	%	N	%	N
Use of BaLA Resources in teaching	10	90.90	1	9.09	0	0	11
Received any training to utilize BaLA resources	2	18.18	0	0	9	81.81	11
BaLA crowding existing space of your classroom	1	9.09	2	18.18	8	72.72	11
Concepts learnt through BaLA by student in Class room easily	8	72.72	3	27.27			11
Your contribution to learning through BaLA	8	72.72	2	18.18	1	9.09	11
Impact of BaLA on attendance	11	100	0	0	0	0	11

- The above table reflects that 10 (90.90%) teachers using BaLA resources in teaching however 9 (81.81%) of such teachers have not received any training for that.

- 8 (72.72%) teachers stated that various concepts are learnt by students in class-room.

- 8 (72.72%) teachers stated that they contributed to the learning through BaLA but when more specifically asked about their contribution no exact answer was given by teacher. It was found majority of the times they were confusing their preparation of **TLM (Teaching Learning Material)** with contribution to BaLA.

- All of them unanimously accepted that there is a positive impact of BaLA on attendance.

Table 53: Information Provided by Teacher (B)

Particular	V.G.		Good		AVG		Poor		V. P.		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Impact of BaLA in Classroom Participation of Students	0	0	9	81.81	2	18.18	0	0	0	0	100

- Out of total 11 schools teachers, 81.81% stated that Impact of BaLA in Classroom participation of students is good.

5.7 Information Provided by Principal and Teacher of Tribal Districts

Table 54: Information provided by principal and teacher (A)

Particulars	Principal			Teacher		
	Yes	**To some extent**	**No**	**Yes**	**To some extent**	**No**
BaLA activity helpful in encouraging slow learners	**9 (81.81%)**	2 (18.18%)	0 (0%)	**8 (72.72%)**	3 (27.27%)	0 (0%)
BaLA efficiently planned in your school	**7 (63.63%)**	4 (36.36%)	0 (0%)	5 (45.45%)	**6 (54.54%)**	0 (0%)
BaLA efficiently executed in your school	**7 (63.63%)**	4 (36.36%)	0 (0%)	**7 (63.63%)**	4 (36.36%)	0 (0%)
School Maintenance BaLA resources	**7 (63.63%)**	4 (36.36%)	0 (0%)	**8 (72.72%)**	3 (27.27%)	0 (0%)
BaLA crowding existing space of your school	1 (9.09%)	2 (18.18%)	**8 (72.72%)**	1 (9.09%)	2 (18.18%)	**8 (72.72%)**

- Out of total 11 schools, 9 (81.81%) principals stated affirmatively that BaLA is helpful in encouraging slow learners and 8 (72.72%) teachers also opined the same.

- In opinion of 7 (63.63%) principals BaLA is efficiently planned in the school. However 6 (54.54%) teachers opined the same.

- In opinion of 7 (63.63%) principals BaLA is efficiently executed in the school and 6 (54.54%) teachers opined the same.

- 7 (63.63%) principals stated that school maintains the BaLA resources and 8 (72.72%) teachers opined the same.

- 8 (72.72%) principals and teachers each replied that BaLA is not crowding existing space of the school.

Table 55: Information provided by principal and teacher (B)

Perception	Impact of BaLA on basic learning standard in school							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	11 (100%)	0 (0%)	1 (9.09%)	**7 (63.63%)**	3 (27.27%)	0 (0%)	0 (0%)	11
Teacher	11 (100%)	0 (0%)	0 (0%)	1 (9.09%)	**10 (90.90%)**	0 (0%)	0 (0%)	11

- Out of total 11 schools 7 (63.63%) principals stated that Impact of BaLA in Classroom Participation of Students is good. However 10 (90.90%) teachers stated that Impact of BaLA in Classroom Participation of Students is average.

5.8 Information Provided by Principal, Teacher and Observer (Tribal Districts)

Table 56: Information Provided by Principal, Teacher and Observer (A)

Perception	Students' participation in self- engaged learning							
	Yes	No	V.G	Good	AVG	Poor	V.P.	Total
Principal	11 (100%)	0 (0%)	2 (18.18%)	**5 (45.45%)**	4 (36.36%)	0 (0%)	0 (0%)	11
Teacher	11 (100%)	0 (0%)	2 (18.18%)	4 (36.36%)	**5 (45.45%)**	0 (0%)	0 (0%)	11
Observer	11 (100%)	0 (0%)	0 (0%)	4 (36.36%)	**6 (54.54%)**	1 (9.09%)	0 (0%)	11

- Out of total 60 schools principals, 5 (45.45%) stated that students' participation in **self-engaged learning** is good. However and 5 (45.45%) teachers opined it is average and. as per observation it is 6 (54.54%).

Table 57: Information Provided by Principal, Teacher and Observer (B)

Perception	Students' participation in group learning							
	Yes	No	V.G.	Good	Average	Poor	V.P.	Total
Principal	11 (100%)	0 (0%)	1 (9.09%)	**8 (72.72%)**	2 (18.18%)	0 (0%)	0 (0%)	11
Teacher	11 (100%)	0 (0%)	0 (0%)	**8 (72.72%)**	3 (27.27%)	0 (0%)	0 (0%)	11
Observer	11 (100%)	0 (0%)	0 (0%)	**6 (54.54%)**	5 (45.45%)	0 (0%)	0 (0%)	11

- Principals and teachers both opined the same that 8 (72.72%) for **Students' participation in group – learning** is good. However as per observation it is only 6 (54.54%).

5.9 Analysis of the Responses, of 16 Principals, who were Personally Interviewed

To get an insight of the impact of BaLA in school 16 principals were personally interviewed about their views on ten related question.

In response to question 1 i.e. *What are the advantages of BaLA?*

25% of principals believe that due to BaLA activity students have become more intelligent and knowledgeable. 40% principals stated that students become more engaged

in self-learning. 25% principals stated that students become more engaged in group learning. 10% stated that students are becoming more enthusiastic due to introduction of BaLA activity.

In response to question 2 i.e. *What type of initiative you have taken to maintain BaLA Resource?*

In 50% schools BaLA resources are maintained by students. In 35% schools teachers' committee is taking care to maintain BaLA resources. In 15% schools management maintains BaLA resources.

In response to question 3 i.e. *What changes you have observed before and after implementation of BaLA?*

35% principals observed that students have become more regular after implementation of BaLA activity. 35% stated that after implementation of BaLA, benefit in teaching and learning is observed. 30% stated that remarkable change is observed in development of physical environment of the school.

In response to question 4 i.e. *What has been your experience so far in planning and building infrastructure of BaLA in your School?*

80% principals stated that they have good experience in planning and building in planning and learning. However 20% principals said that due to lack of experience trial and error method was adopted in implementation of BaLA.

In response to question 5 i.e. *While implementing BaLA what you have learnt through your past experience?*

The experiences of the principals are varying from one to another therefore different responses were received. 40% principals stated that they have learned to plan properly. 35% principals stated that resources should be prepared with the concern of teachers.15 % principals stated that as Government should encourage such activities and implement in all schools because they found BaLA activity very useful.

In response to question 6 i.e. *Which practices did not work while implementing the BaLA in your school?*

70% principals stated all practices worked. 30% principals stated that due to lack of manpower they faced some difficulties for implementing BaLA in school.

In response to question 7 i.e. *Which good practices you have observed in students after implementation BaLA in your school?*

40% principals stated that practical knowledge of students' is increased due to self and group engaged learning. 25% principals stated that regularity in attendance is observed. 20% principals stated that cleanliness in school is observed.15% principals stated that they found students can learn easily through BaLA activity then books.

In response to question 8 i.e. *What initiatives and inputs given by you for BaLA activity in your school?*

40% principals stated that they have not given any initiative and 40% stated that they have provided various ideas to create BaLA resources in school like Herb Garden, Best from the waste, Giant wheel etc.

In response to question 9 i.e. *Have you given any new ideas for implementing BaLA in your school?*

85% principals sated that they have given new ideas for implementation of various BaLA resources like Drawing board, Black board, Eco-garden, Activities of learning with fun etc. 15 % principals stated that they encouraged teachers to provide new ideas.

In response to question 10 i.e. *Have you received any type of donation for BaLA activity? If yes, then what is the difference between before and after implementation of BaLA?*

88% principals stated they have not received any donation for BaLA activity. 12% principals stated that they have received donation for BaLA activity in their school. They received land in donation and donation for painting in school.

In response to question 11 i.e. *What you are doing to maintain the resources?*

In 50% schools BaLA resources are maintained by students by regular cleaning of the school premises. 25% said that they regularly paint various BaLA resources. 25% stated that by student management committee.

In response to question 12 i.e. *If, resources are not maintained then what are the reasons?*

50% principals stated that they maintain BaLA resources. 25% stated that due to excessive use, the condition of resources deteriorated. 25% each principal stated that due to fading of colors and lack of grants resources are not maintained.

In response to question 13 i.e. *What should be done to make BaLA school more effective in learning, suggest any three?*

The three main suggestions provided by principals to make BaLA school more effective in learning are as follows.

      (i)   Specific grant for maintenance of BaLA resources should be given.

      (ii)   More concepts should be introduced in BaLA activity with element of learning with fun.

    (iii)   Training should be imparted.

In response to question 14 i.e. *How many marks out of 10 would you allot to running of BaLA activity in your School?*

31.25% principals allotted seven marks out of ten to the running of BaLA activity in their School.25% principals allotted nine marks out of ten. 25% principals allotted eight marks out of ten. 18.75% principals allotted full marks i.e. ten out of ten.

In response to question 15 i.e. *What are the reasons for not giving full marks?*

In response to this question 56% principals stated that due to lack of proper resources they are not allotting full marks, 19% stated that due to lack of proper information. 12.5% principals not responded to the question and 12.5% principals provided the information which was not relevant to the respective question.

In response to question 16 i.e. *Have faced any difficult /problem to implement the BaLA?*

75% principals stated that they have not faced any difficulty while implementing BaLA in their school. While 25% principals stated that due to lack of guidance they have faced some problem.

5. 10 Analysis of the Responses of 80 Teachers, who Participated in Focus Group Discussion (FGD)

Total 16 Focus Group Discussion (FGD) were organized i.e. 2 from each district to get an insight on teachers' perceptions regarding usefulness of BaLA. Thus total 80 teachers participated i.e. 5 from each selected schools in FGD.

In response to question 1 i.e. *What is BaLA?*

70% of the teachers understand BaLA as very useful activity for education, which emphasis on learning with fun. School space is being used in an effective way to implement the ideas of BaLA. 30% teachers opined that BaLA reflects drawings on walls of the school building and in this way is used as a learning aid. Further stated that, through BaLA students can learn easily in and outside the class room.

In response to question 2 i.e. *What are advantages of BaLA?*

80% of the teachers opined that the major advantage of BaLA is to the students. With BaLA activities, they can remember various concepts very easily.10% of the teachers believe that students can learn various concepts while playing. 10% teachers believe that there is an increase in attendance in class because of BaLA.

In response to question 3 i.e. *What are the initiative taken by you for encouraging BaLA in your school?*

60% of the teachers stated that they are contributing in maintenance of BaLA resources in school. 25% teachers stated that they have contributed in the development of various BaLA activities in their school by providing ideas. 15% teachers stated that they motivated the students to learn more with BaLA activities.

In response to question 4 i.e. *Is BaLA useful for Teachers?*

All teachers during the discussion unanimously accepted that with the use of BaLA resources they can easily teach students. Further informed that, BaLA is extremely useful for teaching and describing Maps, Geometrical shapes and the concepts of Universe.

In response to question 5 i.e. H*ave you received any training on BaLA activity?*

It is found no one have received training. However during discussion; they expressed their interest to receive training for the same.

In response to question 6 i.e. *What is the response of Students on BaLA Activity?*

While inquiring about the response of students on BaLA activity in their school, teachers responded and discussed more about the importance of BaLA for students rather providing the exact answer for the asked question. Therefore it is difficult to ascertain the response of students.

In response to question 7 i.e. *What are the impact of BaLA on basic learning standard in school?*

During discussion teachers expressed that there is very positive impact of BaLA on Basic learning standards in school. Majority of them i.e. 70% teachers informed that with the help of colorful pictures and visual descriptions, student can learn easily. 30% teachers informed that due to BaLA grasping power of the students' has improved.

In response to question 8 i.e. *What are your suggestions to make BaLA school more effective in learning?*

Duringdiscussion it has come out that 69% of teachers believe that training programme for teachers should be conducted. 25% teachers said that separate maintenance grants should be allotted and 6% teachers stated that Computers with projector should be provided.

In response to question 9 i.e. *Suggestions for making it more effective in future.*

40% teachers opined that more grant should be allotted and teachers should be trained to use BaLA resources in school 60% not responded to this question.

In response to question 10 i.e. *What is the impact of BaLA in your village/ area?*

25% teachers said that due to BaLA activity enrolment has increased in their school.50% teachers said that they received positive response from parents, as they encourage their children to go to school. 25% teachers said that children from outside come to play in the school. Parents of students often brings guest to show school.

Chapter 6

Impact of BaLA on Overall Development of School

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6.1 Information provided by Principal and Observer (All 8 Districts)

6.2 Information provided by Observer (All 8 Districts)

6.3 Information Provided by Principal and Observer (Tribal Districts)

6.4 Information Provided by Observer (Tribal Districts)

6.5 Students Found Before and After School Hours in BaLA School (All 8 Districts)

    6.5.1 Students before School Time

    6.5.2 Students after school Time

6.6 Students Found Before and After School Hours in BaLA School (Tribal Districts)

    6.6.1 Students before School Time

    6.6.2 Students after school Time

6.7. Comparison between BaLA Schools of All BaLA schools and Tribal Districts of Gujarat

6.1 Information Provided by Principal and Observer (All 8 Districts)

Table 58: Information Provided by Principal and Observer (A)

Perception	Use of Misused Space							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	49 (81.67%)	11 (18.33%)	7 (14.29%)	**34 (69.39%)**	8 (16.32%)	0 (0%)	0 (0%)	60
Observer	47 (78.33%)	13 (21.67%)	2 (4.25%)	**15 (31.91%)**	29 (61.7%)	0 (0%)	1 (2.14%)	60

- Out of total 60 schools principals of 69.39% stated that they have used misused space in good way. However as per observation it is only 39.91%.

- It is found that in majority of schools the misused spaces were utilized for developing garden, herb garden *(aushadibagh)*, kitchen garden, low height sitting arrangements and misty wall, maps, quote of the day.

Table 59: Information provided by principal and observer (B)

Perception	Use of Unused Space							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	57 (95%)	3 (5%)	6 (10.52%)	**35 (61.4%)**	16 (28.08%)	0 (0%)	0 (0%)	60
Observer	56 (93.33%)	4 (6.67%)	25 (44.65%)	**27 (48.21%)**	4 (7.14%)	0 (0%)	0 (0%)	60

- Out of total 60 schools principals of 61.4% stated that they have used unused space in good way. However as per observation it is only 48.21%. Unused spaces were was generally used for playing games, herb garden, developing alphabets and numerical numbers on steps, milestones and building toilets for students.

Table 60: Information Provided by Principal and Observer (C)

Perception	Effective use of under used space							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	60 (100%)	0 (0%)	6 (10%)	**41 (68.33%)**	13 (21.67%)	0 (0%)	0 (0%)	60
Observer	54 (90%)	6 (10%)	6 (11.11%)	**26 (48.17%)**	21 (38.87%)	0 (0%)	1 (1.85%)	60

- Out of total 60 schools principals of 68.33% stated that they have used under used space in good. However as per observation it is only 48.17%.
- They have used under used place for developing a Maps, Herb Garden, Word Wall in the Lobby, Universe and Mathematic Puzzles.

Table 61: Information Provided by Principal and Observer (D)

Perception	Utilization of BaLA resources in school							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	60 (100%)	0 (0%)	12 (20%)	**38 (63.33%)**	8 (13.33%)	0 (0%)	2 (3.33%)	60
Observer	60 (100%)	0 (0%)	3 (5%)	**28 (46.67%)**	27 (45%)	0 (0%)	2 (3.3%)	60

- Out of total 60 schools principals of 63.33% stated that utilization of BaLA resources in school is good. However as per observation it is only 46.67%.

6.2 Information provided by Observer (All 8 Districts)

Table 62: Information Provided by Observer

Observation	Y		N		V.G.		Good		AVG		Poor		V.P.	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Utilization of BaLA resources in Class room	59	98.33	1	1.66	4	6.77	**27**	**45.76**	25	42.37	3	5.08	1	1.69
Utilization of class room for implementing ideas of BaLA.	59	98.33	1	1.66	3	5.08	21	35.59	**28**	**47.45**	7	11.86	0	0
Use of resources by teacher	58	96.66	2	3.33	25	43.10	**30**	**51.72**	3	5.17	0	0	0	0
BaLA accessible to differently able Children	36	60	24	40	1	2.77	**15**	**41.66**	18	50	2	5.55	0	0
Principal's contribution to learning through BaLA	58	96.66	2	3.33	9	15.51	**31**	**53.44**	14	24.13	4	6.89	0	0
Teachers' contribution to learning through BaLA	58	96.66	2	3.33	2	3.44	**33**	**56.89**	20	34.48	3	5.17	0	0

- It was observed that Utilization of BaLA resources in classrooms was good in 27 (45.76%) schools.
- It was observed that Utilization of class room for implementing ideas of BaLA was average in 28 (47.45%) schools.
- It was observed that Use of resources by teacher was good in 30 (51.72%) schools.
- It was observed that BaLA was accessible to differently able Children was good in 15 (41.64%) schools.
- Principal's contribution to learning through BaLA was observed good in 31 (53.44%) schools.
- Teacher's contribution to learning through BaLA was observed good in 33 (56.89%) schools.

6.3 Information Provided by Principal and Observer (Tribal Districts)

Table 63: Information Provided by Principal and Observer (A)

Perception	Use of Misused Space							
	Yes	No	V.G.	Good	AVG	Poor	V.P.	Total
Principal	8 (72.27%)	3 (27.27%)	1 (12.5%)	**6 (75%)**	1 (1.25%)	0 (0%)	0 (0%)	11
Observer	8 (72.27%)	3 (27.27%)	1 (12.5%)	**3 (37.5%)**	4 (50%)	1 (12.5%)	0 (0%)	11

- Out of total 11 schools principals of 6 (75%) stated that they have used misused space in good way. However as per observation it is only 3 (37.5%).
- It is found that in majority of schools the misused spaces were utilized for developing garden, herb garden *(Aushadibagh)*, kitchen garden, low height sitting arrangements and misty wall, maps, quote of the day.

Table 64: Information Provided by Principal and Observer (B)

Perception	Use of Unused Space							
	Yes	No	V.G.	Good	AVG	Poor	V.P.	Total
Principal	11 (100%)	0 (0%)	0 (0%)	**8 (72.72%)**	3 (27.27%)	0 (0%)	0 (0%)	11
Observer	11 (100%)	0 (0%)	0 (0%)	3 (27.27%)	**8 (72.72%)**	0 (0%)	0 (0%)	11

- Out of total 11 schools principals of 8 (72.72%) stated that they have used unused pace in good way. However as per observation it is 8 (72.72%) in average way. Unused spaces were was generally used for playing games, herb garden, developing alphabets and numerical numbers on steps, milestones and building   toilets for students.

Table 65: Information Provided by Principal and Observer (B)

Perception	Effective use of under used space							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	11 (100%)	0 (0%)	0 (0%)	**7 (63.63%)**	4 (36.36%)	0 (0%)	0 (0%)	11
Observer	11 (100%)	0 (0%)	0 (0%)	**5 (45.45%)**	**5 (45.45%)**	0 (0%)	0 (0%)	11

- Out of total 11 schools principals of 7 (63.63%) stated that they have used under used space in good way. However as per observation it is only 5 (45.45%) .
- They have used under used place for developing a Maps, Herb Garden, Word Wall in the Lobby, Universe and Mathematic Puzzles.

Table 66: Information provided by Principal and Observer (C)

Perception	Utilization of BaLA resources in school							
	Yes	**No**	**V.G.**	**Good**	**AVG**	**Poor**	**V.P.**	**Total**
Principal	11 (100%)	0 (0%)	2 (18.18%)	**6 (54.54%)**	3 (27.27%)	0 (0%)	0 (0%)	11
Observer	11 (100%)	0 (0%)	2 (18.18%)	**2 (18.18%)**	7 (63.63%)	0 (0%)	0 (0%)	11

- Out of total 11 schools principals of 6 (54.54%) stated that utilization of BaLA resources in school is good. However as per observation it is only 2 (18.18%).

6.4 Information Provided by Observer (Tribal Districts)

Table 67: Information Provided by Observer

Observation	Y		N		V.G.		Good		AVG		Poor		V.P.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Utilization of BaLA resources in Class room	11	100	0	0	0	0	**5**	**45.45**	6	54.54	0	0	0	0
Utilization of class room for implementing ideas of BaLA.	11	100	0	0	0	0	5	45.45	**5**	**45.45**	1	9.09	0	0
Use of resources by teacher	11	100	0	0	0	0	2	18.18	**9**	**81.81**	0	0	0	0
BaLA accessible to differently able Children	9	81.81	2	18.18	0	0	3	33.33	**5**	**55.55**	1	11.11	0	0
Principal's contribution to learning through BaLA	11	0	0	0	2	18.18	**5**	**45.45**	4	36.36	0	0	0	0
Teachers' contribution to learning through BaLA	11	0	0	0	0	0	**9**	**81.81**	2	18.18	0	0	0	0

- It was observed that Utilization of BaLA resources in classrooms was good in 5 (45.45%) schools.
- It was observed that Utilization of class room for implementing ideas of BaLA was average in 5 (45.45%) schools.
- It was observed that Use of resources by teacher was average in 9 (81.81%) schools
- It was observed that BaLA was accessible to differently able Children was average in 5 (55.55%) schools.
- Principal's contribution to learning through BaLA was observed good in 5 (45.45%) schools.
- Teacher's contribution to learning through BaLA was observed good in 9 (81.81%) schools.

6.5 Students found Before and After School Hours in BaLA School of All 8 Districts

Table 68: Students found Before and After School hours in BaLA Schools

Number of Students in School	1-20	21-40	41-60	61-80	More than 80	Not found
Before school time	2	10	9	7	16	16
After school time	17	6	1	2	1	33

6.5.1 Students before School Time

- Out of total 60 schools in 44 (73.34%) schools students were found before school hours and playing and learning with BaLA resources. In 16 (26.66%) Schools students were found coming at the time of commencement of school therefore not found playing and learning with BaLA resources.

- Out of those 44 schools where students were found before school hours in 16 (26.66% of 60 and 36.36% of 44) such schools more than 80 students were found playing and learning with BaLA resources. In 10 such schools (16.67 % of 60 22.72% of 44) 21 - 40 students and in 9 such schools (15% of 60 and 20.45% of 44) 41- 60 students and in 7 such schools (11.66% of 60 and 15.90% of 44) 61 - 80 students were found playing and learning with BaLA resources. In 2 such schools (3.33% of 60 and 4.54 of 44) 1-20 students were found.

6.5.2 Students after school Time

- Out of total 60 schools in 27 (45%) schools students were found after school hours, in 33 (55%) schools no student was found after school hours. While inquiring about the status it was found that in 27 schools, school management closes the door soon after completion of the school. Out of these 33 in 6 schools (10% of 60 and 18. 18% of 33) students were not found after school hours to play and learn with BaLA resources.

- Out of those 27 schools where students were found after school hour, in 17 such schools (28.33 % of 60 and 62.96% of 27) 1- 20 students were found. In 6 such schools (10 % of 60 and 22.22% of 27) 21-40 students were found. In 2 such schools (3.33% of 60 and 7.40% of 27), 61 -80 students were found and in 1 school each

(1.66% of 60 and 3.70% of 27) 41-60 and more than 80 students were found after school hours.

6.6 Students found Before and After School Hours in BaLA School of Tribal Districts

Table 69: Students found Before and After School hours in BaLA Schools

Number of Students in School	1-20	21-40	41-60	61-80	More than 80	Not found
Before school time	1	1	4	5	1	1
After school time	5	2	1	1	1	1

6.6.1 Students before School Time

- Out of total 11 tribal schools in 10 (90.90%) schools students were found before school hours and playing and learning with BaLA resources. In 1 (9.09%) schools students were found coming at the time of commencement of school therefore not found playing and learning with BaLA resources.

- Out of those 10 schools where students were found before school hours in 5 (45.45% of 11 and 50% of 10) such schools 61-80 students were found playing and learning with BaLA resources. In 4 such schools (36.36 % of 11 and 40 % of 10) 41 - 60 students.

6.6.2 Students after school Time

- Out of total 11 schools in 10 (90.90%) school students were found after school hours, in 1 (9.09%) schools no student was found after school hours. While inquiring about this status it was found that school management closed the door soon after completion of the school.

- Out of those 10 schools in 5 schools (45.45% of 11 and 10% of 10)1020 students were found after school hours and in 2 schools (18.18% of 11 and 20% of 10) 21-40 students were found after school hours to play and learn with BaLA resources.

6.7 Comparison between BaLA Schools of All BaLA schools and Tribal Districts of Gujarat

- While comparing between tribal region BaLA schools with All BaLA schools of Gujarat, it is found that 73.34% BaLA schools of Gujarat, students found before school hours and playing and learning with BaLA resources while in tribal region 90.90% schools' students were found.

- In 45% BaLA schools of Gujarat, students were found after school hours while in tribal region 90.90% schools students were found after school hours and playing and learning with BaLA resources.

Chapter 7

Findings, Conclusion and Suggestions

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7.0 Introduction

The research conducted by the Gujarat National Law University reflects successful completion of project and brings many findings of vital significance which have established on the basis of the data obtained, analyzed and interpreted. The interpretation and analysis of the data collected for the 60 schools of Gujarat state from the eight districts namely; Mehsana, Jamnagar, Vadodara Dahod, Bharuch, Junagadh Dang and Banaskantha reveals the grass root reality about the availability of BaLA resources, their condition and its overall impact on development of schools learning environment and infrastructure. The extensive series of CMT reflects an important role in understanding the practical use of BaLA resources by students. It gives idea that how far BaLA is successful in clearing the basic concept by students. Inter alia gives the intimations to understand the needs to be address while implementing BaLA activity in school. The exclusive part on tribal region's BaLA schools gives an insight to the status of tribal education and developed infrastructure.

7.1 Major Findings

The major findings of the study reflects availability and condition of BaLA resources, various basic concepts learnt by students (class I-VII) impact on enrolment and retention in school, perception of teachers regarding usefulness of BALA and overall impact of BALA on schools physical environment and education.

7.2 Findings of All 8 Districts

7.2.1 Availability and Condition of BaLA Resources

1. In all schools BaLA resources are found and their condition is good to average.
2. In 45% schools condition of BaLA resources in classroom was found good.
3. In 42% schools utilization of BaLA resources in school was found good.
4. However BALA introduce in these schools 4 to 5 year before they need maintenance.
5. Dot Board, Word Wall, Picture with Fun, Calendar, Map, Geometrical Board, Shape Chart, Mathematical Puzzle, Ruled writable Surface, Green Board, Solar System, Practice Word, Numerical Tables, Height Measurement, Mystery Wall, Run Way/ Path Way, Herb Garden, Green writing Board for Self-Learning Long Jump, Angles,

Me and My World, Low Height seating are total 21 items found in more than 70% schools.

6. 90% i.e. majority of the principals stated that there is impact of BaLA on enrolment and retention in the school.

7.2.2 Impact on Enrolment and Retention

7. After implementation of BaLA in 2007-08, consistency in total enrolment with average of 74 to 76 has been observed. However there has not been much effect of BaLA on total enrolment in the schools.

8. In those schools where BaLA was implemented in 2007-2008, consistency in total retention has been observed from 2006-07 to 2010-11 with an average of 302 to 306.

9. In those schools where BaLA was implemented in 2006-2007, total enrolment was low but after implementation of BaLA in three years i.e. from 2007-2008 significant increase in total enrolment was observed followed by gradual decrease in successive years.

10. There was remarkable impact of BaLA on total retention in those schools where BaLA was implemented in 2006-2007. The total retention increased after implementation of BaLA. However gradual decrease in total retention in last three years was also observed.

7.2.3 Result of CMT (Subject wise)

11. In 32.95% schools, students' knowledge of Numerical concept was found good and in 36.08% schools, it was found average.

12. In 33.55% schools, students' knowledge of Alphabet concept was found good and in 35.98% schools, it was found average.

13. In 27.37% schools, students' knowledge of Story Based Learning concept was found good and in 40.40% schools, it was found average.

14. In 30.07% schools, students' knowledge of Guajarati concept was found good and in 44.47% schools, it was found average.

15. In 31.67% schools, students' knowledge of Environmental Science concept was found good and in 42.38% schools, it was found average.

16. In 31.88% schools, students' knowledge of Science concept was found good and in 43.66% schools, it was found average.

17. In 57.01% schools, students' knowledge of Social Science concept was found average and in 42.13% schools, it was found good.

18. In 31.88% schools, students' knowledge of Science concept was found good and in 43.66% schools, it was found average.

19. In 32.70% schools, students' knowledge of Mathematics concept it was found good and in 40% schools, students it was found average.

7.2.4 Result of CMT (Class wise)

20. In 31.27% schools the knowledge of Class 1 students was found good and in 42.55% schools it was found average.

21. In 31.87% schools the knowledge of Class 2 students was found good and in 44.67% it was found average.

22. In 30.85% schools the knowledge of Class 3 students was found good and in 36.13% it was found average.

23. In 32.08% schools the knowledge of Class 4 students was found good and in 36.30% it was found average.

24. In 27.18% schools the knowledge of Class 5 students was found good and in 45.45% it was found average.

25. In 29.23% schools the knowledge of Class 6 students was found good and in 45.36% it was found average.

26. In 28.50% schools the knowledge of Class 7 students was found good and in 43.95% it was found average.

7.2.5 Perceptions of Teachers Regarding Usefulness of BaLA

27. 96.66% i.e. majority of the principals stated that school has become more happy and joyful place for students.

28. 95% principal stated that BaLA gives holistic space to students for development.

29. 60% principals informed that BaLA is not crowding existing space of their school.

30. 78.33% principals stated BaLA schools are sensitive to accomplish needs of all children from I to VII standard.

31. 78.33% principals informed that they are not getting any donation for maintenance of BaLA activity.

32. 85% teachers replied affirmatively when asked for use of BaLA resources in teaching.

33. 34% teachers said they didn't receive any training to utilize BaLA resources.

34. 63.34% teachers said that BaLA is not crowding existing space of their school.

35. 85% i.e. majority of the principals stated that through BaLA various concepts are learnt by students in class-room.

36. 85% of teachers replied affirmatively when asked for concepts learnt through BaLA by student in Class room easily.

37. 70% teachers replied affirmatively when asked for their contribution to learning through BaLA.

38. 80% teachers accepted that there is an impact of BaLA in school.

39. 70% i.e. majority of the teachers stated that they contributed to the learning through BaLA. It was found majority of the times they were confusing their preparation of TLM (Teaching Learning Material) with contribution to BaLA.

40. 66.67% principals stated affirmatively that BaLA is helpful in encouraging slow learners.

41. 86.66% principals stated that BaLA is efficiently planned in the school.

42. 85% principals stated that BaLA is efficiently executed in the school.

43. 80% principals stated that school maintains the BaLA resources and 85% teachers opined the same.

44. 60% principals replied that BaLA is not crowding existing space of the school whereas 63.34% teachers opined the same.

45. 81.66% principals stated that Impact of BaLA in Classroom Participation of Students is very good. However 61.67% teachers stated that Impact of BaLA in Classroom participation of students is good.

46. 61.02% principals stated that students' participation itself-engaged learning is good and 65% teachers opined the same. However as per observation it is only 44.06%.

47. 68.33% principal stated that students' participation in group-learning is good and 71.67% teachers opined the same. However as per observation it is only 47.46%.

7.2.6 Impact of BaLA on overall Development of School

48. 69.39% principals stated that they have used misused space in good way. As per observation it is only 39.91%.

49. 61.4% principals stated that they have used unused space in good way. As per observation it is only 48.21%.

50. 68.33% principals stated that they have used under used space in good way. As per observation it is only 48.17%.

51. 63.33% principals stated that utilization of BaLA resources in school is good. However as per observation it is good in 46.67% schools.

52. Utilization of BaLA resources in classrooms was found good in 45.76% schools.

53. Utilization of classroom for implementing ideas of BaLA was found average in 47.45% schools.

54. In 41.64% schools BaLA was accessible to differently able Children.

55. Principal's contribution to learning through BaLA was found good in 53.44% schools.

7.3 Findings of Tribal Districts

7.3.1 Availability and Condition of BaLA Resources

1. In all schools BaLA resources are found and in 45.45% schools condition of BaLA resources were found average in school.

2. In 63.63% schools condition of BaLA resources in class room was found average. However BaLA was introduced in these schools 4 to 5 year before so they need maintenance.

4. Dot Board, Word Wall, Picture with Fun, Calendar, Map, Geometrical Board, Shape Chart, Mathematical Puzzle, Ruled writable Surface, Green Board, Solar System, Practice Word, Numerical Tables, Height Measurement, Mystery Wall, Run Way/ Path Way, Herb Garden, Green writing Board for Self-Learning Long Jump, Angles, Me and My World, Low Height seating are total 21 items found in more than 75% of schools. In no school amphitheater was found.

5. All principals unanimously stated that there is an Impact of BaLA on enrolment and retention in the school.

6. In those schools where BaLA was implemented in 2007-2008, variance in total enrolment with average of 98 to 106 from 2007-08 to 2009-10 is observed. In 2010-11 lowest total enrolment with average of 87 was observed.

7. It was found that after implementation of BaLA in 2007-08, there was a gradual increase in total retention. However notable decrease is seen in 2010-11 with average of 392.

8. In those schools where BaLA was implemented in 2006-2007 no significant impact of BaLA was observed on total enrolment. It was found that there was a gradual decrease in total enrolment in schools from 2005-06 to 2008-09.

9. It was found that after implementation of BaLA in 2006-07 major increase in total retention was observed. This trend continued for next year. Further it seems that there was consistency with minor decrease in retention with the average 404 to 368 in last three years.

7.3.2 Result of CMT (Subject Wise)

14. In 34% schools, students' knowledge of Numerical concept was found good and in 43.6% schools it was found average.

15. In 31.51% schools, students' the knowledge of Alphabetical concept was found good and in 47.87% schools it was found average.

16. In 22.22% schools, students' knowledge of Story based learning concept was found good and in 58.38% schools it was found average and in 18.38 % it was found very poor.

17. In 43.79% schools, students' knowledge of Gujarati concept was found average and in 26.97% schools it was found poor.

18. In 26.66% schools, students' knowledge of Environmental Science concept was found good and in 44.57% schools it was found average.

19. In 30.89% schools, students' knowledge of Social Science concept was found good and in 52.93% schools it was found average.

20. In 28.01% schools, students' knowledge of Science concept was found good, in 30.08% schools it was found poor and in 42.35% schools it was found average.

21. In 27.52% schools, students' knowledge of Mathematics concept was found good, in 29.09% schools it was found poor and in 40.01% schools it was found average.

7.3.3 Result of CMT (Class wise)

22. In 28.33% schools knowledge of Class 1 students was found good and in 44.84% it was found average.

23. In 32.83% schools knowledge of Class 2 students was found poor and in 33.82% it was found average.

24. In 29.88% schools knowledge of Class 3 students was found good and in 44.0% it was found average.

25. In 31.64% schools knowledge of Class 4 students was found good and in 40.69% it was found average.

26. In 26.3% schools knowledge of Class 5 students was found good and in 47.56% it was found average.

27. In 31.78% schools knowledge of Class 6 students was found good and in 46.36% it was found average.

28. In 49.07% schools knowledge of Class 7 students was found average and in 25.09% it was found poor.

7.3.4 Perceptions of Teachers Regarding Usefulness of BaLA

29. 90.90% i.e. majority of the principals stated that school has become more happy and joyful place for students and believed that BaLA gives holistic space to students for development.

30. 72.72% i.e. majority of the principals said that BaLA is not crowding existing space of their school

31. 90.90% i.e. majority of the principals stated that BaLA schools are sensitive to accomplish needs of all children from I to VII standard.

32. 90.90% majority of the principals said that they are not getting any donation for maintenance.

33. 90.90% i.e. majority of the teachers stated that they are using BaLA resources in teaching however 81.81% of such teachers have not received any training for that.

34. 72.72% i.e. majority of the teachers stated that through BaLA various concepts are learnt by students in class-room.

35. 72.72% i.e. majority of the teachers stated that they contributed to the learning through BaLA. It was found majority of the times they were confusing their preparation of TLM (Teaching Learning Material) with contribution to BaLA.

36. All teachers unanimously accepted that there is a positive impact of BaLA on attendance.

37. 81.81% principals stated affirmatively that BaLA is helpful in encouraging Slow Learners and 72.72% teachers also opined the same.

38. 63.63% principals stated that BaLA is efficiently planned and executed in the school and 54.54% more than half of the total teachers opined the same.

39. 63.63% principals stated that school maintains the BaLA resources and 72.72% i .e. majority of the teachers opined the same.

40. 72.72% i.e. majority of the principals and teachers each replied that BaLA is not crowding existing space of the school.

7.3.5 Information Provided by Principal, Teacher and Observer

41. 45.45% principals stated that students' participation in self- engaged learning is good. However 45.45% teachers opined it is average and as per observation 54.54% it was found average.

42. 75% i.e. majority of the principals stated that they have used misused space in good way. However as per observation it is only true in 37.5% schools.

43. As per observation Utilization of BaLA resources in classrooms was good in 45.45% schools.

44. As per observation Utilization of class room for implementing ideas of BaLA was average in 45.45% schools.

45. As per observation Use of resources by teacher was average in 81.81% schools.

46. As per observation BaLA was accessible to differently able Children was average in 55.55% schools.

47. Principal's contribution to learning through BaLA was observed good in 45.45% schools.

48. It is found that 90.90 % BaLA schools, students found before and after school hours in school and playing and learning with BaLA resources.

7.4 Discussion

During the data collection various facts have emerged which are in addition to information analysed and interpreted in chapters. To conduct the CMT, various difficulties were faced by FI and Research team. In majority of schools BaLA resources pertaining to I- IV were available but in some classes i.e. V-VII BaLA were limited. The condition of BaLA resources in some of the schools was so bad that they were of no use. Repetition of same BaLA objects (eg. Me and My World for instance in Thasra school of Dahod, Mystery wall and Fun picture) was also one of the problems faced during Data Collection. In Mehsana Prathmik Shala-7 BaLA objects like Height measurement and maps were placed in a corner that no student could utilize the same. Rupenbandar school of Jamnagar BaLA, Adarsh Buniuyadi Prathmik Shala of Valia (Bharuch) and Chandigadh Prathmik Shala of Junagadh were found the outstanding BaLA schools. In these schools BaLA objects were maintained by the school management itself. In some schools due to enthusiasm shown by Teachers and Principal BaLA was utilized by students but in some schools lack of enthusiasm towards the failure of the scheme. Teachers and principals were found having very limited knowledge of BaLA as majority of them considered BaLA as painting on wall or an activity which should be performed by students in recess. On the other hand there were Principals who described BaLA as learning with fun. It was also found that BaLA was quite popular in the rural areas. In the urban districts BaLA was not very successful due to availability of private schools. Introduction of Pragna Project had adverse impact on BaLA activity. It was found that in various schools BaLA resources from the class I and II were totally wiped and out. In most of the schools lack of awareness of BaLA activity among students, teachers and Principals was found. Apart from these discrepancies majority of BaLA schools had a very soothing environment. Seeing students playing and enjoying with BaLA resources was one of the pleasant moments of the memories of this project.

7.5 Conclusion

BaLA is successful in making its remarkable beginning in the state of Gujarat. Nearly 70% identified resources were available in BaLA School. Their condition was found either good or average. Students' knowledge of various concepts learnt through BaLA was found average and good. However no significant impact of BaLA is found on

enrolment in the schools. However a minor impact of BaLA on retention is observed. Teacher knows about BaLA but there knowledge is very limited. 88% teachers didn't receive any training to utilize BaLA resources. Hence it is a serious matter which needs to be addressed.

7.6 Suggestions and Plan of Action

The Research Team humbly suggests the following plan of Action

Implementation of BaLA in school should not be a one-time event. After implementation of BALA in the school, provision of its maintenance has to be made and monitored.

- Provision to Maintain BaLA Resources by Government and
- Provision to Maintain BaLA resources by School Management.

Additional grant for maintenance and development of new BaLA resources should be provided annually.

BaLA should be designed in a way that it can cater to the needs of each class and each subject. Therefore along with Delightful and amusing elements of BaLA, it should be designed and implemented keeping in mind the class specific and subject specific requirements.

The placement of BaLA objects should be proportionately distributed between school premises and classrooms.

At the time of selection of school for implementing BaLA, caution should be taken that it should not overlap with other government programmes or projects. Vis- a-vis the school where BaLA is already implemented other projects like Pragna should not be introduced which has altogether different pedagogical method.

The two important stakeholders of BaLA are teachers and the students. Hence there has to be some provision to create awareness among them. Now BaLA has reached to its next level by introduction of i-BaLA but teachers at school level are not even trained to utilize the BaLA resources. Therefore there is an urgent need to start a training programme for Teachers of BaLA schools.

BaLA resources should be more attractive, colorful and the element of learning with fun should be equally emphasized.

To make BaLA schools more attractive and popular among students, parents and the surrounding population, the school building should be colored with bright and vibrant colors in order to catch attention.

Finally and most important, to create awareness among the students about the BaLA and its usefulness 'BaLA Day' should be celebrated in the school.

This "BaLA Day" can be celebrated in first week of academic year. Day programme can be divided in two sessions:

- In first part, pedagogy session of teacher with students should be conducted.
- In second session out siders, parents, guest etc. should be called and informed about the outstanding feature of their school.

Due to this day Programme, students at the beginning of the year will be informed about the BaLA resources available in their school so that they can utilize and play with these resources on their own during the academic year.

Due to the involvement of parents, guests and others BaLA will get promoted and new ideas will be generated. If 'BaLA Day' will be planned and executed properly, it will definitely generate impact on enrolment, retention, teaching and learning environment in the school.

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Appendix A: List of Schools

Name of Block	Name of School	Date of Data Collection	Name of Field Investigator
District: Mahesana			
Maheshana	1. Arbudanagar Prathmik Shala (Meu)	13/12/2011	Rabari Vipul G., Adsure Rashmi V.
Maheshana	2. Maheshana Prathmik Shala No-7	13/12/2011	Rathod Bhavesh B., Sharma Richa
Vadnagar(Sultanpura)	3. Sultanpura Prathmik Shala	13/12/2011	Vaghela Maulik G.
Becharaji	4. Aadivada Prathmik Shala	13/12/2011	Makwana Sunita I.
Becharaji	5. Fichdi Prathmik Shala	13/12/2011	Mulani Dipak L.
Unja	6. Dabhi Prathmik Shala	13/12/2011	Varjani Sunita J., Modi Megha K.
Vadnagar(Vadbar)	7. Vadbar Prathmik Shala	13/12/2011	Bhavsar Vaishali H.
Distict: Jamnagar			
Dhrol	8. Latipar Taluka Shala(Kumar Shala)	16/12/2011	VaghelaMaulik G.
Jam Khambaliya	9. Shree Vadaliyashinhan Prathmik Shala	16/12/2011	RathodBhavesh B., MakwanaSunita I.
Jodiya	10. Vavdi Prathmik Shala	16/12/2011	Modi Megha K., Rabari Vipul G.
Jamnagar	11. Rampar Prathmik Shala	16/12/2011	Bhavsar Vaishali H.
Dwarka	12. VarvalaPrathmikShala	16/12/2011	Adsure Rashmi V., Sharma Richa
Dwarka	13. Rupenbandar Prathmik Shala	16/12/2011	Varjani Sunita J., Sharma Richa
Kalyanpur	14. Meghpur Titodi Prathmik Shala	16/12/2011	Mulani Dipak L.
District: Vadodara			
Nasvadiya	15. Kothiya Prathmik Shala	21/12/2011	Rathod Bhavesh B.
Vadodara	16. Ravpura Prathmik Shala	21/12/2011	Sharma Richa
Whagodia	17. Vejalpu rPrathmik Shala	21/12/2011	Makwana Sunita I.
Chhotaudepur	18. Aanand Faliya Prathmik Shala	21/12/2011	Vaghela Maulik G.
JetpurPavi	19. Barawad Prathmik Shala	21/12/2011	Rabari Vipul G.
Savali	20. Lamdapura Prathmik Shala	21/12/2011	Modi Megha K.
Vadodara	21. Karoliya Prathmik Shala No.2	21/12/2011	Bhavsar Vaishali H.
Shinor	22. Puniyad Prathmik Shala	21/12/2011	Mulani Dipak L.
District: Dahod			
Dahod	23. Dhamrada Prathmik Shala	22/12/2011	Bhavsar Vaishali H., Sharma Richa
Dahod	24. Limbdabara Prathmik Shala	22/12/2011	Modi Megha K., Sharma Richa
Limkheda	25. Agara Prathmik Shala	22/12/2011	Makwana Sunita I.
Limkheda	26. Zarola Prathmik Shala	22/12/2011	Mulani Dipak L., Sharma Richa
Devgadhbariya	27. Kalidungari Prathmik Shala	22/12/2011	Vaghela Maulik G.
Devgadhbariya	28. Nayakfaliyabhathvala Prathmik Shala	22/12/2011	Rathod Bhavesh B.
Devgadhbariya	29. Timbharava Prathmik Shala	22/12/2011	Rabari Vipul G.

Disrtict: Bharuch			
Jambusar	30. Kavli Prathmik Shala	23/12/2011	Makwana Sunita I.
Jambusar	31. Samoj Prathmik Shala	23/12/2011	Mod iMegha K.
Amod	32. Samni Prathmik Shala	23/12/2011	Bhavsar Vaishali H.
Zagadia	33. Nava tothidara Prathmik Shala	23/12/2011	Vaghela Maulik G.
Zagadia	34. Jarsad Prathmik Shala	23/12/2011	Rabari Vipul G.
Hansot	35. Amod Prathmik Shala	23/12/2011	Rathod Bhavesh B.
Hansot	36. Ambheta Prathmik Shala	23/12/2011	Mulani Dipak L.
Valia	37. Aadarsh Buniyadi Prathmik Shala-Mauza	23/12/2011	Varjan Sunita J.
District: Dang			
Ahwa	38. Rambhash Prathmik Shala	26/12/2011	Rathod Bhavesh B.
Ahwa	39. Pandva Prathmik Shala	27/12/2011	Rathod Bhavesh B.
Ahwa	40. Wagai Prathmik Shala	26/12/2011	Rabari Vipul G.
Ahwa	41. Javada Prathmik Shala	27/12/2011	Rabari Vipul G.
District: Banaskantha			
Palanpur	42. Vagada Prathmik Shala	27/12/2011	Makwana Sunita I.
Dhanera	43. Bhilvas Prathmik Shala	27/12/2011	Vaghela Maulik G.
Dhanera	44. Charada Prathmik Shala	28/12/2011	Vaghela Maulik G.
Deesa	45. Akholnani Prathmik Shala	27/12/2011	Modi Megha K.
Deesa	46. Talegadh Prathmik Shala	28/12/2011	Bhavsar Vaishali H., Modi Megha K.
Deesa	47. Ramun Prathmik Shala	27/12/2011	Bhavsar Vaishali H.
Vadgam	48. Jalotra Prathmik Shala	27/12/2011	Mulani Dipak L.
Dantiwada	49. Bhadalikotha Prathamik Shala	28/12/2011	Mulani Dipak L.
Palanpur	50. GolaPrathmik Pagarkendra Shala	27/1/2012	Varjani Sunita J.
District: Junagadh			
Mangrol	51. Limbda Prathmik Shala	5/1/2011	Rathod Bhavesh B.
Mangrol	52. Juthal Prathmik Shala	6/1/2011	Rathod Bhavesh B.
Chandigadh	53. Chandigadh Prathimk Shala	5/1/2011	Bhavsar Vaishali H., Varjani Sunita J.
Manavadar	54. Sitana Prathmik Shala	6/1/2011	Bhavsar Vaishali H.
Talala	55. Umrethi Prathmik Shala	5/1/2011	Vaghela Maulik G. Varjani Sunita J.
Visavadar	56. Shudavad Prathmik Shala	6/1/2011	Vaghela Maulik G.
Junagadh	57. Timbavadi Prathmik Shala	5/1/2011	Modi Megha K.
Bhesan	58. Morwada Prathmik Shala	6/1/2011	Modi Megha K.
Una	59. Amodra Prathmik Shala	5/1/2011	Rabari Vipul G.
Una	60. Fareda Prathmik Shala	6/1/2011	Rabari Vipul G.

Appendix B: Tools (In English)

Schedule 1: For Principal

District:	Name of School:	Date:
Block:	Name of Principal:	Day:
CRC:	Number of Teachers:	Time:
Village:	Number of Students:	Year of initiation of BaLA:

Particular I	Yes	To some extent	No	Remarks
School has become more happy and joyful place for students				
BaLA activity helpful in encouraging slow learners				
BaLA accessible to differently able Children				
BaLA efficiently planned in your school				
BaLA efficiently executed in your school				
BaLA gives holistic space to students for development				
BaLA crowding existing space of your school				
BaLA school sensitive to accomplish needs of all children from I to VII standard				
School has been changed in play ground after school hours				
School maintains BaLA resources				
School getting any donation for maintenance of BaLA resources, If yes who is/are the donor/s: (local Government / SSA/ Private Donor/ Parents				

Particular II	V.G.	Good	AVG	Poor	V.P.
Use of Misused place (Yes/ No) , if yes					
Use of unused space (Yes/ No) , if yes					
Effective use of under used space (Yes/ No) , if yes					
Student friendly environment (Yes/ No), if yes					
Utilization of BaLA resources in school					
Students participation in self- engaged learning					
Students participation in group- learning					
Impact of BaLA on basic learning standard in school					
Impact of BaLA on enrolment of students in school					
Impact of BaLA on retention of students in school					
Impact of BaLA on enrolment of Boys in school					
Impact of BaLA on enrolment of Girls in school					
Impact of BaLA on retention of Boys in school					
Impact of BaLA on retention Boys in school					
Impact of BaLA on attendance in school					

Signature of Principal   **Signature of FI**   **Seal of School**

Schedule 2: For Teacher

District:	Name of School:	Date:
Block:	Name of Principal:	Day:
CRC:	Name of Teacher:	Time:
Village:	Number of Students in class:	

Particular I	V.G.	Good	AVG	Poor	V.P.	Remarks
Condition of BaLA resources in class room						
Utilization of BaLA resources in class room						
Students participation in self- engaged learning						
Students participation in group- learning						
Impact of BaLA on basic learning standard in school						
Impact of BaLA in classroom participation of Students						

Particular II	Yes	To some extent	No	Remarks
Use of BaLA Resources in teaching				
Received any training to utilize BaLA resources				
BaLA activity helpful in encouraging slow learners (students)				
BaLA accessible to differently able Children				
BaLA crowding existing space of your classroom				
Concepts learned by students of BaLA in class room easily				
BaLA efficiently planned in your school				
BaLA efficiently executed in your school				
Maintenance of BaLA resources in your school				
Students found before time in school				
Students found after school time in school				
Your contribution to learning through BaLA				
Impact of BaLA on attendance				

Views of teachers on use of BaLA for making school joyful, meaningful and Centre of knowledge.

(a) **Total useful (b) To some extent useful (c) Sometimes useful (d) Unused**

Signature of Teacher   **Signature of FI**   **Seal of School**

Schedule 3: Observation

District:	Name of School:	Date:
Block:	Name of Principal:	Day:
CRC:	Name of Field Investigator:	Time:
Village:		

General Observation	V.G	Good	AVG	Poor	V.P	Remarks
Condition of BaLA resources in school						
Condition of BaLA resources in classrooms						
Use of misused place (Yes/ No) , if yes						
Use of unused space (Yes/ No) , if yes						
Effective use of under used space (Yes/ No) , if yes						
Plantation in school (Yes/ No), if yes						
Utilization of BaLA resources in school						
Utilization of BaLA resources in class room						
Utilization of class room for implementing ideas of BaLA.						
Use of resources by teacher						
BaLA accessible to differently able Children (Yes/ No) , if yes						
Student participation in self- engaged learning						
Student participation in group- learning						
Student friendly environment (Yes/ No), if yes						
Principal's contribution to learning through BaLA						
Teachers' contribution to learning through BaLA						

Students in school before and after school time						
Number of Students	1-20	21-40	41-60	61-80	80 onwards	Remarks
Before school time						
After school time						

Concept Mapping Test (CMT)

Concept Mapping Test Std.1:

Concept	Numerical Concept	Alphabets	Story based learning
Identification of Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. Student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor - 1

Concept Mapping Test Std.2:

Concept	Gujarati	Mathematics	Environmental Science
Identification o Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. of student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor - 1

Concept Mapping Test Std.3:

Concept	Gujarati	Mathematics	Environmental Science
Identification of Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. of student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor - 1

Concept Mapping Test Std.4:

Concept	Gujarati	Mathematics	Environmental Science
Identification of Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. of student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor - 1

Concept Mapping Test Std.5:

Concept	Social Science	Science	Mathematics
Identification of Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. of student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor - 1

Concept Mapping Test Std.6:

Concept	Social Science	Science	Mathematics
Identification of Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. of student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor – 1

Concept Mapping Test Std.7:

Concept	Social Science	Science	Mathematics
Identification of Concept			
Explanation of Concept			
Understanding of Concept			
Group Participation			
Use of concept			

Concept Mapping Test – Individual Participation of Students

Sr. No.	Roll no. of student	CMT -1 IP	CMT-2 IP	CMT – 3 IP	Remarks
1					
2					
3					
4					
5					

Very Good -5, Good - 4, Average - 3, Poor -2, Very Poor - 1

Information from school documents on enrolment and Retention in School before and after implementation of BaLA

Year	1st Year	2nd Year	3rd Year	Implementation year of BaLA	1st Year	2nd Year	3rd Year
Total Enrolment in the year							
Enrolment of Girls in the year							
Enrolment of Boys in the year							
Total Retention in the year							
Retention of Girls in the year							
Retention of Boys in the year							

BaLA Resources in School and Their Condition (Check List)

Particulars	Availability	If yes then Condition					Particulars	Availability	Condition				
	Y/N	V.G.	G	AVG	P	V.P.		Y/N	V.G.	G	AVG	P	V.P
Dot board							Height measurement						
Word wall							Story based learning						
Picture with fun							Nutrition chain						
calendar of current, last and next month							Sun clock						
Maps							Mystery Wall						
Geometrical Board							Schedule Clock						
Traditional Motif and Visual							Learning with fun						
Shape chart							Kitchen garden						
Mathematical puzzle							Sand pit						
Ruled Rightable Surface							Run way/ path way						
Year calendar							Herb garden						
Magic square							Green writing board for self-learning						
Green board							Long jump						
Nutrition chart							Angles						
Solar system							Amphitheatre						
Practice word							Me & My world						
Traffic signals							Other if any						
Pre writing pattern group							1						
Numerical concept of ascending and descending order							2						
Distance							3						
Numerical Tables							4						

Signature of Observer　　　　　　**Principal**　　　　　　**Seal of School**

Schedule 4: Interview Schedule for Principal

District:	Name of School:	Date:
Block:	Name of Principal:	Day:
CRC:	Number of Teachers:	Time:
Village:	Number of Students:	

1. What are the advantages of BaLA?

2. What type of initiative you have taken to maintain BaLA Resource?

3. What changes you have observed before and after implementation of BaLA?

4. What has been your experience so far in planning and building infrastructure of BaLA in your School?

5. While implementing BaLA what you have learnt through your past experience?

6. Which practices did not work while implementing the BaLA in your school?

7. Which good Practices you have observed in students after implementation BaLA in your school?

8. What initiatives and inputs given by you for BaLA activity in your school?

9. Have you given any new ideas for implementing BaLA in your school?

10. Have you received any type of donation for BaLA activity? If yes, then what is the difference between before and after implementation of BaLA?

11. What you are doing to maintain the resources?

12. If, resources are not maintained then what are the reasons?

13. What should be done to make BaLA school more effective in learning, suggest any three?

    (i)

    (ii)

    (iii)

14. How many marks out of 10 would you allot to running of BaLA activity in your School?

15. What are the reasons for not giving full marks?

16. Have faced any difficulty /problem to implement the BaLA?

Signature of Principal   **Signature of FI**   **Seal of School**

Schedule 5: Focus Group Discussion with Teachers

District	Name of School	Date
Block CRC Village	Name of Teachers 1. 2. 3. 4. 5.	Time

1. What is BaLA?

2. What are advantages of BaLA?

3. What are the initiative taken by you for encouraging BaLA in your school

4. Is BaLA useful for Teachers?

5. Have you received any training on BaLA activity?

6. What is the response of Students on BaLA Activity?

7. What is the impact of BaLA on basic learning standard in school?

8. What are your suggestions to make BaLA school more effective in learning?

9. Suggestions for making it more effective in future.

10. What is the impact of BaLA in your village/area?

Signature of Teachers   **Signature of FI**   **School Stamp**

1

2

3

4

5