# CHAPTER V

# DATA ANALYSIS AND INTERPRETATION

## 5.0 INTRODUCTION - QUALITY OF PRIMARY SCHOOLING

*The instrumental roles of schooling – helping individuals achieve their own economic, social and cultural objectives and helping society to be better protected, better served by its leaders and more equitably in important ways– will be strengthened if Education is of higher quality. Schooling helps children develop creatively and emotionally and acquire the skills, knowledge, values and attitudes necessary for responsible, active and productive citizenship. How well education achieves these outcomes is important to those who use it. Accordingly, analysts and policy makers alike should also find the issue of quality difficult to ignore. More fundamentally, education is a set of processes and outcomes that are defined qualitatively. The quantity of children who participate is by definition a secondary consideration - merely filling spaces called 'schools' with children would not address even quantitative objectives if no real education occurred. Thus, the number of years of school is a practically useful but conceptually dubious proxy for the processes that take place there and the outcomes that result. In that sense, it could be judged unfortunate that the quantitative aspects of education have become the main focus of attention in recent years for policy makers and many quantitatively inclined social scientists. (UNESCO, 2005).*

In keeping with the above, while one is forced to appreciate the strides made in the provision of Primary education in quantitative terms, one cannot overlook the significant issue of the quality of education being imparted. Here, we need to address the term 'quality' and then determine what could be the possible quality indicators in the area under study – i.e. Primary Education.

The dictionary meaning of the term 'quality' is 'degree of excellence' and an assessment of the extent to which this excellence has been attained would be an indicator of quality. The concept of quality in education is a notion, which allows for many meanings and consequently there is a disparity among educationists as to what actually constitutes quality in Primary Education. However, most seem to agree that 'quality' needs to be understood in terms of a conglomerate of factors namely the presage (also the context)

variables i.e. what do these schools consist of (i.e. infrastructure and other facilities), the process variables - how do these schools function (i.e. the instructional processes) and the product variables - what results do these produce? (i.e. the outcomes).Thus, while one must focus on the classroom management and transaction as a reflection of the quality of the institution, one cannot afford to overlook the organizational variables (infrastructure) for it is within these that the entire schooling process takes place. (Govinda and Varghese, 1991).The organizational variables thus provide an environment conducive to learning or one not conducive to it.

Finally, school quality will also be reflected in the outcomes – viewing from this perspective, many educationists tend to equate school quality with school effectiveness and thus 'learner achievement' is brought to the center stage as the single most important determinant of school quality. Here, achievement is taken to be a comprehensive term, which includes all measurable learning outcomes as a result of the school and schooling while fully acknowledging that not all effects of schooling can be measured in terms of learning in school subjects alone. (Govinda and Varghese, 1991).

Thus, school quality viewed holistically, refers to the 'quality' of the educational institution and the qualitative change that it has fostered in the learners. In order to understand school quality, each aspect of schooling, namely, the material and human inputs available, the teaching - learning processes in the schools and the learning outcomes need to be viewed independently as well as together in an interactive framework

The assessment of quality is thus complex; also, there is no simple one-dimensional measure of quality. It is a conglomerate of many factors within the school that make their contributions individually and collectively towards the quality of schooling in that particular institution. Schools and their structure; facilities and their usage, staff and their skills, students and their background and finally community involvement – all play a very meaningful role when quality is to be determined or ascertained. Of these, a number of components can be measured and their quality assessed; some of the measurable components are infrastructure, available resources and the frequency and nature of their usage and the achievement outcomes that finally decide quality (Govinda and Varghese, 1991).

From research studies reviewed, some propositions about 'educational quality' have emerged. It now remains to be seen how and to what extent these propositions are prevalent and practiced in the prevailing scenario and whether or not these contribute in any way to the 'quality' of the present Municipal Corporation Primary Schooling in Vadodara city.

The following chapter focuses on all the above mentioned aspects and the existing status in Vadodara city with respect specifically to Municipal Corporation Primary schooling.

It is extremely pertinent to state here that the following data was collected during the academic year 2003-04, 2004-05, hence, the analysis and interpretations done are exclusive to that period only. It may also be noted that with respect to specific questions, in rare instances, responses could not be elicited. This may be attributed to a number of reasons – teachers not wanting to respond to sensitive and often conflicting issues (supervision and after effects, introduction of the computer course for students, teaching of different subjects by the same teacher, availability of facilities, conducting of extra-curricular activities, usage of Library and other learning resource materials, etc. ). Thus, in these specific instances only, the available data (both positive and negative) does not represent hundred percentage scores.

The status of Municipal Corporation Primary schooling has been studied in relation to the pre-determined objectives. The data pertaining to each objective has been analyzed and interpreted as per the following:

**The first objective i.e.**

To study the status of Municipal Corporation Primary Schools in terms of facilities available.

- Infrastructure facilities
- Teaching Materials
- Enrollment and retention at the end of the academic year.

.....has been analyzed in the following manner.

## 5.1 SCHOOL INFRASTRUCTURE

In this context it can be stated here that organization variables are significant because it is within these that the learning processes take place. It thus follows that though not

lavish, a congenial atmosphere is necessary if we expect children to come to school and be present for all the school hours. Effective transaction of the curriculum and other inputs are possible only if the school atmosphere is conducive to learning. Giving due consideration to this, 'Organizational variables' was taken up as one of the vital inputs and a significant determinant of quality. Thus, school environment, condition of classrooms, facilities such as electricity, library, playground, urinals, laboratories, drinking water facilities were explored and their status ascertained.

### 5.1.1 INFRASTRUCTURE FACILITIES

The table given below represents the analysis of data related to infrastructural facilities.

**Table 5.1.1 (A)**

**INFRASTRUCTURE FACILITIES (SCHOOL BULIDING)**

| | |
|---|---|
| School Building | |
| Kuccha | 02. 27 % |
| Pucca | 93. 18 % |
| Classrooms | |
| Well ventilated | 81. 82 % |
| Poorly ventilated | 12. 05% |
| Separate classrooms for each class | |
| Sufficient | 71. 59% |
| Insufficient | 21. 59% |
| School Surrounding | |
| Surrounded by wall | |
| Yes | 59. 09% |
| No | 37. 05% |
| Busy Locality | |
| Yes | 55. 68% |
| No | 40. 91% |

The tabulated data reveals that 93.18 % school buildings were of a pucca structure and a very small percentage of schools (2.27%) were found to have a kuccha structure. Within these schools, the classrooms were found to be sufficiently ventilated i.e. there were windows in all the classrooms ..... despite which the classrooms were still very dark and poorly lit.

Sufficient numbers of classrooms were available for independent classes to be conducted (71.59 %) and only in rare cases (21.59%) it was found that separate classrooms were not

available and consequently the students had to be seated together. Also, these classrooms were as per the specified dimensions.

The next question pertained to the school being surrounded by a compound wall thereby providing a certain security to the children during the hours in which they were in the school. Here, it was found that while a large number of schools did have their own compound wall (59.09%) there were also an equally large number that did not have a compound wall i.e. 37.05 % of the schools did not have any compound wall.

Most of these schools were found to be in very busy market localities (55.68%) - there were also some schools in communally sensitive areas and in certain uncertain times the attendance of the children was affected due to this proximity to the communally sensitive area.

In addition to the above, other infrastructural facilities too are necessary for the smooth conducting of daily academic activities. The tables given below provide data with respect to these.

**Table 5.1.1 (B)**

**INFRASTRUCTURE FACILITIES (ELECTRICITY, LIBRARY, ETC)**

| **Facilities in School** | **YES (%)** | **NO (%)** |
|---|---|---|
| Electricity | 87.05 | 05.68 |
| Library | 56.82 | 36.36 |
| Staff Room | 20.45 | 76.14 |
| Toilets | 86.36 | 13.64 |
| Separate toilet for Girls/Boys | 53.41 | 31.82 |

The data on school facilities revealed that in majority of the schools (87.05%) basic facilities such as electricity were present and only a very small percentage of the schools reported not having the facility. The Investigator found that there were Libraries in 56.82 % of the schools while 36.36% schools reported the facility as not being there. However, the school Library was not a very functional one in most cases. The school teachers did report that there were reference books for the different grades which were useful in their daily teaching.

In most of the schools it was found that there was one common room where all teachers were found to gather during recess and other free periods – rarely were there were any separate rooms allotted for Staff.

The other important facility of sanitation was found to be present in almost all the schools. As revealed by the data, 86.36% schools had sanitation facility while there were schools without it as well – 13.64%.The schools having the facility of sanitation however did not always have separate sanitation facilities for boys and girls. It was found that only 53.41% schools had separate facilities among the schools which reported having sanitation.

**Table 5.1.1 (C)**

**INFRASTRUCTURE FACILITIES (SPORTS)**

| | YES (%) | NO (%) |
|---|---|---|
| School Playground | 56.82 | 39.77 |
| • Appropriate | 39.77 | |
| • Usable | 44.32 | |
| • Within School | 46.59 | |

The response to the questions on playground and sports facilities revealed that 56.82 % of the schools had a school playground and among the schools that reported having it, about 40 % reported that it was appropriate, approximately 44 % reported that it was in a usable condition. The school observation had also revealed to the Investigator that there were schools that had no playground but did have a very small ground or enclosed structure where the morning Assembly was conducted. The schools (that had no playground at all), reported that the sports and games were conducted in the grounds adjoining these schools.

**Table 5.1.1 (D)**

**INFRASTRUCTURE FACILITIES (SPORTS)**

| | YES (%) | NO (%) |
|---|---|---|
| Availability of Sports Facilities | 31.82 | 59.09 |
| ▪ Cricket | 18.18 | 72.73 |
| ▪ Football | 10.23 | 80.68 |
| ▪ Volleyball | 15.91 | 75.00 |
| ▪ Hockey | 02.27 | 88.64 |

The data with respect to sports facilities elicited an overall negative response; a very small population of schools responded positively. It was found that Sports equipments were found in about 32 % of the schools while 59.09 % schools reported not having sports facilities. The facilities offered were cricket (18.18%), football (10.23%), volleyball (15.91%) and hockey (2.27%).The Investigator was informed that Tennis rackets and Carom boards were purchased as part of the Operation Blackboard scheme although not too frequently given to the students for fear of misuse. The skipping rope was a sports item readily available.

Yet another facility explored was that of nutritional support. A significant learning is that well fed children learn better. Research has proved that poor nutrition has adverse effects on a child's development and consequently on his learning at school. (Pollitt and Gossin, 1989). In some developing countries, school level interventions such as mid-day meal programs are practiced so that this does not ultimately become the cause for wastage and stagnation.

In India, the National Programme of Nutritional Support to Primary Education or the Mid-day Meal Scheme was launched on 15th August, 1995 to give a boost to the Universalisation of Primary Education program. It was expected to increase enrolment, attendance and retention and improve the nutritional status of children in primary classes in government, local-body and government-aided schools. The programme provides cooked meals to children through local implementing agencies.

In this context, when the midday meal program, of Vadodara Municipal Corporation schools, was examined, the following scenario emerged.

In Vadodara city too, the mid-day meal program was being conducted and cooked food was served to the entire student population during the school working hours on a daily basis. The type of food served had variations but it was predominantly cooked food as can be seen from the table given below.

**Table 5.1.1 (E)**

**FACILITIES (MEALS)**

| | YES (%) | NO (%) |
|---|---|---|
| Midday Meal | 90.91 | 7.95 |
| • Cereals | 5.68 | 92.05 |
| • Ready made food-snacks% | 1.14 | 97.73 |
| • Cooked food | 88.64 | 10.23 |

The data revealed that cooked food was the pre-dominantly offered food type with the other options i.e. cereals and ready-made food very rarely offered by the schools.

**Table 5.1.1 (F)**

**FACILITIES (DRINKING WATER)**

| **Drinking Water facility** | **YES (%)** | **NO (%)** |
|---|---|---|
| | **90 %** | |
| • Water tank | 72.73 | 26.14 |
| • Tap water | 57.95 | 36.36 |
| • Hand pump | 19.32 | 75.00 |
| • Earthen pot | 20.45 | 73.86 |

The data as shown in the Table above revealed that drinking water facility was found to be present in 90 % of the schools although the facilities differed. The most prevalent facility was the water tank facility which ensured water for the entire duration of the school working hours.

## OVERALL INTERPRETATION OF STATUS OF INFRASTRUCTURE FACILITIES.

It is widely accepted that 'Organization' variables are significant because it is within these that the learning processes take place. It is interesting to note in the same connection that The Tenth Five Year Plan too acknowledges that poor quality of primary education is one of the significant reasons for poor achievement scores, student stagnation and drop-out. Thus, improving the quality of infrastructure is a priority for SSA. For the period 2001-2005, infrastructure had been given due priority with plans to start 1.37 lakh new schools, 80,000 new school buildings and 1.92 lakh additional classrooms, 1.57 lakh toilets and 1.12 lakh drinking water facilities.

However, although well acknowledged that though not lavish, a minimum provision of school inputs greatly influence students' learning and provision of the same is necessary if we expect that children should come to school and spend the duration of instructional time there...the data collected with respect to these variables revealed that while the schools were of a pucca structure and also that in most cases there were sufficient number of classrooms for each grade, the schools were in busy localities and the classrooms were not too well ventilated – thus, both the classroom and surrounding ambience were not found to be too conducive to learning .

Also, it has been widely acknowledged that other Infrastructural facilities too play a contributory role in the entire learning environment – facilitating the teaching-learning processes and thereby indirectly influencing the quality of the system. While these facilities may not be the sole determinants of quality, they provide the atmosphere and conditions for learning to happen, and thus, indirectly influence the quality of education. The above data analysis with respect to these infrastructural facilities showed that while certain essential facilities like Electricity , sanitation and the midday meals were provided to most of the schools, there were other facilities which were important but the provision was found lacking, namely - the presence of a Library, books, school playground and sports equipments.

In most of the cases, it was found that the Library was not a very functional one although Teachers did get the benefit of Reference books to aid in their daily teaching. The school playground was yet another facility which was found to be lacking in most cases - with

many cases coming to the fore where there no playgrounds at all but a very small ground or enclosed structure where usually the morning assembly was conducted. The availability of sports equipments too was found to be rare.

It thus entails that the mere existence of a pucca school structure with availability of classrooms does not necessarily ensure quality unless accompanying factors are also present - these variables are the 'enablers' – the catalysts in the entire educational process and strongly influence the quality of the curricular and extra-curricular activities and so the clear implication that these factors need to be given due attention so as to make the environment conducive for qualitative teaching –learning to happen (UNESCO, 2005).

### 5.1.2. TEACHING-LEARNING MATERIALS.

Provision of instructional material is one of the ways of improving the quality of Education. International experience has shown that relatively modest instructional materials actually promote learning. Materials such as textbooks, libraries and classroom instructional materials are significant determinants of achievement in low income and middle-income countries.

The table below provides information regarding the Instructional facilities available in the schools under consideration.

**Table 5.1.2 (A)**

**STATUS OF TEACHING LEARNING MATERIALS**

| Teaching Learning Materials | Yes (%) | No (%) |
|---|---|---|
| Time Table | 86.36 | 10.23 |
| Library | 57.95 | 39.77 |
| Art Room (Separate) | 4.55 | 94.32 |
| Audiovisual Aids available | 37.50 | 60.23 |

| Distribution of School Textbook | Yes (%) | No (%) |
|---|---|---|
| • Within 3 months | 95.45 | 4.55 |
| • 3-6 months | 1.14 | 98.86 |
| • 6-9 months | 0 | 100 |

| Reference books for Teachers | YES (%) | NO (%) |
|---|---|---|
| • Rarely<br>• Sometimes<br>• Always | 11.36<br>17.04<br>63.64 | |
| Scientific Apparatus | 65.91 | 25.00 |
| Appropriate storage for Sc. Apparatus | 45.45 | 42.00 |

The availability of Instructional material is always a very useful addendum to the instructional process and enables better learning. The Table above gives account of other infrastructural facilities and their present status.

Analysis of the data collected revealed the following scenario – a majority of the schools (86.36 %) reported the school functioning was strictly as per the time-table and classes were conducted in accordance with the same. Although 57.95 % schools reported having a school Library, the books were not issued to the students. The Investigator found that all schools were instructed to issue books to the students which however was not practiced due to an apprehension, by the school authorities, about the maintenance of these books.

The Library did have reference books for teachers to help them in their respective subjects; 63.64 % schools responded that these were made available to all teachers.

Almost all respondents agreed that there was a time-table that was followed by all the schools. When asked about the text books and their availability, the response was very positive – the response was that the textbooks were made available within the very first three months – 95.45 % responses were in agreement with the above and a very small percentage responded that books were provided much after the academic session had started.

It was found that scientific apparatus were available in 65.91% of the schools and 25 % of the schools responded that scientific apparatus were not available – thus it appeared that not all schools were availing of this facility. When questioned about storage facility the same trend was seen – while 45.45 % responded that there was adequate storage for these facilities, 42 % responded that there were no appropriate storage facilities.

Essential facilities (teaching learning materials) such as blackboard, chalk, table and chair for Teachers, maps and cupboards are essentials for the smooth conducting of the instructional processes. The table below gives the data related to the availability of these essential facilities.

**Table 5.1.2 (B)**

**STATUS OF TEACHING LEARNING MATERIALS**

| Teaching-Learning Material | STANDARDS (%) | | | | | | |
|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | VII |
| **Chalk** | 93.40 | 91.20 | 91.20 | 92.31 | 91.20 | 90.11 | 89.01 |
| **Blackboard** | 92.31 | 90.11 | 90.11 | 91.20 | 89.01 | 89.01 | 89.01 |
| **Table for Teachers** | 90.11 | 85.71 | 85.71 | 86.81 | 85.71 | 85.71 | 83.51 |
| **Chair for Teachers** | 90.11 | 84.61 | 85.71 | 86.81 | 84.61 | 83.51 | 84.61 |
| **Map/Globe** | 59.34 | 57.14 | 56.04 | 64.83 | 69.23 | 78.02 | 76.92 |
| **Cupboard** | 68.13 | 67.03 | 64.83 | 69.23 | 64.83 | 64.83 | 64.83 |
| **Patiya** | 61.54 | 59.34 | 59.34 | 60.44 | 57.14 | 57.14 | 57.14 |

The data analysis revealed that in all the classes, in all the schools, chalk, blackboard, teacher's table and chair were facilities which were mostly found to be available. More than 90% of the schools were found to possess these essential requirements. Teaching-learning materials like maps and globes, which had great educational significance, were also found to be present in a large number of schools. Interestingly, the data analysis revealed that the upper primary classes had these materials to a larger extent than the lower primary classes. The class cupboards were found to be present in more than 60% of the schools while the 'patiya' i.e. the desk for students to write on, were found to be present in approximately 60% of the schools.

Thus, there was provision for the essential requirements but, their maintenance, utility and implementation needed to be looked into and was duly taken up in the following sections.

A significant instructional tool today is the computer and it is universally acknowledged that *Information and communication technology (ICT) has great potential for enhancing learning and improving the quality of education. At present, the use of ICT is limited because of infrastructure and technical manpower constraints* (MHRD, 2007).

It was in keeping with the significant benefits of ICT integration in education that computers were provided to all the schools under Operation Blackboard (1987) so that computer literacy would be enabled. The table below provides data with respect to this significant aspect i.e. status of computer training and whether or not teachers teaching this subject were trained or not.

**Table 5.1.2 (C)**

**STATUS OF COMPUTER TEACHING**

| Computer as a subject introduced at what Level? | YES (%) |
|---|---|
| • Std. IV | 56.81% |
| • Std. V-VII | 35.22 % |

| Teacher teaching Computers | YES (%) |
|---|---|
| • Trained | 34.09 % |
| • Untrained | 20.45% |

With respect to the teaching of Computers it was found that there was no uniformity of responses - 56.81 % teachers opined that the teaching of Computers as a subject commenced from Standard IV while 35.22 % said that Computer teaching was introduced at the upper primary grades only i.e. from grades V,VI,VII.

Thus, there was no clarity regarding the exact grade at which the computer training was introduced or should be introduced.

The next question posed was whether or not the training was imparted by trained teachers and to this 34% teachers said that the teachers were trained while a small percentage of teachers (20.45 %) reported that the teaching was done by untrained teachers. The noteworthy feature was that approximately 46% respondents chose not to answer this question implying that this was a much unattended-to area in the school functioning.

In a few schools it was found that in the absence of trained teachers to teach this subject, a local NGO generally conducted the Computer training for the students deputing their own teachers for this purpose.

In general it was found that the response to this question was minimal and mixed indicating the nature of the scenario – there were Computers but the absence of trained teachers to teach the subject rendered the gadgets mostly non-functional.

**INTERPRETATION OF STATUS OF TEACHING MATERIAL.**

The analysis of the above data revealed that other facilities being equal, the success of the teaching-learning processes are also strongly linked to the availability of 'supporting or enabling' inputs. (UNESCO, 2005).

The availability of these 'enabling inputs' and the effectiveness with which they are employed are all significant inputs to the quality of the present system. Keeping this importance in mind, the National Programme 'Operation Blackboard' was launched in 1987 and under this programme; schools were provided minimum essential facilities.

While certain inputs appeared to be prevalent in the schools under study, there were accompanying factors which needed attention. The data given in this section revealed that a majority of schools functioned in accordance with the time-table; did have Library and scientific apparatus; did circulate the school text books within three months of commencement of the academic year and also provided Reference books to their Teachers. But, in these very schools it was also found that while there was provision for a Library, the Library books were not circulated among students for fear of poor maintenance; while scientific apparatus was reported in a large percentage of schools, the system of storage and maintenance of these apparatus was questionable and while these very schools reportedly had sufficient number of classes for each grade, they did not have separate Activity rooms and very often no separate room was made available even for the Teachers.

Also, certain minimum facilities are essential in the classrooms for the Teacher to be able to effectively conduct the instructional processes. The data in relation to this fact revealed that although these essential facilities were present, their condition and maintenance was in question. The class blackboards were in a state of disrepair and very

often they were simply painted on the wall which was not too conducive for writing as it did not have a very smooth surface. It was very common to see the students seated on the ground on mattresses and studying but, there were also cases where there was no provision of mattresses and so the students sat on the floor itself during the school hours.

The data analysis revealed that in all these schools the number of classrooms were adequate and very rarely were cases of multi-grade teaching found. However, a few schools were come across where the students had to be seated outside the school premises due to infrastructural obstacles i.e. schools under construction, schools that needed construction and also cases where animals often strayed in or jumped in over the walls.

The scenario with respect to Computer training revealed that the schools had been provided with Computers in order that Computer literacy was ensured. However, although the schools did have the computers, there was a dearth of trained teachers to teach the subject and so these machines were predominantly nonfunctional except for cases where an outside agency offered services such as the NGOs. However, it was found that this problem was taken care of by training teachers via the In-Service training programmes which attempted to impart functional computer literacy to the teachers so that instruction as well as some of the academic duties could be done with the help of computers. Despite these efforts, the extent of usage was found to be very minimal.

The response with respect to availability of funds was positive in most cases. The overall observation was that while funds are being sanctioned and utilized, a regular follow-up is required to ascertain whether or not the facilities provided are being maintained properly or not. In the event of this not happening very regularly, the facilities gradually deteriorate and then become a barrier to the effective conducting of the instructional process. An unreadable blackboard, non-availability of ready support material for students and uncomfortable seating arrangements in poorly ventilated classrooms are surely not conducive factors to learning and these may be reflected in the future in the form of poor achievement outcomes as is the case with the prevailing system and situation.

In order to understand the same picture i.e. the status of Municipal Primary Schools in terms of facilities available i.e. Infrastructure facilities, Teaching Materials.

from closer quarters, the investigator made a second round of observation of the seven schools chosen in the second phase of the study and studied the same infrastructural variables in further detail. The table below gives the infrastructure status - Infrastructure facilities and teaching Materials of the purposively selected seven schools.

**Table 5.1.2 (D)**

**SCHOOL INFRASTRUCTURE - SECOND PHASE SCHOOLS**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **School Location** | Not Noisy | Not Noisy | Noisy | Not Noisy | Noisy | Noisy | Not Noisy |
| **School Ambience** | Clean | Clean | Dirty | Dirty | Dirty | Avg-Clean | Clean |
| **Playground** | Small | Small | x | Small | x | Small | x |
| **Open Space around S.** | ✓ | ✓ | x | x | x | x | x |
| **Fence / Wall** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Moving Space in Corridr.** | ✓ | ✓ | ✓ | ✓ | V.Little | ✓ | ✓ |
| **Lavatory - B & G** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Water** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Light** | Well-Lit | Dark | Dark | Well-Lit | Dark | Well-Lit | Well-Lit |
| **Teacher's Furniture** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Ventilation / Windows** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Fans** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Lights** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Fixtures for Aids** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Blackboards - Usable** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Class Cupboards** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Chart / Aids / on wall** | x | x | x | x | x | x | x |
| **Books in Library** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Computer Room** | x | x | x | x | x | x | x |
| **Computers** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

The observation of the seven chosen schools revealed the following

*The location of these schools* were very often found to be in busy localities; of these, three were found to be situated in such localities which were either busy market places or within residential areas. A particular school, like a few others in the entire population, was located in a communally sensitive area and this proximity did under special circumstances impact the attendance of the students studying there – as indicated in the school records. The other three schools were found to be situated in fairly noise-free and conducive learning conditions.

*The school ambience* i.e. the surrounding conditions were found to be clean and approachable in three of these schools; while the other schools had surroundings which were often water logged, odour prone and generally unkempt.

*The school playground* in the case of these seven schools were found to be too small in comparison with the school building and in certain other cases there were no playgrounds for the students – only a small Assembly area for the conducting of the morning assembly.

*The Open space around the schools* was found to be a rare phenomenon. Only two of the seven schools had an open space whereas the other schools were surrounded by residential areas or market places with no surrounding open space available.

*School surrounded by Fence/Wall* - All the schools had a fence or a wall surrounding the school which acted as a protective barrier for the small children attending it for the stipulated hours of schooling.

*Moving space in the corridors* - All the schools except one had sufficiently spacious corridors permitting the classrooms to be spaced and with minimum disturbance being caused due to instructional transactions during the school working hours.

Provision of drinking water - All the schools had sufficient provision of drinking water.

*Classroom lighting* - Of the seven schools, four schools had well lit classrooms with sufficient visibility in the classrooms. However, three schools were comparatively dark and the visibility inside the classrooms was less.

*Classroom furniture* - All the schools had classrooms with windows, fans and light provision. They all had fixtures for teaching aids to be hung up on the walls; all the schools had blackboards which were in a usable condition and class cupboards to accommodate teaching-learning materials. They all had a single Table and chair for the Teacher. Regarding the furniture for the students-only three schools among the seven had benches and chairs for the students while in the other four schools the students sat on the floor on durries with small desks to write on.

*Books in Library* - A number of books were available in the Library along with Teacher Reference books however not issued to the students on a regular basis.

*Computer Room* – Most of these schools did not have a separate computer room; however all schools had been provided with four computers each under the Operation Blackboard scheme. However, not all these computers were functional on a daily basis often due to lack of trained staff to handle them.

*Sports and Musical Instruments* were found to be present but not in frequent usage – the musical instruments were used mostly during the morning assembly and sports equipments were rarely given to the students – for these children it was mostly free play in the school compound during the designated sports periods.

*Other inputs.....*

The school walls were found to have proverbial sayings painted on them and these were positioned so that students frequently saw them i.e. at the school entrance, near the staircases and near the classroom entrances. Also, the daily news headlines were written on a daily basis on a centrally placed board to keep students abreast of the latest happenings. In certain cases, there were academically relevant drawings on the classroom walls – namely, ascending numbers, alphabets, domestic and wild animals, human body systems, etc.

Thus, despite the obvious constraints (schools located in busy localities, non-availability of playgrounds, poor visibility in classrooms, books not issued to the students, non-functional computers and dearth of sports facilities) some initiatives were consciously taken for quality inputs for these students in terms of news headlines, quotes on the school walls and corridors, and celebration of festivals. These were initiatives taken up at the school level and most of the schools were found to be practicing the same.

### 5.1.3 ENROLLMENT AND RETENTION AT THE END OF THE ACADEMIC YEAR

The interventions under SSA and the District Primary Education Programme (DPEP) had a positive impact on school enrolments. According to provisional estimates of the Seventh All India Education Survey, enrolment in the primary stage increased from 114 million in 2001-02 to 122 million in 2002-03. Dropout rates also declined significantly from 39.03 per cent to 34.89 per cent during this period.

The number of out-of-school children, estimated at 42 million at the beginning of the Tenth Plan had come down to 23 million in April 2003 and further to 8.1 million in September 2004. Since then various strategies have been evolved to mainstream street children, working children and differently abled children - adequate teaching-learning materials and provision of other joyful learning conditions in schools have been ensured, and the child tracking systems have been intensified.

The data analysis with respect to enrollment and retention in the year 2003-04 in the city of Vadodara revealed that despite measures taken for increased enrollment, there was a steady decline in the retention of these children and this was a constant feature observed in all the grades. The enrollment data revealed that in all the grades, the number of students at the end of the academic year were less in number when compared to the number at the beginning of the academic year – thus, retention of these children in the schools was an issue of concern.

It was probably this scenario that eventually prompted the initiative for enrollment drives. In the recent past, in Vadodara city too as in the other parts of the country, the enrollment drive was conducted with the specific objective of tracking down children who were in the school going age but who were out school for different reasons.

**Table 5.1.3**

**THE ENROLLMENT STATUS IN THE CITY OF VADODARA (2006)**

| | | | | |
|---|---|---|---|---|
| STANDARD I | BOYS | 3575 | TOTAL | 7320 |
| | GIRLS | 3745 | | |
| STANDARD II | BOYS | 3021 | TOTAL | 6217 |
| | GIRLS | 3196 | | |
| STANDARD III | BOYS | 2880 | TOTAL | 6143 |
| | GIRLS | 3263 | | |
| STANDARD IV | BOYS | 2897 | TOTAL | 6024 |
| | GIRLS | 3127 | | |
| STANDARD V | BOYS | 2751 | TOTAL | 5653 |
| | GIRLS | 2902 | | |
| STANDARD VI | BOYS | 2848 | TOTAL | 5832 |
| | GIRLS | 2984 | | |
| STANDARD VII | BOYS | 2592 | TOTAL | 5335 |
| | GIRLS | 2743 | | |

**Source : MSB,Vadodara, 2006**

The data analysis revealed that the largest number of students were in the lower primary grades and the number gradually decreased as one progressed to the upper primary grades. There was also visibly a positive trend that could be seen – the number of girl students in each class was more than that of the male students indicating the gradual awareness in society for the education of the girl child.

While this was the trend seen in the academic year 2006, the analysis of the data collected via the Information Schedule revealed that enrolment showed a gradual decrease at the upper primary stage. The retention in these grades also show a decreasing trend implying that after completion of the lower primary education, either students were forced to discontinue, shifted residence or were enrolled in Private schools as was often found to be the case.

Thus, it was difficult to conclude whether or not the concerned student was really a drop-out or continued with his/her education but under different circumstances.

*Once children are enrolled, it is crucial to ensure that they remain at school long enough to complete the curriculum and acquire basic skills. For a variety of school- or family-related reasons, large numbers of children drop out of school, or more accurately, are 'pushed out' (e.g. by the costs of schooling or by a child-unfriendly environment in the classroom) or 'drawn out'(to participate in household economic activities)before completing the fifth grade. These children are likely to be those who found it most difficult to cope with school and whose achievement levels are especially low. The returns they will have from a couple of unsuccessful years of school attendance may be insignificant, compared with those that completion of primary schooling would bring. Reducing dropout rates is thus crucial.* (UNESCO, 2005).

Hence, the need to interpret the enrollment and consequent retention data in the light of the above mentioned fact.

The second objective i.e.

To Study the status of Municipal Corporation Primary Schools in terms of Human Resources

- Qualification and experience of teachers.
- Type and duration of in-service training availed by teachers.
- Frequency and nature of teacher appraisal programmes.

has been analyzed in the following manner.

## 5.2 HUMAN RESOURCES

While material resources constitute infrastructure, facilities and other learning materials and are a significant entry point to the instructional process, human resources are the imperative components and they constitute another very important part of the educational system. In the present context, human resources is given to mean the Teachers, the students and the Parents and factors related to them in the context of the schooling process.

The section below gives the data related to Teachers – their qualifications, years of experience, nature of In-service training programs undergone, nature of teacher appraisal programs, academic duties as well as other duties at school; the preparation made by them for a well organized academic year; their perception regarding absenteeism;

parental involvement and finally their suggestions for the qualitative enhancement of the system.

### 5.2.1 QUALIFICATION AND EXPERIENCE OF TEACHERS.

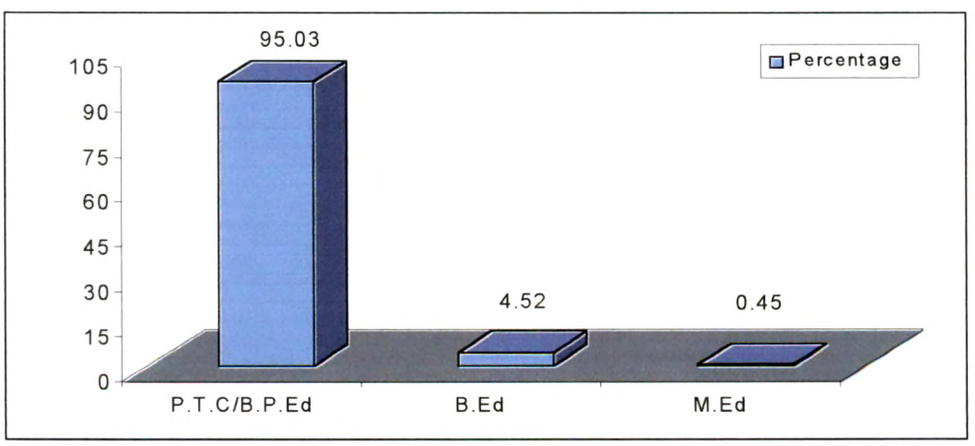
Student achievement is significantly related to quality of teachers. In most developing countries, Teachers are the principal instructional instrument and consequently an essential task would be to improve the preparation, motivation and deployment of teachers. Research proves that Teacher education; particularly the number of years of pretraining general education is related to student achievement. The Teacher's average number of years of education was positively related to achievement in many cases (Saxena, Singh and Gupta, 1995). However, teaching experience has not been found to be a significant predictor of student achievement in major empirical studies (Shukla and others 1994; Saxena, Singh and Gupta, 1995).

The table given below gives details regarding the status of teacher qualification specifically in Vadodara city.

**Table 5.2.1 (A)**

**TEACHER QUALIFICATION**

| **Qualification of teachers** | **P.T.C / B. P. Ed** | **B. Ed** | **M. Ed** |
|---|---|---|---|
| Percentage | 95. 03 % | 04. 52 % | 0 . 45 % |




The data with respect to Teacher qualification revealed that a very large population of Teachers was Secondary school certificate holders after which the required P.T.C.

certification had been obtained (95.03%). The Table also revealed that a very small percentage of teachers were graduates with an advanced professional training i.e. B.Ed (4.52%) and the number of teachers with a post-graduate qualification was miniscule i.e. 0.45 %.

Research studies in countries still endeavoring for Universalisation of Elementary education have shown one of the major constraints towards achievement of Universalisation is the fact that in these countries, the teachers themselves often have scarcely more formal education than their pupils. This would eventually reflect on the quality of the Instructional processes. Research also proves that Teacher education; particularly the number of years of pretraining general education is related to student achievement. Also, it was found that the Teacher's average number of years of education was positively related to achievement in many cases (Saxena, Singh and Gupta, 1995).

Thus, if there is evidence of student achievement being linked with teacher qualification, the system must endeavor to upgrade the general educational qualifications of the Teachers so that this would indirectly impact the achievement of the students.

## EXPERIENCE OF TEACHERS

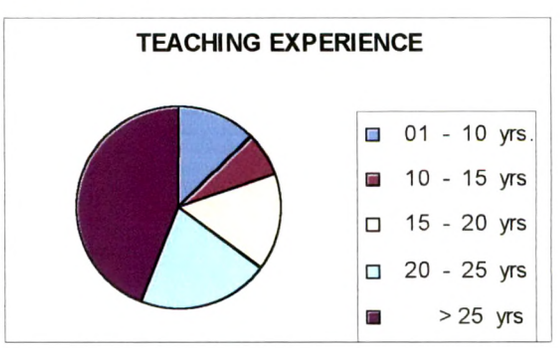
Teaching experience has not been found to be a significant predictor of student achievement in major empirical studies (Shukla and others, 1994; Saxena, Singh and Gupta, 1995).

The table given below details the data with respect to teacher's teaching experience in Vadodara.

**Table 5.2.1 (B)**

**TEACHER EXPERIENCE**

| Teaching experience | Percentage of teachers. |
|---|---|
| 01 - 10 yrs. | 12.63 % |
| 10 - 15 yrs | 06.76 % |
| 15 - 20 yrs | 15.83 % |
| 20 - 25 yrs | 21.00 % |
| > 25 yrs | 43.77 % |



The data given above revealed that a small percentage of teachers had experience ranging from 1-10 years and with increasing teaching experience the percentage increased significantly – the largest population was found to have a teaching experience of more than 25 years.

This indicated that among other factors, these senior teachers had valuable experience which would serve as a rich input for the system ; however the same data also is indicative of the fact that these teachers having obtained their general and professional education years ago, would now need to undergo in-service training programs so as to keep themselves updated with the latest methodologies and techniques available today and thereby keep pace with changing times and needs.

### 5.2.2 TYPE AND DURATION OF IN-SERVICE TRAINING AVAILED BY TEACHERS

It is now an accepted truth that trained teachers do make a difference and regular in-service training does indeed help teachers to keep abreast of modern methodologies and instructional strategies. While there is very strong evidence that the quality of teachers is important, the solution to the problem is not necessarily the traditional teacher-training mode of lengthy pre-service training. Rather, research has given more importance to regular in-service training, continuous within school programs and distance education (World Bank, 1990).

The Nagar Prathamik Shikshan Samiti, Vadodara in coordination with DIET Vadodara, organizes several Training Programmes for Staff and students thereby constantly updating their skills and introducing them to contemporary methodologies and requirements.

Some of the major Training Programmes in the Academic Year 2004-05 were as follows–

**Table: 5.2.2 (A)**

**TRAINING PROGRAMS CONDUCTED (2004-05)**

| **Training Programs conducted** | **Training Program Objectives** |
|---|---|
| Training in Std.IV Textbook teaching | Training Teachers to teach the new Std.IV textbooks via activity based and interesting methodologies. |
| Std.V, VI, VII – Mathematics content Teaching. | Training Teachers to teach Maths via activity based methods. |
| Std. I, II, III.IV – Music, Yoga and Cultural Activities Training. | Training Teachers to conduct Music, Yoga and cultural activities. |
| Std.V,VI,VII – Social Studies and Language skills related Training. | Training Teachers for effective Social Studies and Language teaching (Prose, Poetry and Grammar). |
| Academic Calendar Designing. | Training Teachers for uniform teaching in all the Nagar Prathamik schools. |
| Designing Evaluation tools | Training Teachers to design question papers in accordance with the Grade-wise MLLs. |
| Std.V-VII Competencies Training. | Training Teachers to teach MLLs in a simplified manner. |
| Girls' Education sensitization. | To generate sensitivity regarding the issue of girl child education. |
| Teaching Aids Preparation. | Training Teachers in the designing and effective implementation of Teaching aids. |
| Maths, Science – Content Teaching. | Training Teachers to teach difficult topics in simplified manner. |
| Annual Science Fair Organization. | Instructing Teachers in the Organization of the Annual Science Fair. |

Source : Nagar Prathamik Shikshan Office, Vadodara.

**Table 5.2.2 (B)**

**MAJOR TRAINING PROGRAMMES IN THE ACADEMIC YEAR 2005-06**

| Training Programs conducted | Program Objectives |
|---|---|
| Academic Calendar Designing. | Training Teachers for uniform teaching in all the Nagar Prathamik schools. |
| Content Mastery Enhancement for all subjects – conducted periodically (June.....February) | To enrich Teachers' Content knowledge through this Training Programme. |
| Std.VII Maths, Science, Gujarati, Social Studies - Competencies Training | Training Teachers to teach content effectively as per specified competencies. |
| Training in the making of Subject related Teaching Aids. (Conducted periodically July...March) | Training Teachers in the making of subject specific Teaching Aids. |
| Designing Evaluation tools | Training Teachers to design question papers in accordance with the Grade-wise MLLs. |
| Workshop on Evaluation Practices. | Training Teachers in evaluation practices. |
| Action Research Findings | Disseminating the Findings of the on-going Researches at the State level related to Primary Education. |
| Training in the making of Subject related software. | Training Teachers to make educational software. |
| Introducing Teachers to a Values component in Technology usage. | Sensitizing Teachers to the importance of Values while using Technology. |
| Video Script Writing | Training Teachers in the art of Video script writing. |
| Girls' Education sensitization. | To generate sensitivity regarding the issue of girl child education. |
| Gender Bias Sensitization. | Training Teachers to handle gender issues with sensitivity. |

From the Table given above it can be seen that Training programs were conducted for all connected to the school system.... Functionaries – namely School Principals, the DIET Officials, the CRC and BRC Coordinators, the PTC student-teachers and also the students of the Primary schools.

Some of the noteworthy programmes conducted were as follows –

- For Teachers, a multitude of programs were conducted as revealed above – beginning with the training in effective designing of the annual academic programme, its transaction and associated requirements, meaningfully designed evaluation mechanisms to capture all areas of student progress and finally value added components.
- For students, short training programs were conducted thereby sensitizing them to issues of concern to them as future citizens, namely, Population Explosion and its consequences;
- The PTC student-teachers were trained in the making and effective implementation of subject related teaching aids;
- The PTC Examiners were trained in the attainment of effective content transactional skills, Organization of different school functions and Celebrations, Identifying and attending to class learning difficulties and were also given an Art of Living orientation; the various CRC Coordinators were trained in the Organization of Interschool Functions such as the annual Science Fair and were also given training in Computer related skills.

Duration of these programs was found to vary in accordance with the requirements of the program. Generally, these Training Programs were of duration of three to four days only and sometimes when the training was imparted for topics such as Gender Sensitization or other value added topics, the duration of the programs was of one day only.

The noteworthy fact was that a majority of these Training Programs were conducted during the on-going academic year and the teachers of other grades were assigned the duty of attending to the school students.

In the words of Krishna Kumar '.....while the efforts and gains made by students and teachers over time are essential components of any assessment, a system's capacity to

reform itself by encouraging new practices must also figure in any comprehensive framework of the assessment of quality.....' (Krishna Kumar, 2006).

From the data given above, it can be seen that Training programs were conducted to attend to both academic and academic related areas and attempts made to usher in new practices. Also, skills expected of Teachers in contemporary times, issues of concern to Officials and Teachers in this system specifically and issues of future relevance to students were all taken up periodically and attended to. The above analysis indicates the conscious efforts made by the concerned authorities to provide rich inputs to the Functionaries as well as the students by continuously ushering in meaningful and desirable changes to enhance the overall quality of the system.

In conclusion, regular efforts were found to be made with respect to Teacher Training thereby ensuring that the Administrators, Teachers and other Functionaries were kept abreast of the latest in the field of education. The most important beneficiary and the citizens of tomorrow too were given inputs and sensitized to issues which were relevant and meaningful for their future.

Yet, an issue of concern was that although, In-service training of Government school teachers was indeed beneficial as it was more in line with current school developments in the field as well as with the ground realities faced by these teachers, the training periods were too short to impact teaching methods and affected instructional time because teachers were not willing to come after school hours and during vacation times (PROBE, 1999).

The study revealed that indeed the training programs were for a short duration of a few days only and conducted during the ongoing academic session. Thus, it was necessary to devise mechanisms whereby these training modules could be conducted over extended periods of time so that their impact translated into more effective instructional processes.

Also, such training programs need to be conducted at the very beginning of the year so that the learning finds ample opportunity for expression during the academic year and also because teachers were relatively less burdened during the initial stages. The academic disturbance caused by their absence in the schools for these time periods would remain an issue of concern and alternative yet fruitful arrangements needed to be worked out, keeping the learner in mind.

### 5.2.3 FREQUENCY AND NATURE OF TEACHER APPRAISAL PROGRAMMES.

The teacher appraisal constituted primarily the classroom instruction related factors – prior preparation done by Teachers for meaningful and organized functioning, the actual instructional processes and thus this appraisal was based on the observation of the teacher during the actual classroom instruction. The areas of observation included the methodology adopted during the course of instruction, the manner of recapitulation of the previously taught topic, the usage of prepared teaching – learning material and finally an observation of the performance of randomly selected students from the same teacher's class with respect to selected competencies and skills. These observations were done on a surprise basis twice a day and the concerned authority prepared a report and accordingly feedback was provided in needed areas of improvement.

**Table 5.2.3**

**TEACHER APPRAISAL**

| | **SOMETIME (%)** | **MOST OF TIMES (%)** | **ALWAYS (%)** |
|---|---|---|---|
| Do teachers prepare | | | |
| ❖ Annual Plan | | 3.41 | 89.77 |
| ❖ Lesson wise Plan | 3.41 | 5.68 | 86.36 |
| School timetable prepared? | 2.27 | 7.95 | 81.81 |

| Are the following supervised | **YES (%)** | **NO (%)** | **NO RESPONSE (%)** |
|---|---|---|---|
| • Planning books | 81.82 | 3.41 | 14.77 |
| • T-L activities in the class | 79.55 | 6.82 | 13.63 |
| • Quality of T-L activities | 80.68 | 4.55 | 14.77 |
| Are these taken up in the | | | |
| • Staff meeting | 79.55 | 6.82 | 13.63 |
| • P.T.A. meeting | 84.09 | 3.41 | 12.50 |
| Any action taken? | 38.64 | 19.32 | 42.04 |

It is a general practice to prepare an annual plan for smooth conducting of all the academic activities and the data revealed that an annual calendar was indeed prepared (89.77 %); also, it is generally expected that a Teacher before conducting the class must have a prior lesson plan detailing the specific content, methodology, materials and media that is being planned for the effective conducting of the instruction. The researcher was keen to find out whether or not this really happened – the responses in this connection indicated that the writing of planning books was compulsory and was followed by all the teachers - 86.36 % responded that this was done on a regular basis. Regarding the availability and following of time table it was found that 81. 81 % respondents replied that the time-table was prepared and followed as framed.

The Investigator found that there was present a supervision system that looked into Planning books, the classroom instructional processes and the quality of these activities. When asked whether any action was taken following the supervision, 38.64 % replied that remedial action was taken to rectify the situation in case of gross and glaring evidences.

The scenario revealed an organized functioning with a pre-drawn schedule i.e. a time table; teachers planning their annual, monthly and daily academic activities for meaningful and effective classroom instruction and also a supervision mechanism that inspected the above mentioned on a daily basis. However, the speculation was whether these were done on a notional basis or were the plans actually implemented thoughtfully during the teaching-learning process? Did a prior plan enable a well organized, meaningful and effective transaction or was it merely yet another design on paper only?

These and related issues were taken up during observation of the instructional processes and an attempt made to answer these questions.

### 5.2.4 OTHER SIGNIFICANT ASPECTS RELATED TO HUMAN RESOURCES

In addition to the above mentioned factors i.e. teacher qualifications, training programs undergone and teacher appraisal mechanisms, a few other aspects related to human resources were also taken up and analyzed.

Data related to these aspects have been analyzed below.

**Table 5.2.4 (A)**

**DUTIES OTHER THAN TEACHING FOR STAFF.**

| Duties other than Academic Duties | YES % | NO % |
|---|---|---|
| • Administrative/Census/Election duty | 97.73 | 2.27 |
| • Admission Related | 97.73 | 2.27 |
| • Sports Related | 96.59 | 3.41 |
| • Cultural Activities | 94.32 | 5.68 |
| • School Office related administrative work | 96.59 | 3.41 |
| Are these a disturbance to the regular school activities | 92.03 | 7.97 |

The table above indicates that apart from academic duties, teachers are entrusted with other duties as well such as Election duty, Admission duties (refers to duties such as the enrollment drive conducted in the city to identify and enroll all children in the school going age) Sports related duties, Cultural activity duties and also the administrative duties in their respective schools. More than 90% teachers opined that duties other than academic duties came their way during the course of the academic session.

Normally, in schools other than the Municipal Corporation Primary schools, there are specially appointed teachers for these roles and consequently a single teacher is not over-burdened with all the duties at the same time. When asked whether or not these additional duties were a disturbance to their regular school activities, 92 % of the teachers replied in the affirmative saying that it did impact and disturb their regular academic duties in the schools.

Teachers were also asked the reasons for student absenteeism. The table given below records the reasons as perceived by them.

**Table 5.2.4 (B)**

**REASONS FOR STUDENT ABSENTEEISM**

| Absenteeism was mainly due to | YES (%) | NO (%) |
|---|---|---|
| • School very far from home | 26.14 | 65.91 |
| • No interest in studies | 06.82 | 86.36 |
| • Engaged in other activities | 68.18 | 25.00 |
| • School situated in communally sensitive area | 36.36 | 50.00 |
| • Poor academic achievement | 27.00 | 69.50 |
| • Girl-child | 11.36 | 75.00 |

When asked for the causes of student absenteeism, some of the reasons that emerged were – students were engaged in other activities (68.18%), school was situated in a communally sensitive area (36.36%) and also that school was far from place of residence (26.14%). Some of the other responses to the same question evoked such answers as – students were not interested in their studies and very rarely that being a girl child, going to school was restricted. Some other reasons given were harassment as a result of being a Muslim student and absenteeism due to parental ignorance of the benefits of education. It was interesting to note that as per the understanding of the Teachers, being a girl child was not a barrier to education (75%). Also, Teachers disagreed that school distance was a major barrier and neither was disinterestedness any obstacle to learning – these were positive observations and reflected well on social attitudes, availability of schools within reachable distances and teaching practices.

### 5.2.4 (C) PARENTAL INVOLVEMENT IN SCHOOL

It is well acknowledged that the responsibility of educating a child is the joint responsibility of the School, the parents and the Community and so it is necessary that all these elements work cooperatively and thereby ensure 'good quality' education for the child. Thus, involvement on part of the parents and Community is important if inputs in terms of student progress are expected and so regular, formal and informal interactions are extremely important for the system to function effectively.

**Table 5.2.4 (C)**

**PARENTS INVOLVEMENT**

| | **Rarely (%)** | **Sometimes (%)** | **Frequently (%)** |
|---|---|---|---|
| Are Parents called to School for enquiry | 11.36 | 18.18 | 54.55 |
| How frequently are P-T meetings organized? | 18.18 | 27.27 | 46.59 |
| Do Parents show involvement in their children's academic activities | 44.32 | 23.86 | 14.77 |

Keeping the importance of Community involvement in mind the school authorities were asked regarding the extent of their involvement. From the table above it can be seen that the Parents were frequently called to the schools (54.55 %) and regular PTA meetings were organized (46.59 %). The data reveals a significant finding i.e. there were an equally large number of responses that opined that parents were not too frequently invited to the schools. The next question related to whether or not parents showed initiative on their part – to this question too there was a mixed response. On the one hand there was a response which revealed that parents rarely showed any involvement (44.32 %) but there was a small percentage - 14.77 % responding that the parents did indeed show involvement in their child's academic progress.

Thus, the data appeared to be contradictory on both these responses. This is probably indicative of the fact that only those parents who are aware of the importance of education might be inclined to attend PTA meetings on a regular basis to have regular interaction with the Teachers and assess the academic progress of their children. This implies that Parents themselves should be educated for them to be aware of the serious implications of the lack of education.

Finally, as a very significant component of the educational system, teachers were asked to give their recommendations for quality improvement. Their recommendations are presented in the table below.

**Table 5.2.4 (D)**

**TEACHER RECOMMENDATIONS FOR QUALITY IMPROVEMENT**

| | YES (%) | NO (%) |
|---|---|---|
| Suggestions | | |
| • Improve Teacher Qualification | 32.95 | 55.68 |
| • Sudden and Strict Supervision | 35.23 | 53.41 |
| • Monthly unit tests be introduced | 55.68 | 32.95 |
| • Increase Parent – Teacher meetings | 65.91 | 22.73 |
| • Give and check homework daily | 71.59 | 15.91 |

When asked for their suggestions as to how to improve the quality of the existing system, the responses were as follows – a majority of the Principals felt that the existing qualifications were appropriate while only 32.95 % felt that the existing teacher qualifications needed to be upgraded. 35.23 % of the respondents opined that sudden and strict supervision would help to ensure quality while 53.41% respondents felt that the existing system of supervision needed no change as it was satisfactory. A large percentage - 55.68% were of the opinion that monthly tests should be introduced to ensure regularity in the students' work and formative evaluation would enable detection of learning disabilities.

Studies have proved that the length of the academic year, scheduled and unscheduled interruptions to teaching, affects educational achievement. In countries across the world, the amount of time actually devoted to learning is consistently related to achievement. Even in low literacy districts in India, student achievement was found to be higher in those schools with greater/longer instructional time. Achievement was found to be higher in schools where regularity in attendance was high. Teacher absenteeism reduces instructional time and consequently affects quality.

The positive effect of regular attendance on academic achievement and the role played by parents to ensure this, was noted by Bhattacharya and Dave (1991) for grade I students in nine states. Similarly, Involvement in duties other than academic duties may also prove to be detrimental to the 'quality' of elementary education.

The data analysis of the status of human resources in the schools under study revealed that theoretically there was a proper organization of academic work with annual planning and lesson planning done with regularity - also, a well maintained supervision mechanism where the documents and the quality of the instructional processes were supervised. There was provision for extra reference material for the Teachers to refer in order to enrich their instruction.

However, one wonders how these compulsory and regular pre-planned activities translate into quality inputs and ultimately impact the quality of the teaching-learning process. Do they finally enable a more systematic and efficiently functioning system?

The data also revealed the extra duties which the Teachers were expected to perform other than their regular academic duties.....and a large population of Teachers opined that these were a disturbance to the conducting of their regular school activities. It was also found that according to the Teachers although PTA meetings were organized, parental cooperation was not too positive and so the Teachers recommended that increased parental interactions would indeed be better for the system.

The system as could be seen was being impacted by several components all making their significant individual contributions – those which may be deemed positive were a certain regularity and organization in the daily working schedules of the Teachers, a supervision mechanism that ensured that this systematic and well organized set-up was adhered to and the recognition that parental involvement was crucial in the achievement of system objectives and then devising ways to facilitate increased parent-teacher interactions.

However, while on the one hand, regularity and systematization was being attempted, on the other hand teachers were assigned duties which they themselves professed as being a disturbance in the conducting of their academic duties; while parental involvement was considered crucial, attempts at involving the parents were often unsuccessful due to their unwillingness or ignorance which again may be due to their own limitations in comprehending the importance of education in their children's lives and finally there were also societal perceptions and realities which determined and influenced the functioning of the system.

The fact remains that for the system to function effectively all these influences should be supportive and not that they cancel out one another thereby negating all the well thought efforts put in for the benefit of the Learner.

The next objective attempted to answer some of the questions raised in the previous section, namely, how were the inputs being implemented and were they enabling a more systematic and efficiently functioning system?

The third objective i.e.
To study the teaching-learning process in the schools through

- Analysis of the text book,
- Organization of the time-table,
- Mode of classroom transaction -Methods adopted by the teachers,
  -Teaching aids used by the teachers,
- Evaluation mechanisms,
- Remedial classes conducted for weak students.

.....has been analyzed in the following manner.

## 5.3 THE TEACHING-LEARNING PROCESS IN THE SCHOOLS

While the facilities accorded are a significant input, these represent only one dimension of the curricular inputs provided in the schools. Student learning is largely influenced *also* by the actual curricular transactions and thus each classroom becomes a unique learning environment depending on the manner in which the instructional processes are visualized, designed and organized by individual teachers (Govinda & Varghese, 1991). Organization of classroom teaching may vary depending on the methodology required and considered appropriate for certain chosen subjects, specialization of teachers in the subjects taught, availability of sufficient number of teachers, additional duties conducted which are subtracted from instructional hours, etc. Thus, organization of instructional processes contribute significantly to the quality of education provided and so *observation of instructional processes* was taken up as an important indicator. The aspects looked into were the school textbooks, organization of the time-table, mode of classroom transaction, the evaluation mechanisms and the remedial classes conducted post examination.

The first step was analysis of the most important and widely utilized instructional material i.e. the textbook.

### 5.3.1 ANALYSIS OF THE TEXT BOOKS – LANGUAGE AND MATHEMATICS.

Provision of instructional material is one of the ways of improving the quality of Education. International experience has shown that relatively modest instructional materials actually promote learning. Materials such as textbooks, libraries and classroom instructional materials are significant determinants of achievement in low income and middle-income countries.

The Textbook is the single most important Instructional aid in the Indian classroom situation since other teaching aids are used sparingly.

### 5.3.1. (A) TEXT BOOK EVALUATION – MATHS

The Mathematics Textbook analysis revealed the following features –

**Table 5.3.1. (A)**
**TEXT BOOK EVALUATION – MATHS**

| | | Std. V | Std. VI | Std. VII |
|---|---|---|---|---|
| 1) | **First Published** | | | |
| | Last Revision | First Published in 1997 Subsequent revisions in 2000, 2001, 2002, 2003 | First Published in 1998 – Subsequent revisions in 2000, 2000, 2001 | First Published in 1999 – Subsequent revisions in 2001, 2002 |
| 2) | **Organisation** | | | |
| | Overall organization of Subject | Ideas placed from simple to difficult – in gradient manner | Topics placed from simple to difficult in gradient manner. Topics from Std. V in greater detail. | Topics arranged from simple to difficult topics from Std. VI in greater detail. |
| | Organisation within | Most chapters begin with a recapitulation of related topics; this | Most chapters begin with a recapitulation of related topics; this | Most chapters begin with a recapitulation of related topics; this |

| | | Std. V | Std. VI | Std. VII |
|---|---|---|---|---|
| | | is done with a short exercise for self evaluation. | is done with a short exercise for self evaluation. | is done with a short exercise for self evaluation. |
| | | Topics arranged logically and corresponding MLLs stated alongside each subtopic. Solved examples (3-4) for each subtopic. Alternative ways of solving numericals are also shown. | Topics arranged logically and corresponding MLLs stated alongside each subtopic. Solved examples (3-4) for each subtopic. Alternative ways of solving numericals are also shown. | Topics arranged logically and corresponding MLLs stated alongside each subtopic. Solved examples (3-4) for each subtopic. Alternative ways of solving numericals are also shown. |
| | | The explanation of each subtopic is immediately followed by an assignment to be done in class and self study exercise is given for homework. | The explanation of each subtopic is immediately followed by an assignment to be done in class and self study exercise is given for homework. | The explanation of each subtopic is immediately followed by an assignment to be done in class and self study exercise is given for homework. |
| | | Suggested activities for Teachers to give better understanding of this topic. | Suggested activities for Teachers to give better understanding of this topic. | Suggested activities for Teachers to give better understanding of this topic. |
| | | Exercise at the end of the chapters for overall revision; Exercises are at application level only. | Exercise at the end of the chapters for overall revision; Exercises are at application level only. | Exercise at the end of the chapters for overall revision; Exercises are at application level only. |
| | | Test after 2-3 chapters for intermittent evaluation. | Test after 2-3 chapters for intermittent evaluation. | Test after 2-3 chapters for intermittent evaluation. |

| | | Std. V | Std. VI | Std. VII |
|---|---|---|---|---|
| 3) | **Content** | | | |
| | In accordance with MLLs stated | Content divided into subtopics and corresponding MLLs stated. | Content divided into subtopics and corresponding MLLs stated. | Content divided into subtopics and corresponding MLLs stated. |
| | Additional and latest information provided. | - | In Teacher activity, tips are given to give additional information such as information about LIC and HDFC in Ch.3 : Simple Interest | In Maths, general chapters are also included. Ch-4 gives details regarding calculator. |
| 4) | Presentation of Material | Appropriate headings and subheadings are used for the different topics. Topics, subtopics, headings and definitions are in bold font to attract attention. | Appropriate headings and subheadings are used for the different topics. Topics, subtopics, headings and definitions are in bold font to attract attention. | Appropriate headings and subheadings are used for the different topics. Topics, subtopics, headings and definitions are in bold font to attract attention. |
| 5) | Language | There are some words and mathematical terms expressed in difficult vocabulary but there is no glossary for explanation of difficult terms. | There are some words and mathematical terms expressed in difficult vocabulary but there is no glossary for explanation of difficult terms. | There are some words and mathematical terms expressed in difficult vocabulary but there is no glossary for explanation of difficult terms. |
| 6) | Illustrations | Diagrams, pictorial representations are clear and appropriately placed. Figures and diagrams clearly labeled and well explained. | Diagrams, pictorial representations are clear and appropriately placed. Figures and diagrams clear labeled and well explained. | Diagrams, pictorial representations are clear and appropriately placed. Figures and diagrams clear, labeled and well explained. |

| | | Std. V | Std. VI | Std. VII |
|---|---|---|---|---|
| 7) | Mechanical Features | Quality of Print, Paper and Binding is satisfactory. Textbook is in black and white. Figures are neat bold and clear. | Quality of Print, Paper and Binding is satisfactory. Textbook is in black and white. Figures are neat bold and clear. | Quality of Print, Paper and Binding is satisfactory. Textbook is in black and white. Figures are neat bold and clear. |

**ANALYSIS OF THE MATHEMATICS TEXTBOOK -**
**OVERALL OBSERVATIONS.**

Revisions were done periodically, in fact the Math textbook of Std.V revealed that revisions were done as frequently as 2000, 2001, 2002, 2003.The overall content organization was from simple to difficult topics; the chapters began with a brief recapitulation of the previous topic, often with a short exercise for self-evaluation. Each new concept was introduced along with a detailed explanation, solved examples, and often alternative methods of solving the same problems were also shown. Following these were related assignments for self-evaluation. It was found that activities were suggested alongside the newly introduced topics for teachers to design meaningful activities, in case of concept clarification.

There were intermittent evaluation exercises in the form of a short test for the purpose of formative evaluation – these tests were however only at the application level without any higher order questions being posed. The content was analyzed into sub-topics with the corresponding MLLs stated alongside. For certain topics, relevant and current additions were provided.

The layout was found to have appropriate headings and subheadings with topics and subtopics highlighted. The printing was in black and white and the diagrams and pictorial representations were clear, appropriately placed and labeled.
Also,

There were errors detected in the Std. VI and VII textbooks namely –

- Std VI – pg 81 – Example 17 – The given numerical relates to Wheat and its distribution among 45 families but the solution shows an additional amount of bajri

which is being distributed among the members. Thus, the numerical begins with wheat and ends with grains where grains imply wheat plus bajri.

- In the Std. VII textbook, the unit of time is given as 'mt' instead of 'minute'.

'*rate of work done*' is given as work done / time taken

$$= 1 \text{ work} / 3 \textit{ mt}$$

$$= \frac{1 \text{ work}}{3 * 60 \text{ sec}}$$

$$= 1 / 180 \text{ work/sec}$$

Thus, 1/3 work / mt = 1 / 180 work / sec

Students too would imbibe the same erroneous unit i.e. 'mt' for 'minute' which is factually incorrect. This error was detected in at least 5 instances.

- There are typographical errors also like

Eg. A machine finishes $\frac{4}{5}$ part of work .....

The division sign in between is *not* shown ...

Ideally the fraction should have been written as $\frac{4}{5}$

This too may cause misunderstanding among the students.

- There was yet another error detected where the multiplication sign was missing, namely

In 2 hours if work done is ½, then in 1 hour work done will be

$$\frac{1}{2} * \frac{1}{2} = \frac{1}{4}$$

But the same is depicted in the textbook as $\frac{1}{2}\ \frac{1}{2} = \frac{1}{4}$

There was no multiplication sign in-between the numbers in the denominator. Thus, both the mathematical concept and the reason for yet another ½ are difficult to understand unless the mistake is pointed out specifically.

### 5.3.1. (B) TEXT BOOK EVALUATION – LANGUAGE

**TABLE 5.3.1. (B)**

**TEXT BOOK EVALUATION – LANGUAGE**

| | | Std. V | Std. VI | Std. VII |
|---|---|---|---|---|
| 1 | First Published; Last Revision | First published in 1997; Subsequent revisions in 1999, 2000. | First published in 1998; Subsequent revisions in 1998, 1999, 2000, 2001, 2002. | First published in 1999; Subsequent publications in 1999, 2000. |
| 2 | Organization of Content in Text Book | Minimum Levels of Learning organized in terms of listening, speaking, reading, and writing. | Minimum Levels of Learning organized in terms of listening, speaking, reading, and writing. | Minimum Levels of Learning organized in terms of listening, speaking, reading, and writing. |
| | | The Organization of content is as follows Introduction to Poet / Author; Brief Summary of Prose / Poem; Glossary of difficult terms; Questions/ Grammar Exercise based on Prose/ Poem; Self-study exercise; Prose/ Poem related activity for knowledge generation; Related Grammar Explanation followed by exercises for practice; Guidelines to Teachers for more activities to enhance student knowledge. | The Organization of content is as follows Introduction to Poet / Author; Brief Summary of Prose / Poem; Glossary of difficult terms; Questions/ Grammar Exercise based on Prose/ Poem; Self-study exercises; Prose/Poem related activity for knowledge generation; Related Grammar explanation followed by exercises for practice; Guidelines to Teachers for more activities to enhance student knowledge. | The Organization of content is as follows- Introduction to Poet / Author; Brief Summary of Prose/Poem piece; Glossary of difficult terms; Questions/ Grammar Exercise based on Prose/ Poem; Self-study exercises; Prose Poem related activity for knowledge generation; Related Grammar Explanation followed by exercises for practice; Guidelines to Teachers for more activities to enhance student knowledge. |

| | | | | |
|---|---|---|---|---|
| 3 | Content | In accordance with the MLLs the initial chapters have a brief section on phonetics/ i.e. how to pronounce words properly tips on proper reading including tips on punctuation, pause. | | |
| | Co-relation | Co-relation between subjects is attempted for example<br>▪ Ch-6 : Food and Health<br>The Teacher's Activitygives guidelines on 'Micro-Organisms' and how it benefits/ affects other organisms.<br>▪ Ch-8 : Sardar Vallabhai Patel<br>The Teacher's Activity section includes map activity for students to locate significant places in the Gujarat Map.<br>▪ Ch-11 : Noise Pollution<br>Teacher's Activity includes the harmful effects & causes of Noise Pollution and means to reduce it. | Co-relation between subjects is attempted for example.<br>▪ Ch-17 : Prem Vrishbhavtar<br>Teacher's Activity, there is a suggestion to co-relate the poem with the problems arising due to population explosion. Thus, a sensitization to the problems of population explosion.<br>▪ Ch-18 : Ghardivadi<br>Teacher's Activity includes sensitization to equality of sexes.<br>▪ Ch-24 : Pujya Mota<br>Teacher's Activity includes a sensitization to life skills - and the necessity of these to progress in life. | Co-relation between subjects is attempted for example<br>▪ Ch-6 : Shubhratri, mashi<br>Teacher's Activity has suggestion to use related ideas for sensitization to flora and fauna.<br>▪ Ch-17 : Drishtanth - Kathao<br>Teacher's Activity includes section on life skills – empathy, getting along with others, etc. |
| 4 | Presentation of Material | Appropriate Headings and Subheadings are used for topics/ activities.<br>▪ Idioms/ Phrases are typed in bold font. | Appropriate Headings and Subheadings are used for topics/ activities.<br>▪ Idioms/ Phrases are typed in bold font. | Appropriate Headings and Subheadings are used for topics/ activities.<br>▪ Idioms/ Phrases are typed in bold font. |

| | | | | |
|---|---|---|---|---|
| 5 | Language | There is a glossary for difficult terms so that difficult words are explained.<br><br>The explanation of grammatical concepts although having new terminologies, has no corresponding glossary. | There is a glossary for difficult terms so that difficult words are explained.<br><br>The explanation of grammatical concepts although having new terminologies, has no corresponding glossary. | There is a glossary for difficult terms so that difficult words are explained.<br><br>The explanation of grammatical concepts although having new terminologies, has no corresponding glossary. |
| 6 | Illustrations | All the drawings/ pictures are in black and white and are clearly depicted. | All the drawings/ pictures are in black and white and are clearly depicted. | All the drawings/ pictures are in black and white and are clearly depicted. |
| 7 | Mechanical | Quality of Print is clear, bold with easily understandable font. | Quality of Print is clear, bold with easily understandable font. | Quality of Print is clear, bold with easily understandable font. |
| | | Paper binding - satisfactory. | Paper binding - satisfactory. | Paper binding - satisfactory. |

**ANALYSIS OF THE LANGUAGE TEXTBOOK –**
**OVERALL OBSERVATIONS**

The textbooks showed frequent revisions for example the Language textbook of *Std VI* showed revisions done frequently (1998,1999,2000,2001,2002);the organization of the content was in terms of listening, speaking, reading and writing skills ; each unit (prose/poetry) began with a brief introduction to Author/poet followed by a brief summary of the following poem or prose piece, exercises for self-evaluation and self study exercises, related exercises given for knowledge enrichment and also guidelines given to the teachers for designing of meaningful student activities.

It was found that in *Std V,* tips were given on proper pronunciation, intonation and manner of reading - this input was however not repeated in the future classes. The textbook attempted a co-relation between the topics and related information (as stated in the table above).The presentation was found to be with appropriate headings and subheadings with topics and subtopics highlighted. The printing was in black and white and the diagrams and pictorial representations were clear, appropriately placed and labeled.

The data analysis revealed that the school Textbooks were periodically revised and necessary updations were made, the content was organized systematically with ample examples provided for better understanding. The noteworthy elements were the inclusion of the latest information in connection with some of the topics; the attempts to correlate specific topics with other disciplines and also Life-skills and the attempts at continuous formative evaluation for student self assessment.

Thus, all attempts were made to make the text books relevant, updated, correlated and well presented both with respect to mechanical and content aspects.

Despite the noteworthy attempts made to make the text books relevant, updated, correlated and well presented both with respect to mechanical and content aspects – it was found that these Textbooks were crammed with awesome information, concepts and vocabulary.

The Language textbook focused mainly on the language structures and other mechanical aspects - the nature of the text was far too formal and removed from the spoken form; there was no attempt to include colloquial forms (used in daily conversations) from the different dialects with the assumption that children would learn to communicate only through rote memorization and repetition.

The Maths textbook too revealed excessive accumulation of facts and although examples, applications, teacher activities and student self-assessment exercises were provided, there was lack of correlation with daily life experiences and eventually the subject became irrelevant and meaningless to the learner who failed to find meaning in the topics included.

Also, keeping in view the poor achievement levels of students over the years which had adverse effects such as reduced retention levels, the Minimum Levels of Learning (MLLs) were introduced in order to shift the focus from superficial treatment of textbook based factual content to attainment in terms of actual learning behaviors.

However, the detailing of competencies into sub-competencies and the assumption that the sum of these sub-skills would be the competency itself has come in for criticism from academicians nationwide. They argue that 'frequently, with the focus on behaviors and performance, concepts may not even feature in the assessment. This logical yet mechanical listing of sub-skills and rigid timetables for their achievement does not reflect either the concern that learning and use of the competency may itself be more flexible, or, that the cycle over which competencies are learnt need not follow the timing or pace described, or, that the whole may be greater than the sum of the parts. Designing learning and test items for these detailed lists, and teaching to these learning outcomes, is impractical and pedagogically unsound' (NCF, 2005).

Also, a well designed instructional tool such as the text book still needs appropriate implementation and the subsequent analyses i.e. classroom observations, interviews with the Practitioners themselves and finally the student learning outcomes would finally reflect the extent and quality of implementation of this very significant instructional tool. Analysis related to these aspects have been presented in the following section.

### 5.3.2 ORGANIZATION OF THE TIME-TABLE

A significant indicator of school management is the manner in which the school activities are organized. Certain questions regarding the school organization which were attempted to be answered here were - how are the daily activities organized? ; are they organized in accordance with an annual plan? What are the different subjects taught in the respective grades? What is the weekly allocation in terms of time for these subjects ?

The Table below gives the data with respect to Time table organization.

**Table 5.3.2**

**TIME TABLE ORGANIZATION**

| SUBJECTS | GRADES | | | | | | |
|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | VII |
| GUJARATI | 9 | 9 | 9 | 9 | 7 | 7 | 7 |
| ENGLISH | | | 2 | 2 | 5 | 4 | 4 |
| HINDI | | | | 2 | 5 | 4 | 4 |
| MATHS | 9 | 9 | 9 | 9 | 6 | 6 | 6 |
| SCIENCE | | | | | 6 | 6 | 6 |
| SOC. SC. /ENV. SC | 9 | 9 | 9 | 9 | 6 | 5 | 5 |
| SANSKRIT | - | - | - | - | - | 2 | 2 |
| PHYSICAL EDUCATION | | | | | 2 | 2 | 2 |
| ART | | | | | 2 | 2 | 2 |
| MUSIC | | | | | 2 | 2 | 2 |
| SUPW | 9 | 9 | 9 | 7 | 2 | 2 | 2 |
| SR PRVRUTI | 9 | 9 | 7 | 7 | | | |
| SPORTS & DRILL | | | | | 2 | 3 | 3 |
| TOTAL HOURS | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

The analysis of data revealed that the weekly allocation of hours to be allocated to each subject in each grade is issued to all schools on behalf of the Nagar Prathamik Shikshan Samiti.

The total number of teaching hours per subject per week was found to be 45 each, in all the classes. The class duration was found to be thirty minutes in all the classes except for the first two classes which had duration of thirty-five minutes. The Morning Assembly was conducted over a period of forty minutes and a short break of twenty minutes was given after the first four classes. However, it was found that Science and Maths periods were often conducted after the recess and the first few classes of the day were the Language classes.

In the lower primary classes, all the subjects were not introduced. The subjects taught at this level were Language (Gujarati, Marathi, Hindi, and Sindhi), Mathematics, Environmental Science, S R Pravruti and Socially Useful Productive work. The teaching

of English as a subject, commenced from Standard Three and in Standard Four elementary Hindi was also introduced. The number of hours devoted to teaching of Language, Maths and Environmental Science were extensive in the lower primary grades which reduced gradually as students entered the upper primary grades. Thus, at the lower primary grades, when the foundation was being laid, the time allotted was more and gradually they decreased .The number of hours for English language teaching was less in the lower grades and increased gradually as one went to the higher grades. Sanskrit as a subject was introduced from Standard Six. Also, with the number of academic subjects increasing, the time allotted to extra-curricular activities was gradually reduced as one moved to the higher classes. In the Upper Primary classes, there was a gradual increase in both the academic and non-academic areas and in the weekly allocation of the number of hours for each.

Thus, the data analysis indicates that the curricular load is maintained at a minimum in the lower grades and gradually allowed to increase with increase in age. The noteworthy feature was that the initial instruction was done in the child's own mother tongue .....a feature recommended for effective future instruction to happen. There was also inclusion of extra-curricular activities such as Art, Music, SUPW and Physical Education interspersed with academics so as to take care of the monotony of classroom teaching.

However, one wonders whether in the given situation where one Teacher is assigned the duty of teaching all the subjects, is a pre-drawn timetable really possible to be adhered to? And is not this practice of a single Teacher being present in the class for extended periods a sure recipe for monotony to set in?

(This may be one of the reasons why Private schools generally prefer different Teachers for the different subjects so as to ensure less monotony and more regularity in terms of instructional time).

Thus, while time table organization seems to have considered many psychological and academic truths, the limitation of adequate Staff and other trained persons makes such arrangements (as discussed above) imperative and how these arrangements affect student learning outcomes is a significant concern.

### 5.3.3 MODE OF CLASSROOM TRANSACTION

It was decided to observe classes and see the classroom instructional processes as well as to capture the goings on in the actual classroom situation. Classroom observations were made as a participant observer both in Mathematics and Language Subjects, in Grades V, VI, VII. The purpose of the Observation was to get to know the prevalent teaching methodologies, strategies used by the teachers, student participation and behavior patterns, nature of pupil responses, instructional aids used by the teachers, homework assigned and modes of evaluation.

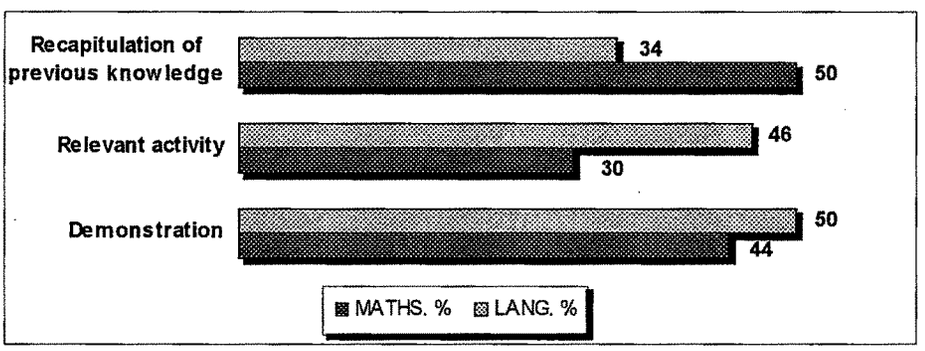
For this purpose, a total of fifty classes were observed both in Language and Mathematics in all the grades V, VI and VII and for all the mediums of instruction i.e. Gujarati, Marathi, Hindi and Sindhi. The selection of classes was random without following any particular or pre-determined criteria.

The data collected was then analyzed by conversion into frequency of occurrence and percentages and the same have been presented graphically as per the individual items contained in the observation schedule.

The observation of the Mathematics and Language classes revealed the following –

**GRAPH 5.3.3 (A)**

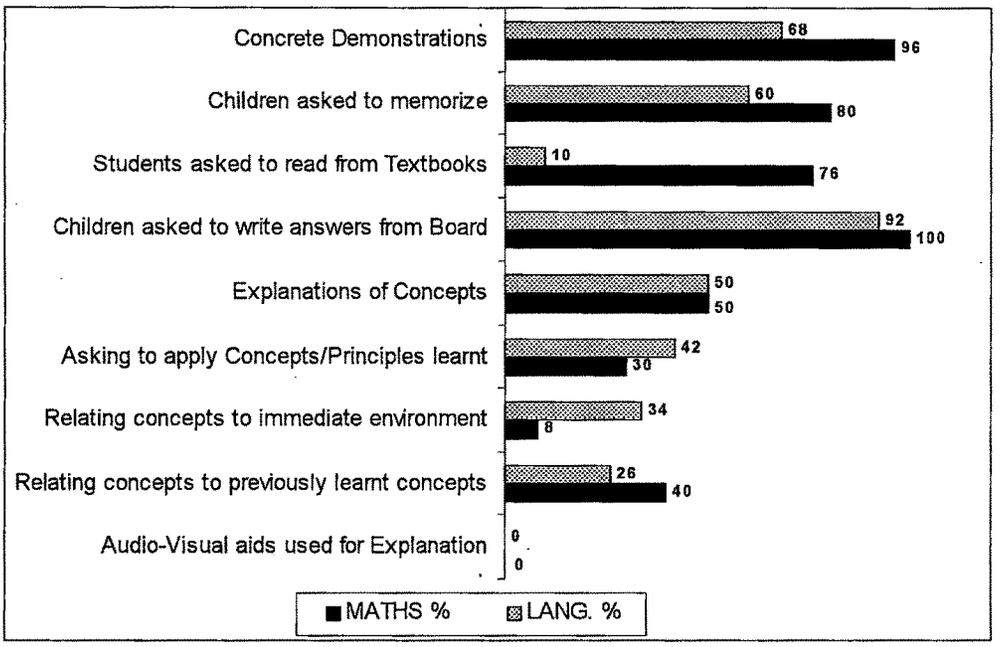
**ITEM: LESSON INTRODUCTION.**




The Maths lessons were introduced by recapitulation of previous knowledge primarily (50%) and also by referring to the Teaching Learning Materials made by teachers for the various topics (44%). It was only in rare circumstances that a relevant activity was done to introduce the topics (30%). Observation of the Language classes also revealed that recapitulation of previous knowledge was done (34%) and that the teaching Learning Material was used to relate to during the introduction phase (50%).

**GRAPH 5.3.3 (B)**

**ITEM: TEACHING STRATEGIES**

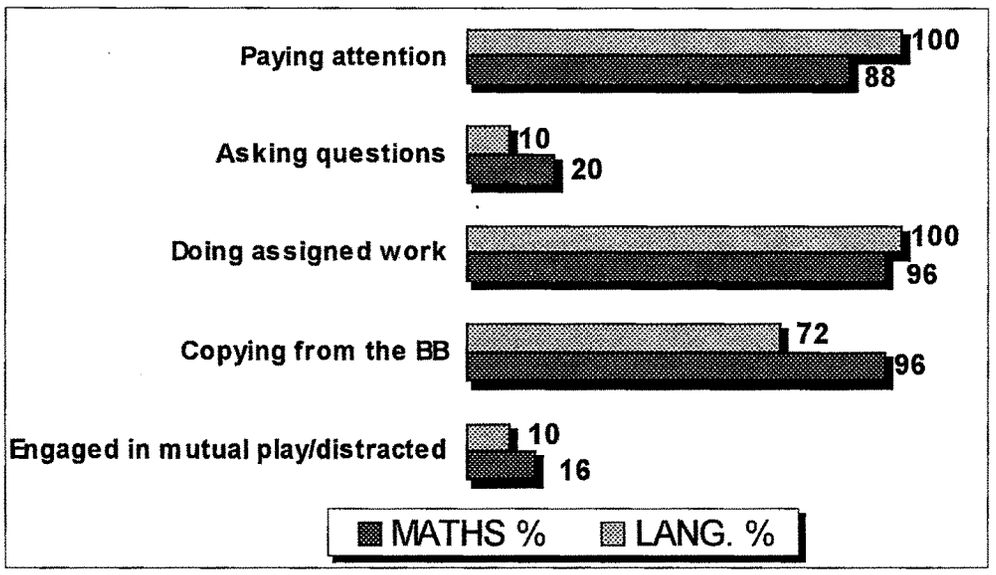



During the Mathematics Instructional process, the strategies most predominantly used by the Teachers were explanation of concepts with the available TLM materials, followed by solving of numerical problems (96%). The students were mostly passive and were assigned the task of memorizing (80%), reading from the textbook (76%) or writing the solved numerical from the blackboard (100%).They were often found to be assigned the task of memorizing facts and definitions from the textbook. The use of audio-visual aids for teaching mathematics was very rare and the available TLM were occasionally used for the explanation of concepts. The concepts which were related to previously taught concepts in Maths were at times correlated (40%), but the same were rarely related to the immediate environment (8%) – thus teaching subjects in isolation and not integration.

The same was seen even in the Language classes. The most dominant Teacher activities were explanation of concepts (50%), children being asked to memorize (60%) and writing answers from the blackboard (92%). It was also found that students were very rarely asked to do any reading from the textbooks (10%); thus, the skills of reading and speaking were rarely catered to.

**GRAPH 5.3.3 (C)**

**ITEM: STUDENT BEHAVIOUR PATTERNS**

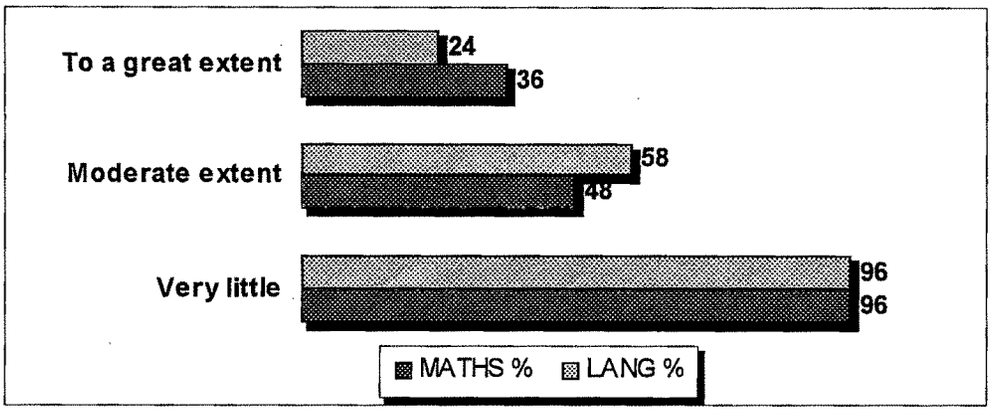



Student behavior patterns in the class revealed that they were mostly passive in teacher-centric classes. In the Mathematics classes, they were found to be attentive (88%) but occasionally the backbenchers were found to indulge in mutual play (16%). Students assumed a passive role - quietly copying from the blackboard (96%) and doing the work which was assigned to them (96%); very rarely had they any questions or queries (20%).

The scenario in the Language classes too was similar – students were attentive (100%) and did the work assigned to them (100%).They were found, in most cases to be writing (the assigned class work) from the blackboard (72%) and very rarely had any questions or queries (10%).

**GRAPH 5.3.3 (D)**

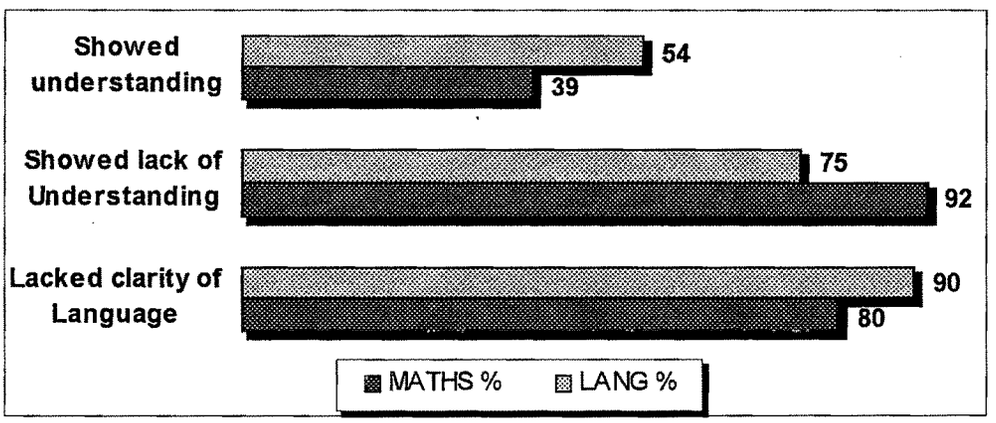
**ITEM: PUPIL PARTICIPATION**




In both the subject classes, the student participation was found to be moderate. Questions were posed to the students and a chosen few students answered these questions with the larger student population not being able to answer them. In each class there were few students who were academically brighter than the remaining students and other than them the classes were predominantly passive. In both the Mathematics and Language classrooms, in 96% observations, very little pupil participation was seen, implying that the instructional processes were predominantly teacher-centric.

**GRAPH 5.3.3 (E)**

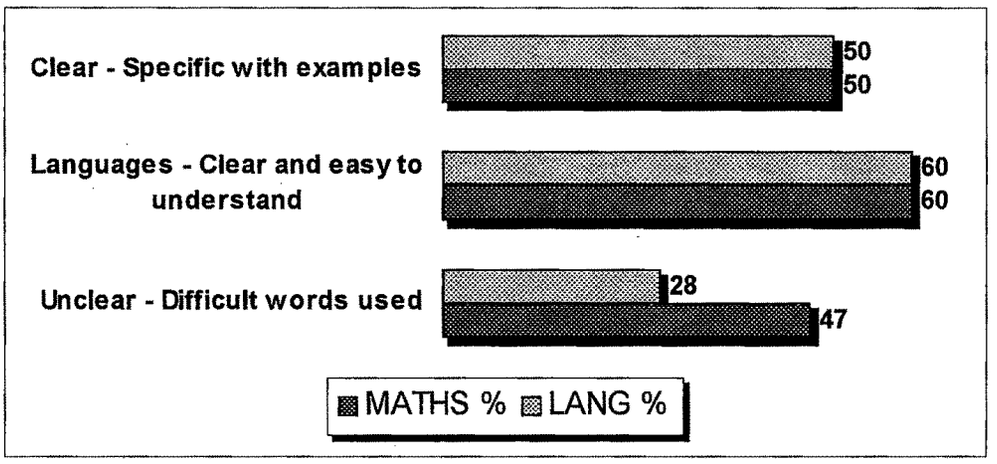
**ITEM: PUPIL RESPONSES**




When questioned by the teachers, a few chosen students predominantly answered the questions with the larger student population remaining silent. In general, the student responses showed lack of understanding (92% in Maths and 75% in Languages). The observation also revealed that both in the Mathematics and Language classes, the responses lacked clarity i.e. students were unable to respond with clarity (80% in Mathematics and 90% in Languages).

**GRAPH 5.3.3 (F)**

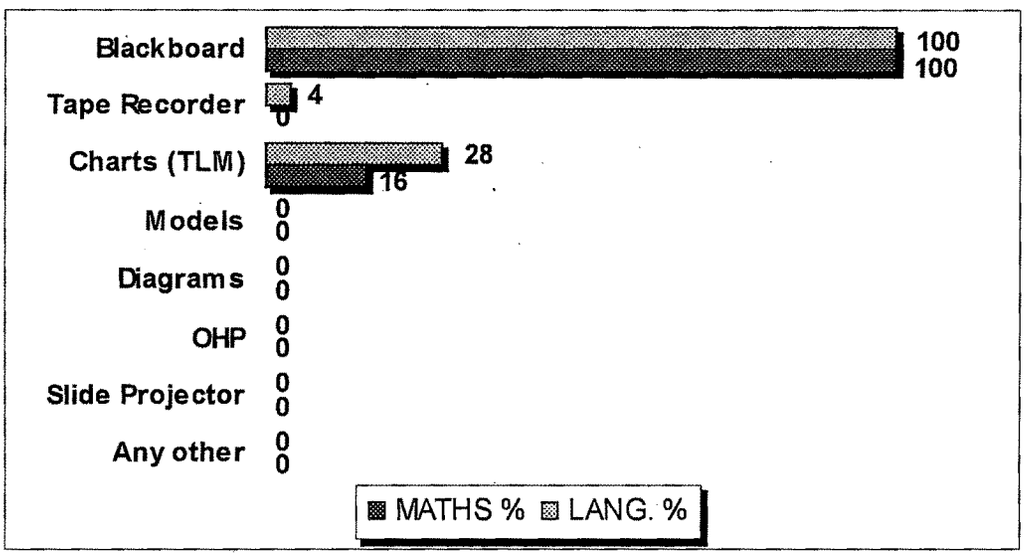
**ITEM: TEACHER EXPLANATION**




The Observer noticed that explanations done by the teachers were clear, specific with examples (50% in both Mathematics and Language classes) and the language used was clear and easy to understand –explanations were done in detail and difficult terminologies were rarely used. Sometimes in the Maths class difficult items were used and then explained in the context of the topic taught (47%).Similarly, the Language teacher occasionally used difficult terminologies which may have been difficult for students to comprehended (28%). However these were under exceptional circumstances. The regular feature was teacher dominated classrooms wherein mostly the mode of transaction was writing and solving the sums on the blackboard without any detailed explanation. There were cases where it was seen that a Mathematics class was being conducted by a school Teacher who professed to not being too conversant with the subject herself, being the school Art teacher prior to having taken up the present assignment.

GRAPH 5.3.3 (G)

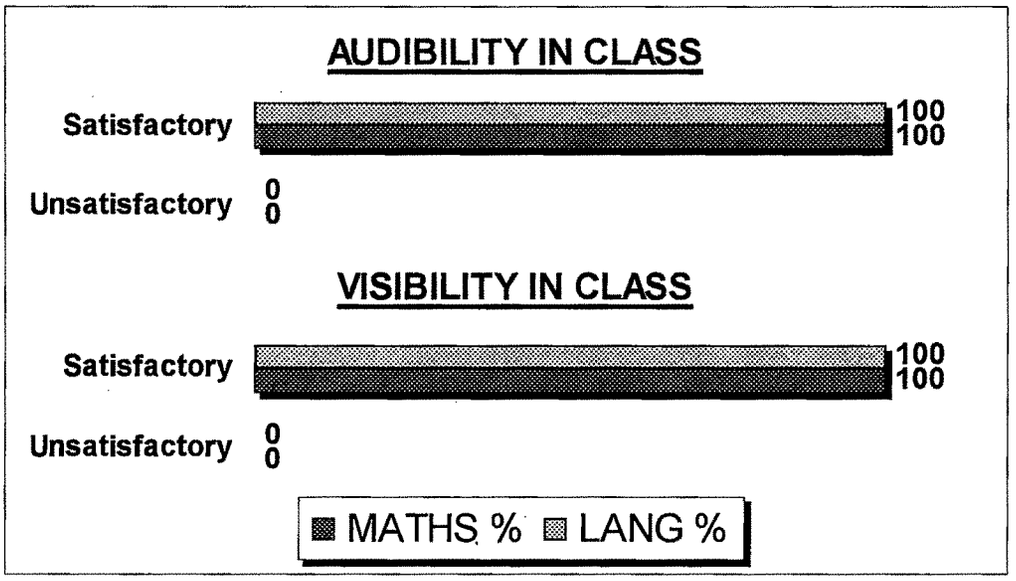
**ITEM: TEACHING AIDS USED IN CLASS**




Regarding the usage of teaching aids it was found that the most pre-dominantly used teaching aid used was the blackboard (100% usage in both subjects) and only under rare circumstances were some other teaching aids used. In some rare instances it was found that the tape recorder was used in the language class for the lower primary classes (4%). The Teaching Learning Material made by the teachers was also used by them during the teaching-learning sessions although not too frequently – 16% and 28% in the Mathematics and Language classes respectively. Some of the school teachers mentioned that since the schools were operating in shifts, the TLM were not too frequently used as there was a possibility of their being damaged during the other shift. It was this apprehension that prevented the teachers from utilizing the TLM freely for the benefit of the students.

GRAPH 5.3.3 (H)

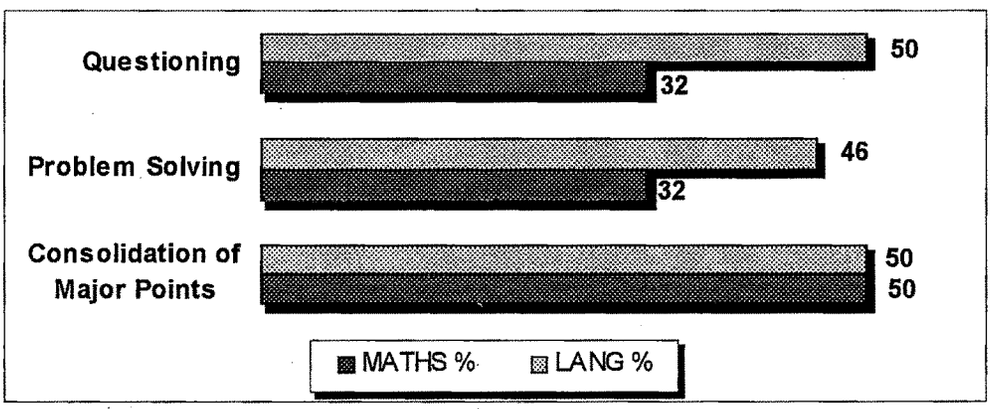
ITEM: AUDIBILITY, VISIBILITY IN CLASS




In the case of both audibility and visibility inside the classrooms, it was found that since the classrooms were not too big and neither was the student population too large, the audibility in the class was found to be satisfactory. The visibility too was satisfactory – since the student population was less, they were seated near the windows and thus visibility was satisfactory. Otherwise, in terms of school infrastructure, in most cases, the rooms were not too well lit and the classrooms were quite poor in visibility.

GRAPH 5.3.3 (I)

ITEM: CLASS SUMMARISING




During the observation it was found that all the classes were concluded by a quick recapitulation done mainly through consolidation of main points both in the Maths and Language classes – the other recapitulation strategies were problem solving and

questioning. But whatever be the strategy employed, recapitulation was done after each class to consolidate the just taught content matter.

With regards to home assignments it was found that these were assigned, although not after each and every class, but they were rarely checked by the teachers. The assigned work was generally checked by student monitors mainly for the regularity of the work done and not so much for the quality of work submitted. Thus, there was no regularity in checking and identifying learning disabilities through the homework.

The manner in which extra-curricular activities were arranged in the time-table and conducted was observed and the nature and extent of student participation noted. The organization was done as depicted in the timetable with various activities conducted such as Drawing, Craftwork, Clay work ,Physical Education, Music, Object Drawing, Nature drawing, Handwriting ,etc. However, many of these activities although included in the timetable could not be conducted due to non-availability of trained persons and eventually, the class teachers themselves conducted the same. For these children it was mostly free play during these periods.

**OVERALL INTERPRETATION**

Research evidences show that the instructional time and the quality of instructional time spent has a significant effect on learning outcomes. *Research evidences from 'instructional effectiveness' research confirms these results. It suggests that structured teaching methods, bringing a strongly ordered approach to learning tasks – with clear learning goals, sequenced introduction to new material, clear explanations, regular checking of understanding, time for pupils to practice new skills, completion of learning tasks and frequent testing and feedback – are helpful ingredients in strategies for quality improvement and reform.* (UNESCO, 2005).

In contrast to the above, the study revealed that the practices inside the classrooms were predominantly teacher-centric with little scope for active participation by students in the learning process. The classroom observations revealed a classroom atmosphere wherein the most pre-dominantly used methodology was the lecture method and the teaching aid was the blackboard; students mostly wrote down facts from the blackboard with very little participation in the ongoing instructional processes. Similar findings were reported by the PROBE team – they too concluded that the child's natural curiosity and

propensity to constantly ask questions are all silenced by the school environment and gradually they assumed the role of passive listeners. (PROBE, 1999).

Any instructional process would be incomplete without evaluation of student learning outcomes and its remediation and the following sections deal with evaluation mechanisms followed in the primary grades.

### 5.3.4 EVALUATION MECHANISMS - STD. I – VII.

In keeping with modern day educational theories which do not approve of examinations for students of this age group, Stds. I and II do not have any examinations; rather they have a comprehensive evaluation system which captures all aspects of their development in the school via an observation which spans the entire academic year.

It is clearly stated in the progress card itself that the evaluation is not a formal academic Report Card rather an account of the student's progress during the course of that academic year which covered all aspects of his/her growth.

FOR STD I a comprehensive evaluation pattern was employed wherein the child's academic and non-academic areas were evaluated without conducting any formal examination. The areas that were taken up specifically were –

Personality Development –some of the areas included for observation were student regularity, neatness in attire, ability to get along with others, respect accorded to elders, discipline, orderliness, etc.

Mathematics related activities – some of which were clay work, craftwork, coloring work, drawing of different figures, ability to do elementary addition and sing Math related poems.

Language and Environmental Science related activities – some activities included here were recitation of poems, drawing pictures, coloring, ability to dialogue, clay work, and Dramatization.

Mathematics – knowledge of numbers 1-50, ability to orally express numbers, do elementary addition and subtraction.

Language – knowledge of alphabets – reading and writing, ability to read and write small words, read simple sentences, ability to comprehend and reply to questions posed and text related activity.

FOR STD II a similar comprehensive evaluation pattern was employed wherein the child's academic and non-academic areas are evaluated without conducting any formal examination. The areas that were taken up specifically were –

Personality Development - some of the areas included for observation were student alertness, respect for flora and fauna, cleanliness, punctuality, curiosity, taking active part in celebrations and sports and extent of cooperation in school related activities.

Language and Environment Science related activities – Knowledge of National Anthem, ability to dialogue, knowledge of direction, ability to do craft work and clay work.

Mathematics related activities – Craftwork and Maths related activities.

Maths – Knowledge of numbers 1-100 , ascending order , knowledge of place value, elementary addition and subtraction , knowledge of tables 2,3,4,5,10, knowledge of currency (rupees and paisa), ability to do independent math work.

Language – Ability to comprehend unknown sentences, understand questions posed and give appropriate responses, knowledge of compound words, ability to read from the text, ability to read and write seen and unseen passages, ability to do self study in Language.

FROM STD. III onwards regular examinations are conducted in order to assess the student's academic progress. It was found that these examinations were spaced out in the entire academic year with assessment taking place at regular and periodic intervals. The manner in which evaluation was being carried out in the school for Std. 3-7 is given below –

**Table 5.3.4**

**EVALUATION PATTERN.**

| TEST | ORAL | ACTIVITY | WRITTEN | TOTAL |
|---|---|---|---|---|
| FIRST - | 15 mks | 10 mks | 25 mks | 50 mks |
| SECOND | - | - | 50 mks | 50 mks |
| THIRD | 10 mks | 15 mks | 25 mks | 50 mks |
| FOURTH | - | - | 100 mks | 100 mks |

Source : MSB,Vadodara,2006.

- Hindi is made compulsory from Std. IV and the Hindi subject examination would be a total of 100 marks with 35 % being the pass percentage. Only one exam was conducted at the end of the year – of these 50 marks was an oral exam, 25 marks for activity test and 25 marks for a written exam. Of these, the Oral and Activity tests were prepared by the school teachers themselves while the written test was prepared by the Examination Committee. The scores secured in Hindi were added to the total score scored by the student in that academic year.

- Sanskrit was added to the existing number of subjects for Std.VI, VII (as optional) and only one exam was conducted for it in the academic year of 100 marks. The distribution of marks was as in Hindi – oral exam – 50 mks, Activity test – 25 mks and a written test for 25 mks. Of these, the Oral and Activity tests were prepared by the school teachers themselves while the written test was prepared by the Examination Committee. The score secured in Sanskrit was not added to the total score scored by the student in that academic year.

The following Extra-curricular Activity exams were conducted at the end of each academic year for the respective grades.

- **Sarjanatmak activity for Std III & IV** **= 100 mks comprising**
  - ❖ Drawing, Craftwork, Claywork = 40 mks
  - ❖ Physical Education = 40 mks
  - ❖ Music (Prayer song, Baalgeet, Acting) = 20 mks

- **Art Education for Std V – VII** **=100 mks comprising**
  - ❖ Art, Object Drawing, Nature drawing, Handwriting = 50 mks
  - ❖ Evaluating the performance in Drawing = 20 mks
  - ❖ Music (Prayer , Bhajan, Baalgeet, Shloka, Rashtra Geet, Abhinay geet) = 30 mks
- **Socially Useful Productive Work for Std III – VII** **= 100 mks**
- **Physical Education for Std III-VII** **= 200 mks**

Analysis of the Evaluation pattern was indicative of a comprehensive evaluation mechanism which took into account all aspects of the student's development. The evaluation pattern was a periodic one with evaluation being done at definite intervals to ascertain student progress in different learning areas.

While giving importance to academic areas, it also gave importance to non-academic areas and these were activities designed meaningfully in accordance with the respective grades.

### 5.3.5 ORGANIZATION OF REMEDIAL CLASSES

Together with evaluation, the remediation of learning difficulties was taken care of with the organization of remedial classes.

**TABLE 5.3.5**

**REMEDIAL CLASSES**

| | YES (%) | NO (%) |
|---|---|---|
| In case of poor performance do you conduct additional/remedial classes | 47.73 | 12.5 |

The data revealed a mixed response with a large number of respondents not responding to the question. A further analysis revealed that the Remedial classes were conducted at the end of the academic year and at the very beginning of the new academic year. Students from the different grades whose academic performance were below the expected level, were then given remedial classes in a Bridge Course which consisted of academic inputs in all the subjects and with the aim of overall improvement in the

learner's academic performance. On satisfactory performance only were these students promoted to the next grade – in case of very poor performance these students were detained in the same grade. These Bridge Courses were conducted in all the Samiti schools to raise the academic performance of poorly performing students and thereby bring them on par with the others in the same group.

## 5.4 OUTCOME OF SCHOOLING

The fourth objective i.e.

To study the outcome of schooling through

- Students academic achievement (Math and Language),
- Participation in different co-curricular activities.

has been analyzed in the following manner.

### 5.4.1 STUDENTS' ACADEMIC ACHIEVEMENT (MATH & LANGUAGE).

***The outcomes of education should be assessed in the context of its agreed objectives. They are most easily expressed in terms of academic achievement (sometimes as test grades, but more usually and popularly in terms of examination performance), though ways of assessing creative and emotional development as well as changes in values, attitudes and behaviors have also been devised. It is useful to distinguish between achievement, attainment and other outcome measures – which can include broader benefits to society (UNESCO, 2005).***

For the purpose of this study, measurement of outcomes was restricted to students' *achievement i.e.* academic performance in chosen academic areas and also participation in different co-curricular activities. This study focused specifically on certain selected academic areas only and assessment of learners done in these chosen areas. *Assessment of learners was limited to the acquisition of basic skills in literacy and numeracy.*

A more comprehensive evaluation *would* cover cognitive, affective and psychomotor areas of pupils' growth and would employ different tools and techniques of evaluation to capture different dimensions of pupils' growth at the primary stage. *However, this study has restricted itself to the study of student academic achievement in chosen areas such as literacy and numeracy and in non-cognitive areas it has focused on the nature of activities designed and the extent of student participation.*

## MODE OF CONDUCTING STUDENT EVALUATION.

Examinations are a useful way of monitoring school quality Regular / frequent conducting of exams is an effective mechanism for monitoring student achievement and consequent feedback. The quality of individual achievement is usually gauged from the results scored by the students in these examinations.

For the purpose of this study, an assessment of the outcome of primary schooling (achievement) was meant to connote - Measurement of literacy and numeracy skills in the learners, in all the medium of instruction (Gujarati, Marathi, Sindhi, Hindi) for classes V, VI, VII, for the academic year 2004-05.

The Paper – pencil test was an instrument to assess student achievement in two areas - language and mathematics and was used to measure the literacy and numeracy skills among these learners. The minimum levels of learning specified for each grade (here, Std. V, VI, VII) served as the benchmarks for evaluating student performance.

The measurement of performance was done at such a stage when students were expected to have acquired the prescribed competencies i.e. at the end of the academic year. It is also necessary to be mentioned here that out of the prescribed competencies for each grade, selected competencies were taken up and student performance with regards to these competencies only was assessed.

Selection of competencies was done after consultation with the Municipal School Board Evaluation Committee members – they were senior and experienced schoolteachers and it was with consultation with them that the competencies were decided. On their recommendation, certain competencies were selected over the others and consequently selected for the achievement test as a suitable indicator of the students' learning outcomes.

The achievement scores have been analyzed grade-wise (V,VI,VII) subject-wise (Language and Mathematics), Stream wise (Gujarati, Hindi, Marathi, Sindhi) and also sexwise.

## Table 5.4.1(A)

### STUDENT ACHIEVEMENT SCORES

### (ON BASIS OF MEDIUM, SUBJECT, GRADE,SEX).

| STD | CRITERIA | | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lang. | Math | Lang. | Math | Lang. | Math | Lang | Math |
| V Girls | $A^+$ | above 70% | - | 5.26 | - | 4.17 | - | 14.29 | | |
| | A | 60 - 70% | - | 5.26 | 10 | - | - | 14.29 | | |
| | $B^+$ | 50 - 60% | 9.09 | 5.26 | 6.67 | 8.33 | - | - | - | - |
| | B | 40 - 50% | - | - | 20 | 20.83 | - | 7.14 | - | 25 |
| | C | 36 - 40% | 9.09 | - | 6.67 | 12.5 | - | 7.14 | - | 12.5 |
| | Pass | 35% | - | 5.26 | | | | | | - |
| | Fail | below 35% | 81.82 | 78.95 | 56.67 | 54.17 | 100 | 57.14 | 100 | 62.5 |

| STD | CRITERIA | | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lang | Math | Lang | Math | Lang | Math | Lang | Math |
| V Boys | $A^+$ | above 70% | - | - | 8.70 | - | - | 16.67 | -- | - |
| | A | 60 - 70% | - | - | 8.70 | - | - | 8.33 | - | 33.33 |
| | $B^+$ | 50 - 60% | - | -- | 4.35 | 4.55 | - | 8.33 | - | - |
| | B | 40 - 50% | - | 11.76 | 4.35 | 40.91 | 20 | 8.33 | 16.67 | 50 |
| | C | 36 - 40% | - | 11.76 | 4.35 | 22.73 | - | 8.33 | 16.67 | - |
| | Pass | 35% | | | | 4.55 | | | - | - |
| | Fail | below 35% | 100 | 76.47 | 69.57 | 27.27 | 80 | 50 | 66.67 | 16.67 |

| STD | CRITERIA | | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lang | Math | Lang | Math | Lang | Math | Lang | Math |
| VI Girls | $A^+$ | above 70% | | | 6.06 | | 11.11 | | | |
| | A | 60 - 70% | 4.35 | | 18.18 | 10.71 | 33.33 | | | |
| | $B^+$ | 50 - 60% | 8.70 | | 24.24 | 3.57 | 33.33 | | | 28.57 |
| | B | 40 - 50% | | | 21.21 | 17.86 | 11.11 | | 25 | |
| | C | 36 - 40% | 8.70 | | 9.09 | 14.29 | | | 16.67 | 14.29 |
| | Pass | 35% | | | | | | | 8.33 | |
| | Fail | below 35% | 78.26 | 100 | 21.21 | 53.57 | 11.11 | 100 | 50 | 57.14 |

| STD | CRITERIA | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lang | Math | Lang | Math | Lang | Math | Lang | Math |
| VI Boys | $A^+$ above 70% | | | 6.67 | | | | | |
| | A 60 - 70% | | | 6.67 | | 20 | | | |
| | $B^+$ 50 - 60% | | | 6.67 | 13.04 | 20 | | | |
| | B 40 - 50% | | | 15 | 21.74 | | 16.66 | | |
| | C 36 - 40% | 7.69 | | 5 | 4.35 | | | | 25 |
| | Pass 35% | | | | | | | | |
| | Fail below 35% | 92.31 | 100 | 50 | 60.87 | 60 | 83.34 | 100 | 75 |

| STD | CRITERIA | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lang | Math | Lang | Math | Lang | Math | Lang | Math |
| VII Girls | $A^+$ above 70% | - | - | 6.67 | 5 | 11.11 | | - | |
| | A 60 - 70% | 16.67 | | 16.67 | 25 | 5.56 | 5.26 | - | |
| | $B^+$ 50 - 60% | 8.33 | | 13.33 | 25 | 27.78 | 5.26 | - | |
| | B 40 - 50% | 8.33 | 11.11 | 20 | 5 | 22.22 | 10.53 | 40 | |
| | C 36 - 40% | 8.33 | | 6.67 | 5 | 11.11 | | 20 | |
| | Pass 35% | 8.33 | 11.11 | 3.33 | 5 | | 5.26 | - | |
| | Fail below 35% | 50 | 77.78 | 33.33 | 30 | 22.22 | 73.68 | 40 | 100 |

| STD | CRITERIA | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lang | Math | Lang | Math | Lang | Math | Lang | Math |
| VII Boys | $A^+$ above 70% | | | | 8 | | | - | |
| | A 60 - 70% | | | | 16 | 14.29 | 7.69 | - | |
| | $B^+$ 50 - 60% | | | 17.39 | 20 | 14.29 | 7.69 | | |
| | B 40 - 50% | 10 | | 21.74 | 12 | 57.14 | 23.08 | | 16.67 |
| | C 36 - 40% | 20 | | 26.09 | 8 | 14.29 | 23.08 | | 16.67 |
| | Pass 35% | | 8.33 | 4.35 | 4 | | 15.38 | | 16.67 |
| | Fail below 35% | 70 | 91.67 | 30.43 | 32 | 00.00 | 23.08 | 100 | 50 |

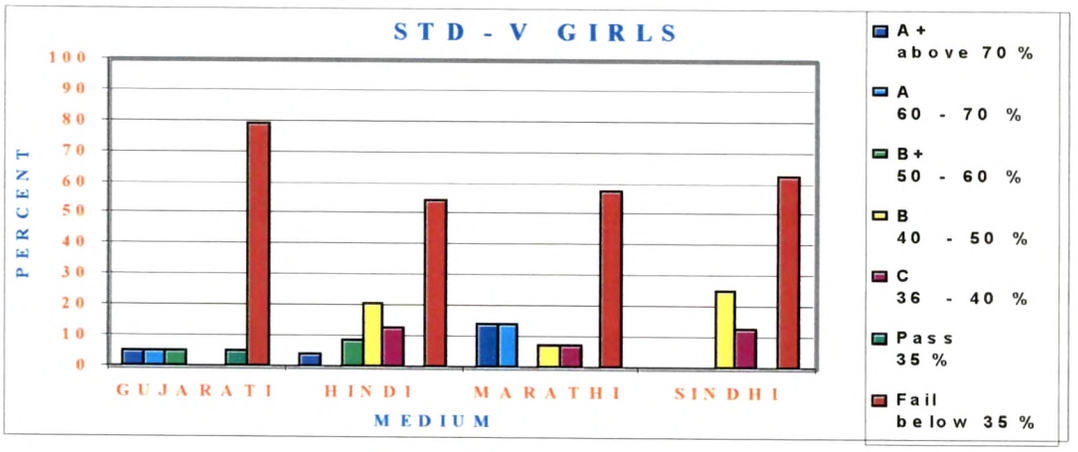
The results of the achievement test conducted for Std.V, VI, and VII for Mathematics and Language revealed that –

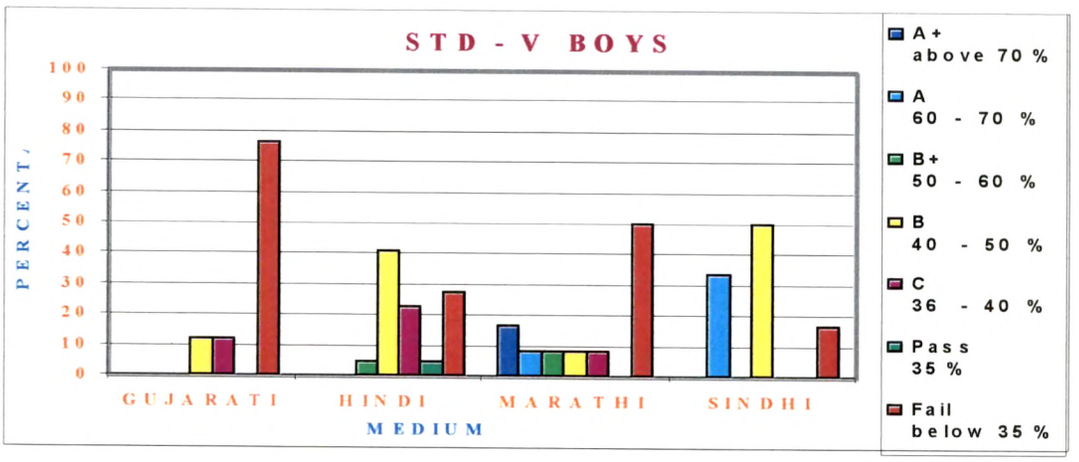
In general, considering all mediums of instruction, Hindi medium students have fared better than their counterparts. It was found that in certain cases, there were hundred percent failures and Sindhi medium fared badly as far as Language performance was concerned. This implies the necessity of attending to the issue which may be due to several factors - it may be indicative of lack of additional academic support both from home and additional classes keeping in mind the Language ( Sindhi ) and the difficulty of finding teachers to teach this subject as well as the additional reference material – both for Teachers and students.

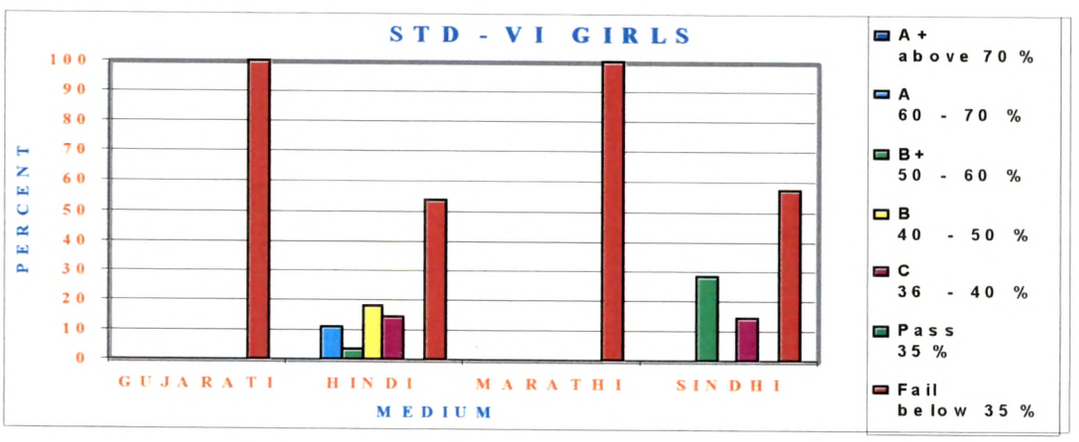
Among students of all the mediums, the overall performance of girls was far better than that of boys and the percentage of failures was found to be higher among boys in almost all the grades and subjects.

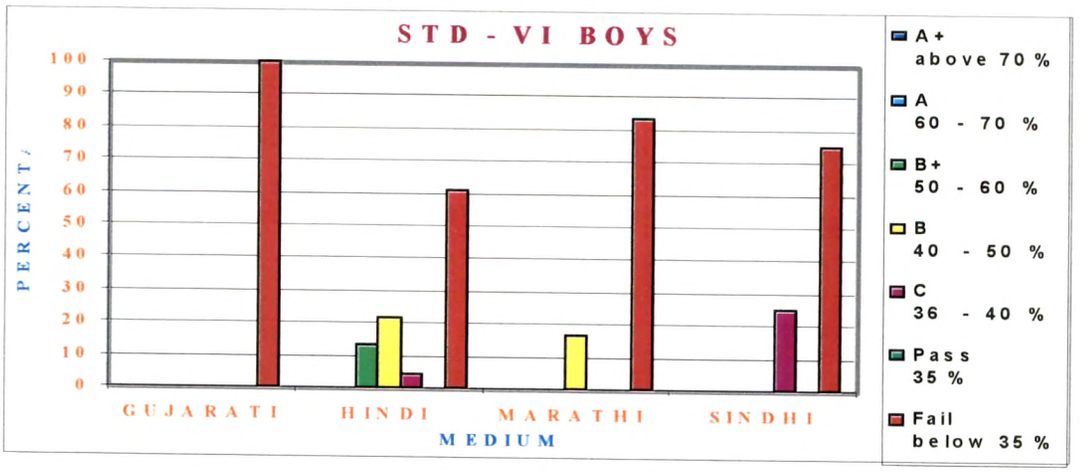
## GRAPH 5.4.1(B)

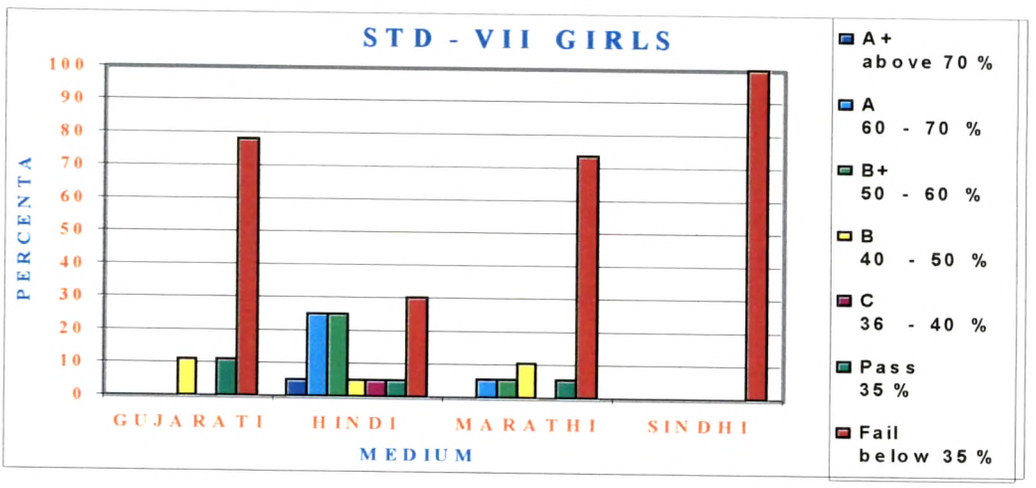
## GRAPHICAL REPRESENTATION OF STUDENT SCORES; MATHEMATICS




STD - VI BOYS
PERCENTA
100
90
80
70
60
50
40
30
20
10
0
GUJARATI
HINDI
MARATHI
SINDHI
MEDIUM
A+ above 70 %
A 60 - 70 %
B+ 50 - 60 %
B 40 - 50 %
C 36 - 40 %
Pass 35 %
Fail below 35 %


STD - VII GIRLS
PERCENTA
100
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80
70
60
50
40
30
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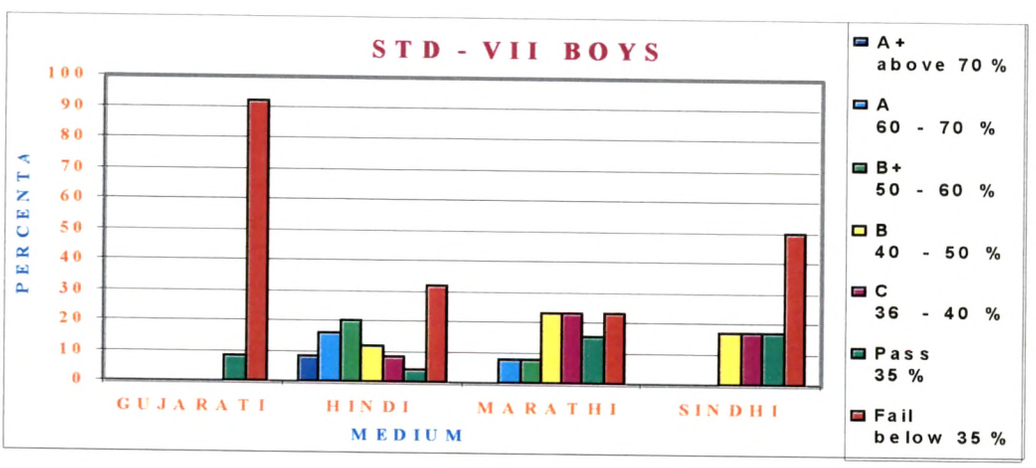
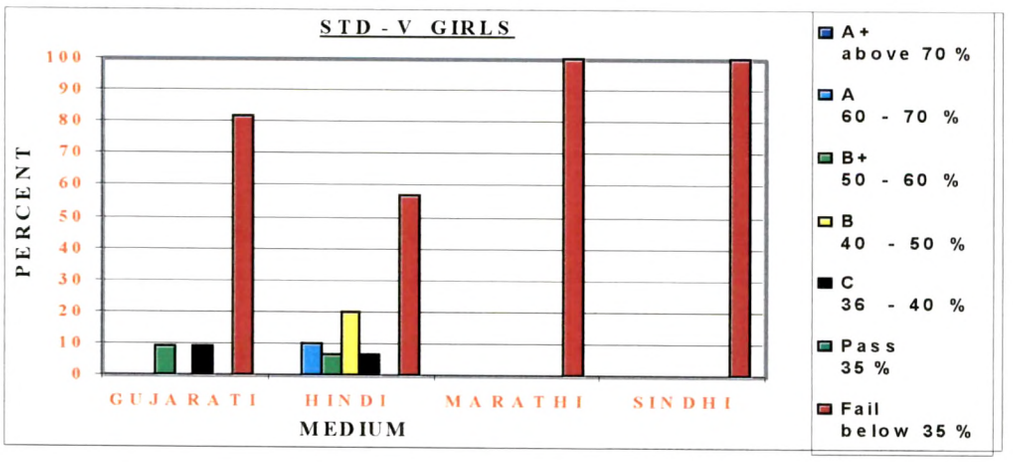
0
GUJARATI
HINDI
MARATHI
SINDHI
MEDIUM
A+ above 70 %
A 60 - 70 %
B+ 50 - 60 %
B 40 - 50 %
C 36 - 40 %
Pass 35 %
Fail below 35 %

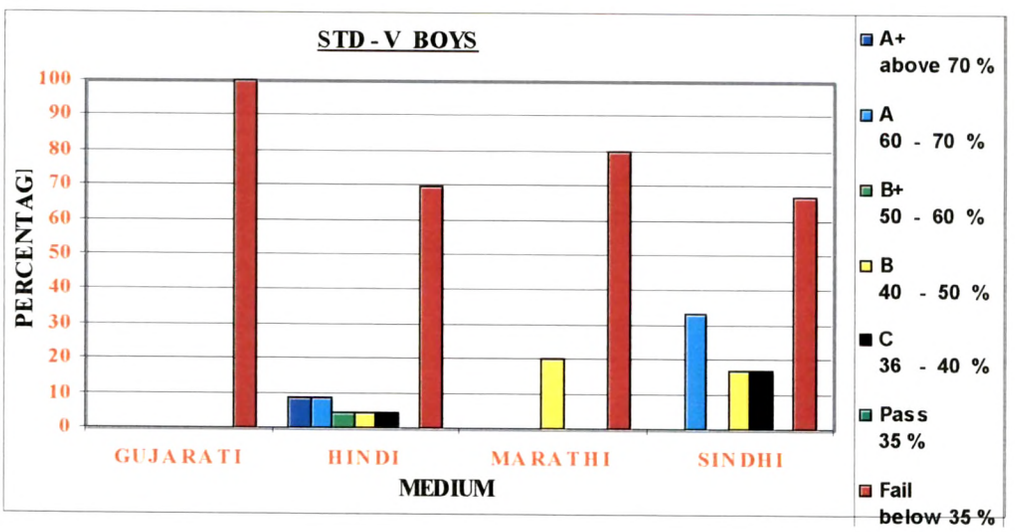

STD - VII BOYS
PERCENTA
100
90
80
70
60
50
40
30
20
10
0
GUJARATI
HINDI
MARATHI
SINDHI
MEDIUM
A+ above 70 %
A 60 - 70 %
B+ 50 - 60 %
B 40 - 50 %
C 36 - 40 %
Pass 35 %
Fail below 35 %

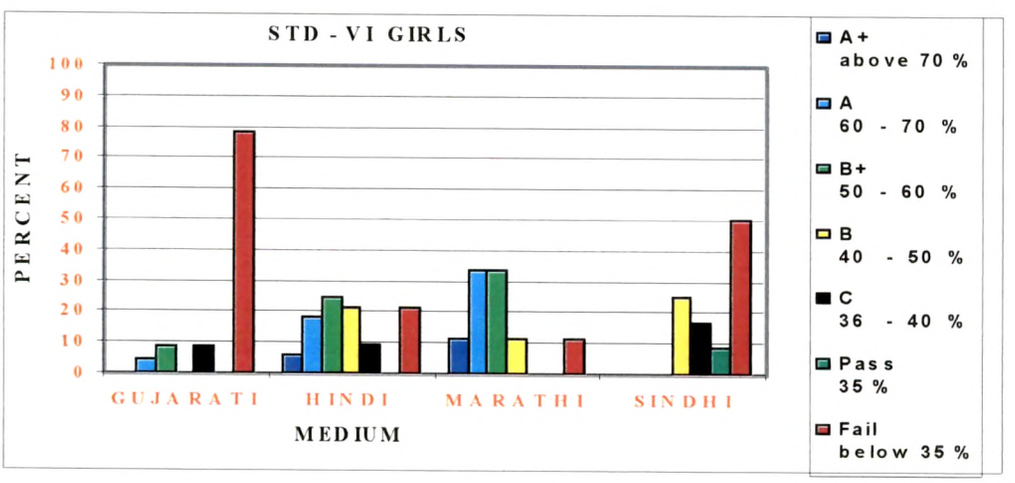
## GRAPH 5.4.1(C)

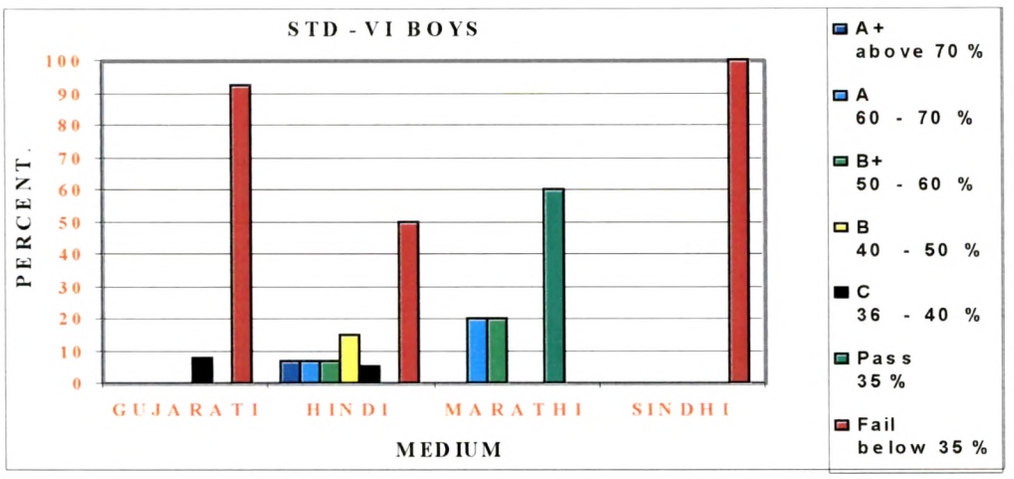
## GRAPHICAL REPRESENTATION OF STUDENT SCORES

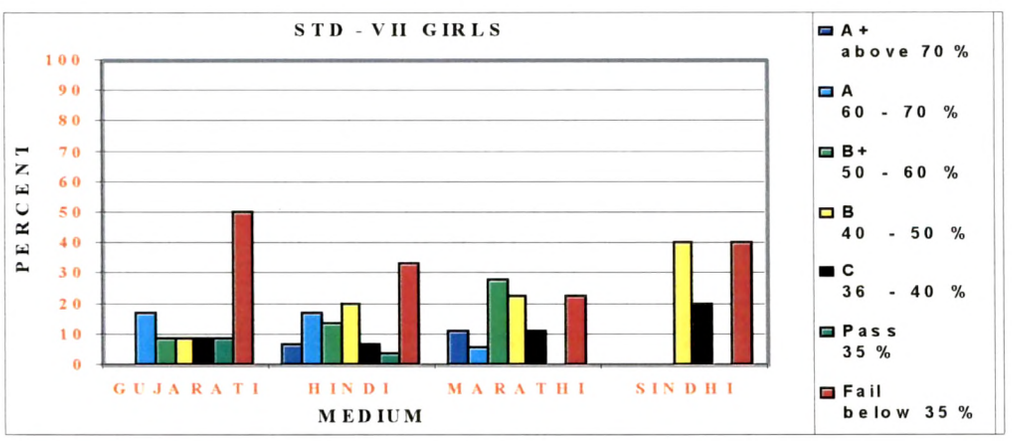
## LANGUAGE




STD - VI BOYS
PERCENT.
100
90
80
70
60
50
40
30
20
10
0
GUJARATI
HINDI
MARATHI
SINDHI
MEDIUM
A+ above 70 %
A 60 - 70 %
B+ 50 - 60 %
B 40 - 50 %
C 36 - 40 %
Pass 35 %
Fail below 35 %


STD - VII GIRLS
PERCENT
100
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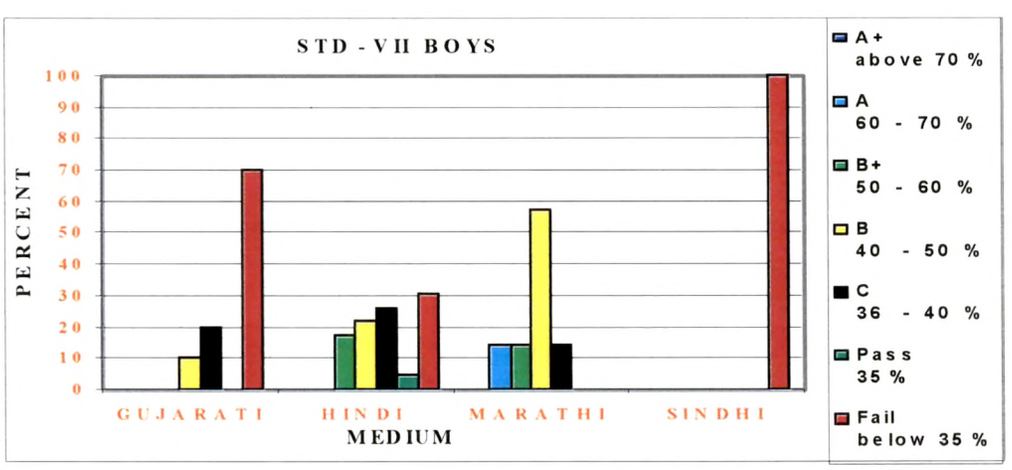
0
GUJARATI
HINDI
MARATHI
SINDHI
MEDIUM
A+ above 70 %
A 60 - 70 %
B+ 50 - 60 %
B 40 - 50 %
C 36 - 40 %
Pass 35 %
Fail below 35 %


STD - VII BOYS
PERCENT
100
90
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GUJARATI
HINDI
MARATHI
SINDHI
MEDIUM
A+ above 70 %
A 60 - 70 %
B+ 50 - 60 %
B 40 - 50 %
C 36 - 40 %
Pass 35 %
Fail below 35 %

## ANALYSIS OF FAILURES IN EACH SUBJECT, GRADE AND SEX.

The overall pass percentage was found to be less than 50% in most of the cases and in certain cases it was 0% as well. Very few cases recorded pass percentage more than 50%.Thus, the overall fail percentage was very high indicating very poor student academic performance in the two areas taken up for the study – literacy and numeracy. While in the lower classes, the performance in Mathematics was found to be better than in Language, in the higher grades i.e. Std. VI, VII the students fared better in language than in mathematics. There was a gradual decline in the performance of mathematics. There were instances where all students had failed in a given subject indicating no learning having taken place at all.

The table below gives figurative data of the pass and fail percentages in the two subjects

**Table 5.4.1 (D)**

**ANALYSIS OF PERCENTAGE OF FAILURES**

**(Subject, Grade and Sex)**

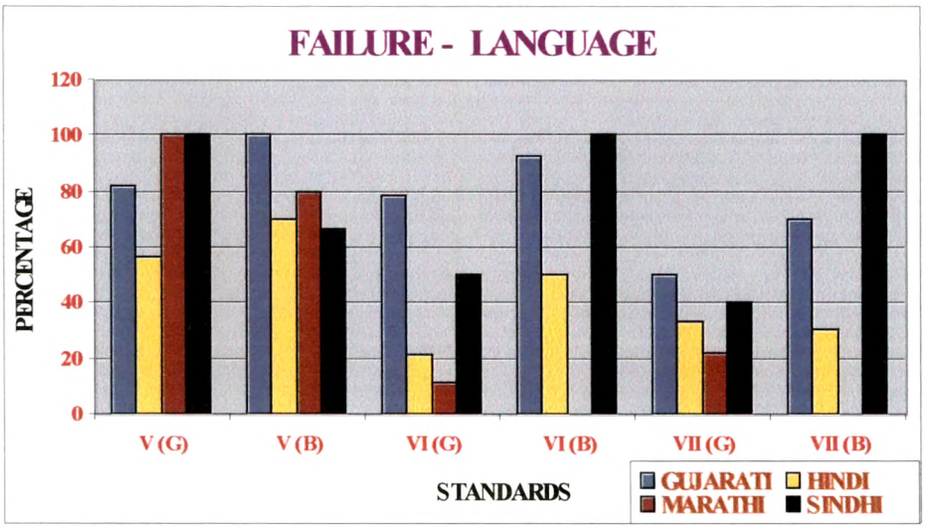
| STD | CRITERIA | GUJARATI % | | HINDI % | | MARATHI % | | SINDHI % | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | M | L | M | L | M | L | M |
| V Girls | Pass > 35% | 18.18 | 21.05 | 43.33 | 45.83 | 0 | 42.86 | 0 | 37.5 |
| | Fail < 35 % | 81.82 | 78. 95 | 56.67 | 54.17 | 100 | 57.14 | 100 | 62.5 |
| V Boys | Pass > 35% | 0 | 23.53 | 30.43 | 72.73 | 20 | 50 | 33.33 | 83.33 |
| | Fail < 35 % | 100 | 76.47 | 69.57 | 27.27 | 80 | 50 | 66.67 | 16.67 |
| VI Girls | Pass > 35% | 21.74 | 0 | 78.79 | 46.43 | 88.89 | 0 | 50 | 42.86 |
| | Fail < 35 % | 78.26 | 100 | 21.21 | 53.57 | 11.11 | 100 | 50 | 57.14 |
| VI Boys | Pass > 35% | 7.69 | 0 | 50 | 39.13 | 40.00 | 16.66 | 0 | 25 |
| | Fail < 35 % | 92.31 | 100 | 50 | 60.87 | 60.0 | 83.34 | 100 | 75 |
| VII Girls | Pass > 35% | 50 | 22.22 | 66.67 | 70 | 77.78 | 26.32 | 60 | 0 |
| | Fail < 35 % | 50 | 77.78 | 33.33 | 30 | 22.22 | 73.68 | 40 | 100 |
| VII Boys | Pass > 35% | 30 | 8.33 | 69.57 | 68 | 100 | 76.92 | 0 | 50 |
| | Fail < 35 % | 70 | 91.67 | 30.43 | 32 | 00.00 | 23.08 | 100 | 50 |

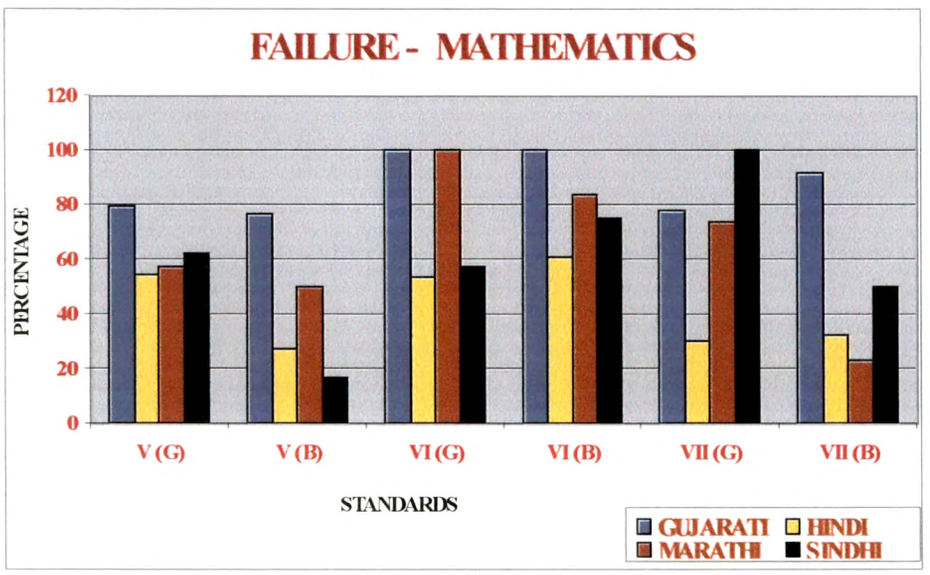
**(L – LANGUAGE ;M – MATHEMATICS)**

## GRAPH 5.4.1(E)

## GRAPHICAL REPRESENTATION OF STUDENT SCORES; PERCENTAGE OF FAILURES

The same data has also been presented graphically in the following section.




The analysis also revealed that the percentage of failures in Maths was lesser in the lower grades and as the students went to the higher grades i.e. Grades VI and VII, their performance in Mathematics became poorer with the number of failures increasing.

The performance in Language showed that majority of students did not score above the fifty percent mark indicating that the written skill needed further attention. Also, Maths

is a scoring subject with the possibility of scoring full marks also – however, the analysis of scores revealed that among students who had fared well the maximum scores were in the 60-70 % range, with very few students scoring more than 70% in this subject. Analysis of percentage of failures in each Subject, Grade and Sex also revealed that the percentage of failures was very high in each subject and grade.

## PERFORMANCE OF STUDENTS IN ACHIEVEMENT TESTS ; A CLOSER LOOK

A closer look into the performance revealed that the students of these standards did not understand very fundamental concepts of Mathematics and this affected their understanding in the following grades.

- A closer observation of the performance of students in Std .V revealed a poor understanding of addition of fractions and the accompanying concept of Least Common Multiple (LCM). Not knowing this, students were found to be solving the addition of fractions erroneously such as in the following case

  $(1/4 + 1/6 = 2/10)$ ; $(2/10 + 5/4 - 3/2 = 4/12)$

  This error was found to be committed in all the three grades and this was also found to be affecting the content areas associated with the same knowledge.
- Also, their understanding and hence performance was weak in the conversion of word statements into mathematical (numerical) statements.

  For eg.....subtracting 5 from 3 times a number.

  This may be the reason why Students of grade V were unable to solve word problems. The succeeding grades too would eventually be affected as word problems were taught in all the grades.

- Students of both Standards V, VI were unable to correctly depict positive and negative numbers on the number line. They were not too clear with the placement of positive number and negative numbers. Students of both these grades fared badly in this particular question.

- The concept of modulus value was not very clear to students of Std.VII and the common error in many cases with respect to this particular issue was as given below

  Eg.....modulus $|-17-10|$ = -7, -27

  There were very few instances where students responded correctly i.e. 27 .

- Students in all the grades were found to have difficulty solving numericals related to Percentage i.e. of type 10% of Rs.12 and since Percentage was an important topic, a sound knowledge of the same would have been useful for the learning of other related topics.

- Mixed fractions was yet another area where students fared rather poorly and the manner in which they solved these problems showed that their understanding needed clarification

  Eg.....$16^{½}$ = 17 / 2 , 161 / 2 were the responses given, whereas the correct response was 33 / 2 and this response was given by very few students.

- Other topics such as arithmetic mean, Indices and addition of linear equations were topics which were bound to be repeated in all future topics but the students were not found to have very sound knowledge of these.

- In Geometry, the areas where students committed errors were as follows -

In the question where they were expected to label the different parts of the circle – centre, radius and diameter, students were found unable to label these parts although these were the very elementary components of a circle.

- The responses given to the question on graphs and transversal too revealed lack of understanding and needed to be attended to.

**LANGUAGE**

There was need for more writing practice as the students although expressive orally were not able to write and thus fared poorly. Also, students were not able to do the grammar related questions and their knowledge of idioms and phrases needed attention. They had

little knowledge of Synonyms and Antonyms and the questions related to these questions were mostly left un-answered.

Students were not too familiar with types of sentences and committed mistakes in their identification. A particular paragraph required students to pick out the nouns and adjectives and this question could not be answered by many students thereby showing that fundamental concepts were not clear.

The evaluation revealed that students' written expression needed to be attended to. This may be said because students were unable to paraphrase a known content, write an essay or a letter and were unable to construct a story from a given outline. There were also mistakes in spellings in their written work.

However, most students were found to have attempted the Comprehension question and done fairly well – indicating that they understood but could not independently express their understanding.

Thus, fundamental concepts need to be attended to as these were linked to other more complex concepts in the future grades and only the understanding of these would ensure a good performance in the future. The Mathematics curriculum is organized in such a manner that concepts keep recurring and also concepts are linked to one another – the knowledge of one enables the learning of many other related concepts. Thus, it is very important that elementary concepts and misunderstandings be clarified to ensure future understanding.

Regarding Language, it was revealed that elementary knowledge was lacking and without a sound knowledge of the basics, how could these students be expected to perform well? The findings revealed mere coverage of academic course with very little proficiency in written expression and so while they comprehended and answered the questions correctly in a given 'comprehension', the same students were unable to express themselves in questions like paraphrasing, story constructing and essay and letter writing. The problem may be related both to lack of knowledge of appropriate vocabulary as well as to lack of proficiency in written expression. The root of the problem may lie in the nature of the classroom transactions which were predominantly teacher centric and the solution to the same may be the conducting of student centered activities such as oral reading, guided reading, word study, reading self selected books

independently followed by teaching practices that would give ample opportunity for practice of communication skills, both oral and written.

In addition to curricular activities, student achievement included another important dimension - that of participation in different co-curricular activities. The following section focuses on the nature of co-curricular activities and the extent of student participation therein.

### 5.4.2 PARTICIPATION IN DIFFERENT CO-CURRICULAR ACTIVITIES.

Analysis of the documents pertaining to co-curricular activities, revealed that extra-curricular activities were conducted once or twice in a week but there were no specially trained teachers for these activities – the class teachers themselves conducted these activities.

Sports and Music were the most commonly conducted activities and often, the class teachers themselves conducted them. Instruments such as the harmonium and the manjeera were used during the morning assembly which was done every morning as a practice in most schools. The other musical instruments used in schools were the tabla and also sometimes the dholak. The most frequently used sports equipments were found to be the lezim, dumbbells, skipping rope and sometimes volleyball.

The following Extra-curricular Activities were conducted during the periods allotted for extra-curricular activities in the weekly time-table -

| |
|---|
| • Sarjanatmak activity for Std III & IV<br>❖ Drawing , Craftwork , Clay work<br>❖ Physical Education<br>❖ Music (Prayer song , Baalgeet , Acting) |
| • Art Education for Std V – VII<br>❖ Art, Object Drawing, Nature drawing, Handwriting<br>❖ Evaluating the performance in Drawing<br>❖ Music (Prayer , Bhajan, Baalgeet, Shloka, Rashtra geet, Abhinay geet) |
| • Socially Useful Productive Work for Std III – VII<br>• Physical Education for Std III-VII |

It was found that inter-school Competitions were conducted round the year and students were encouraged to participate in these competitions. Some of the competitions conducted in the academic year 2004-2005 were - Hindi elocution, Gujarati elocution, Singing, Handwriting, mehndi application, Drawing , Shloka recitation, Bhajan recitation, Essay writing, Garba dancing . In addition to these, were the Games festival and the annually conducted Baal Mela and the Science fair.

The competitions were conducted during the school working hours. There was a clear directive that the organization of these activities was aimed at the holistic development of the children and thus maximum participation of students was elicited. However, the participation was limited to only a few students ultimately as the requirements stated that only a few students per school could participate in these competitions. Thus, participation in these competitions was restricted only to very few students. Consequently only a chosen few got to participate while the majority was left out.

Yet another significant factor was that participating students missed their academics during this period which was unfortunately never compensated.

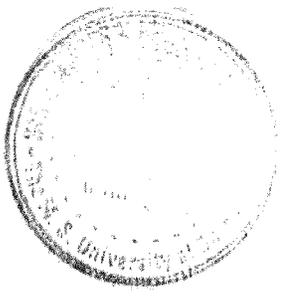
The analysis of data with relation to participation in different co-curricular activities revealed that the academic planning did take into consideration the importance of co-curricular activities and both the time-table and the co-curricular organization revealed that such activities were indeed incorporated on a regular basis.

However, not all activities could be conducted sometimes due to lack of trained staff and at other times due to the unavailability of related material.

Also, for the Competitions, participation was limited to only a few students ultimately as the requirements stated that only a few students per school could participate in these competitions and so a majority of students were unable to participate in these competitions.

Thus, the need to devise mechanisms where all may get opportunity to participate.

Finally, any conclusive statement on 'quality' would necessarily include the views and opinions of the Functionaries and Beneficiaries of this system and so, the final objective did take into account this significant factor.



## 5.5 VIEWS OF FUNCTIONARIES AND BENEFICIARIES

The fifth objective i.e.

To study the views of Administrative Officers, Headmasters, Teachers, Students and Community Members regarding quality of Primary Schooling.

..... has been analyzed in the following manner.

Validity of this study was addressed through triangulation of official documents, classroom observations, achievement testing and interviews with both Functionaries and beneficiaries of the system and a summary of their responses have been presented under the following headings.

Interview schedules were developed in order to collect reactions from different categories of functionaries and beneficiaries of the Primary Education System under MSB in Vadodara city. The sample included Administrators, School Principals, Teachers, and students of classes V, VI, VII and their parents. The following issues were raised and their views elicited. The Interview schedule revealed the following findings –

1. Necessity of Balwadi - need to make it compulsory.

   Early Childhood care and Education is denoted as ECCE, here referred to as Balwadi, and refers to a wide range of programs that cater to the physical, cognitive and social development of children before they enter the formal schooling age and process. The benefits of ECCE Program are well documented and found to be beneficial to the learner in a number of ways. Studies have shown that ECCE contributes positively to good child development outcomes that set the foundation for life-long learning. (UNESCO, 2005).

   When asked about the necessity and relevance of Balwadi to the future academic attainments of the school going children, a majority of the Administrators, school Principals and Teachers agreed that pre-school experience was beneficial in many ways –it helped the children to get adjusted to the school climate and its requirements, while also giving them the necessary training in various habits and introducing them to the academic fundamentals. The parents too were in favor of Balwadi for their children but the ready availability of Balwadi in city was an issue

that needed to be attended to, they felt. Many of the students interviewed had been to Balwadi before commencement of formal schooling.

2. Annual and Lesson Planning

When asked about the regularity in Annual and Lesson planning, all the school Principals and Teachers opined that Planning was a regular feature and they wrote their lesson plans regularly and also strictly adhered to these plans in their teaching classes. All the School teachers barring a few said that their daily lesson plans were regularly checked by the Principal.

3. Textbooks used in MSB schools

The school text-book being the most important instructional aid in these schools, it was necessary to find out the reaction to this teaching aid. Almost all the school teachers agreed that textbooks for all the subjects were available and also that the books were made available on time i.e. at the very beginning of the academic session. However, the teachers felt that the translated versions of these textbooks (i.e. in Marathi, Hindi and Sindhi languages) often created confusion both among students as well as teachers as the translation did not often give the appropriate translated word in that specific language and this they felt needed to be looked into. Some teachers felt that the Maths textbook had difficult terminologies and no accompanying glossary to explain these terms. Consequently, teachers who were not too well versed with the subject often faced problems. Some teachers felt that there should be provision for Extra or reference material to enable the subject teachers to teach their subjects with more ease.

Both parents and students reported that they had the school textbooks from the very beginning of the academic year.

4. Qualification of Teachers.

Teachers' subject mastery and verbal skills, their expectations of students and their own passion for learning are significant factors for school quality (UNESCO, 2005).

This question evoked a mixed response from the Administrators and Teachers. Some were satisfied with the existing teacher qualifications and felt that teachers of

the system were sufficiently qualified to deal with the kind of students that came to their schools. There were also a group of teachers who strongly believed that in order to improve the quality of the instructional process, teachers with advanced educational qualifications should be employed – these teachers ,it was felt, would be able to provide better inputs to the students.

5. Training programs – relevance and effectiveness.

The data revealed that Teachers welcomed the in-service teacher training programs and appreciated the inputs provided. A list of training programs provided over the past two years have been mentioned in the earlier sections of this chapter itself. The training programs which were highly appreciated were those related to Kathin Bindu (Training in the effective transaction of difficult competencies), TLM making, methods of teaching grammar, the short Computer Literacy program.

However, there were a group of teachers whose response was not too positive with regards to the training program mainly because it was often conducted during the on-going academic session and these teachers were concerned about the academic loss the students faced due to the temporary absence of the teachers undergoing the training. These teachers suggested that the training programs ought to be conducted during the vacations so that their participation would be more wholehearted.

The students also reported that during these training sessions they were made to sit together and their academics were compromised till their teachers returned from the training programme.

6. Teaching of various subjects; difficulties faced and their causes

Here again the researcher found a mixed reaction. There were a sizeable percentage of teachers who opined that the teaching of different subjects by the same teacher posed no problem as training for the same had been imparted to them during the course of their teacher training and catering to all these subjects was not too difficult. However, there were teachers who were teaching difficult subjects and had very little exposure to its teaching and were not too confidant in the teaching of that subject and this was found to be especially true in case of difficult subjects such as Mathematics and Science.

Also, to add to the problem of teaching all the subjects and doing justice to them all, there were the additional administrative duties which the teachers had to do year after year and this added to their load very often forcing them to compromise with their academic duties.

Parents did not answer this question but opined that academic performance of their children was important to them and not the manner of school functioning. The students interviewed said that certain subjects were difficult to understand like mathematics and science and if their doubts were not solved in school they did find it difficult to understand the other related concepts except for those other students who availed of personal tuitions or got academic support from their parents at home. This facility however was available to very few students only.

7. The prevailing system of evaluation

The functionaries opined that the prevailing system of evaluation was satisfactory. They felt that students were being evaluated both in academic as well as non-academic areas. The school Principals felt that since the examination of question papers were centralized, the schools teachers had to take up this role very seriously.

However, there were a group of teachers who expressed dissatisfaction with the existing system of evaluation and felt that one way of improving the quality would be to introduce monthly tests so that teachers would be familiarized with the student's learning disabilities.

Parents, when interviewed also felt that examinations were conducted after long intervals which did little to identify students' learning difficulties and thereby better the academic performance; students reported that no class tests were conducted to assess them on day-to-day learning.

8. Conducting of extra curricular activities

Extra-curricular activities were conducted once or twice in a week but there were no specially trained teachers for these activities – the class teachers themselves were expected to conduct these activities. Also, a number of inter-school Competitions were organized in each academic year for the students to participate.

The only limiting factor here was that only chosen students were given the opportunity to participate since it was a Competition.

The extra-curricular activities conducted were evaluated but there was no mention of the same in the school Report Cards. The school Principals and the Coordinators wanted the Report Cards to be designed in such a manner that it would reflect different aspects of the student's achievements – curricular and extra-curricular.

Majority parents reported that they were not intimated about any Competitions and extra-curricular activities were very rare. Majority students reported that Competitions were conducted, although very rarely, and for those few students participating in these Competitions the academic topics covered in their absence were rarely repeated. The student participation in these competitions was thus very less.

Regarding the conducting of the daily activities, students reported that the commonly played games were Langdi (one-legged game activity) kho-kho, pakdam-pakdi (touch-n-run) and limbu-chamchi (lemon-n-spoon balancing game).

9. The Inspection conducted in the schools.

The Administrators charged with the responsibility of ensuring smooth and efficient functioning of the system conducted periodic inspection of the schools and classroom instructional process in which certain pre-determined features were observed namely classroom conducting, use of teaching-learning material and finally methodology adopted by the respective teachers.

To this question, Principals reported that they did conduct class supervision during the day and teachers too reported the same.

10. Parental Involvement in school activities

The functionaries of the Primary school system expressed dissatisfaction over the extent of parental involvement and expected greater participation, willingness and cooperation from them. They opined that the frequency of PTA meetings in the year should be increased and parents should shoulder equal responsibility in the educational process.

Parents too expressed dissatisfaction with regards to the overall school functioning. They felt that there should be more number of monthly meetings and due and prior notification of the same. Some parents reported that they were not once invited to the school for report of their child's progress. They expressed dissatisfaction over their child's academic achievements and some felt that even after many years of schooling, their children could not even read the daily newspaper. They informed the researcher that initially remedial classes were conducted in order to cater to the learning difficulties of the students but eventually these sessions became irregular and consequently the student attendance gradually reduced.

Also, they were very rarely informed about the competitions conducted in the schools. They expressed unhappiness regarding the quality of food being served to their children. Some parents were firm that after lower primary schooling, they would shift their children to some private school and discontinue with the present system of schooling.

11. Special initiatives for quality enhancement

Both Functionaries and Beneficiaries had a lot to say for initiatives for quality enhancement. The Administrators and school Principals wanted Balwadi to be made compulsory, teachers to be allotted teaching subjects according to their specialization if quality was to be ensured, parental involvement should increase and they too should shoulder equal responsibility in the learning process, the annual report card should be made more comprehensive so that it incorporates both the curricular and extra-curricular achievements of the student in the course of the academic year, the training programs be conducted only on holidays or during vacations so that the students do not miss their academics and finally reduced administrative load so that they may focus more on their academic duties.

Many parents opined that they should be involved in all school activities and should be informed about curricular and co curricular activities which were arranged for their children...in other words they were keen on active involvement in the school activities.

12. Reasons for liking or disliking school

When this question was posed to the students, a majority of the students said that they liked going to school and some students were happy with the teaching in the schools. Students enjoyed the maatikaam i.e.claywork and during the course of the year had made clay objects such as a 'ganpati','chakli','popat'.

Apart from these activities, other activities were rare – very rarely were music classes conducted and there being very few trained staff, computer classes were not conducted. In many cases, there being no school playground, sports activities and games were rare. Despite this, the overall attitude of the children was positive.

13. Reasons for sending child to school and If decision to discontinue, probable reasons

The parents, when asked this question almost unanimously replied that they hoped for a better life for their children and hence going to school and getting educated was an imperative. It was indeed very happy to note that all the parents interviewed, strongly supported their child's education although they did voice their concerns regarding the present system of schooling and the quality therein.

Some unhappy parents had already decided to withdraw their children and enroll them in good private schools after completion of lower primary schooling which did not reflect too well on current practices and efforts.

The analysis of data that emerged from this section showed that in many instances, there were similarities in the data obtained earlier and in this section .Similarities were found in cases such as teachers agreeing to the present qualifications on grounds that their training did equip them to deal with different subjects' teaching, timely provision of textbooks, relevance of the training programs conducted, and poor involvement of parents. In certain other instances, the earlier data (obtained via other tools) and the data obtained from the interview schedules were at times contradictory – parents opined that while an elaborate set of co-curricular activities were shown on paper, in practice very few such activities were actually conducted ; while elaborate evaluation mechanisms were seen on paper, they had no knowledge of any periodic evaluation taking place; also while remedial classes were reportedly arranged for those with learning difficulties, few parents reported that there were no remedial classes being conducted at all and their children had to be sent for tuitions as there was no additional academic support .Thus, triangulation helped to validate the obtained data .

## 5.6 MAJOR FINDINGS OF THE STUDY

The major findings of the study are -

### STATUS OF INFRASTRUCTURAL FACILITIES.

- While a majority of the schools were of a pucca structure (93. 18 %) and also that in most cases there were sufficient number of classrooms for each grade, (71. 59%), the schools were in busy localities and the classrooms were not too well ventilated – thus, both the classroom and surrounding ambience were not found to be too conducive to learning .

- While certain essential facilities like Electricity and the Mid day meals were provided to most of the schools, there were other facilities which were important but the provision was found lacking, namely - the presence of a Library, books, school playground and sports equipments.

- In most of the cases it was found that the Library was not a very functional one although Teachers did get the benefit of Reference books to aid in their daily teaching.

- The school playground was a facility which was found to be lacking in most cases - with many cases coming to the fore where there no playgrounds at all, only a very small ground or enclosed structure where usually the morning assembly was conducted. The availability of sports equipments too was found to be rare.

- The important facility of Sanitation was found to be present in almost all the schools.The schools having the facility of sanitation however did not always have separate sanitation facilities for boys and girls. It was found that only 53.41% schools had separate facilities among the schools which reported having sanitation.

### STATUS OF TEACHING MATERIAL.

The study revealed that

- While certain inputs appeared to be prevalent in the schools under study, there were accompanying factors which needed attention.

- A majority of schools functioned in accordance with the time-table (86.36 %); did have Library (57.95 %) and scientific apparatus; did circulate the school text books within three months of commencement of the academic year and also provided Reference books to their Teachers - 63.64 % schools responded that these were made available to all teachers.

- But, in these very schools it was found that while there was provision for a Library, the Library books were not circulated among students due to an apprehension regarding its maintenance; while scientific apparatus was reported in a large percentage of schools (65.91 %), the system of storage and maintenance of these apparatus was an area that needed to be looked into.

- The schools reportedly had sufficient number of classes for each grade but did not have separate Activity rooms.

- The data with relation to essential facilities revealed that while these facilities were present, their condition and maintenance was in question. The class blackboards were in a state of disrepair and very often they were simply painted on the wall which was not too conducive for writing as it did not have a very smooth surface.

- In all these schools, the number of classrooms was adequate and very rarely was any case of multi-grade teaching found.

- The schools had been provided with Computers in order that Computer literacy was ensured. However, although all the schools did have the computers, there was a dearth of trained teachers to teach the subject and so these machines were predominantly nonfunctional except for cases where an outside agency offered services such as the NGOs. This problem was taken care of by training teachers via the In-Service training programmes which attempted to impart functional computer literacy to the teachers so that instruction as well as some of the academic duties could be done with the help of computers. Despite these efforts, the percentage of usage was found to be very minimal.

- Thus, while funds are being sanctioned and utilized, a regular follow-up is required to ascertain whether or not the facilities provided are being maintained properly or not. In the event of this not happening very regularly, the facilities gradually

deteriorate and then become a barrier to the effective conducting of the instructional process.

## QUALIFICATION AND EXPERIENCE OF TEACHERS.

The data with respect to Teacher qualification revealed that

- A very large population of Teachers was Secondary school certificate holders after which the required P.T.C. certification had been obtained (95. 03 %) The Table also revealed a very small percentage of teachers were graduates with an advanced professional training i.e. B.Ed (04. 52 %) and the number of teachers with a post-graduate qualification was miniscule i.e. 0.45 %.

- The data with respect to teaching experience revealed that a small percentage of teachers had experience ranging from 1-10 years (12.63 %) and with increasing teaching experience the percentage increased significantly – the largest population (43.77 %) was found to have a teaching experience of more than 25 years

## ENROLLMENT AND RETENTION AT THE END OF THE ACADEMIC YEAR

With respect to enrollment and retention it was found that –

- The largest number of students were in the lower primary grades and the number gradually decreased as one progressed to the upper primary grades.

- There was also a visibly positive trend that could be seen i.e. the number of girl students in each class was more than that of the male students indicating the gradual awareness in society for the education of the girl child.

- With respect to enrollment it was found that there was a general increase in the trend of enrolment in the grades I-IV and from the upper primary stage, the enrolment showed a gradual decrease.

- The retention in these grades also show a decreasing trend implying that after completion of the lower primary education, either students were forced to discontinue, shifted residence or were enrolled in Private schools as was often found to be the case.

## IN-SERVICE TRAINING AVAILED BY TEACHERS

- Conscious efforts were made by the concerned Authorities to provide rich inputs to the Functionaries as well as the students, thereby continuously ushering in meaningful and desirable changes to enhance the overall quality of the system.

- Training programs were conducted to attend to both academic and academic related areas. Also, skills expected of Teachers in contemporary times; issues of concern to Officials and Teachers in this system specifically and issues of future relevance to students were all taken up periodically and attended to.

- Duration of these programs was found to vary in accordance with the requirements of the program. Generally, these Training Programs were of duration of three to four days and sometimes when the training was imparted for topics such as Gender Sensitization or other value added topics, the duration of the programs was of one day only.

- The noteworthy fact was that a majority of these Training Programs were conducted during the on-going academic year and the teachers of other grades were assigned the duty of attending to the school students.

## FREQUENCY AND NATURE OF TEACHER APPRAISAL PROGRAMMES.

The data analysis of the status of human resources in the schools under study revealed that

- There was a proper organization of academic work with annual planning and lesson planning done with regularity - also, a well maintained supervision mechanism where the documents and the quality of the instructional processes were supervised. Remedial action was taken to rectify the situation in case of gross and glaring evidences.

- Writing of planning books was compulsory and was followed by all the teachers - 86.36 % responded that this was done on a regular basis. Regarding the preparation and following of time table, it was found that 81. 81 % respondents replied that the time-table was prepared and followed as framed.

- Teachers were assigned additional duties which they themselves professed as being a disturbance in the conducting of their academic duties. More than 90% teachers opined that duties other than academic duties came their way during the course of the academic session.

**ANALYSIS OF THE TEXT BOOKS – LANGUAGE AND MATHEMATICS.**

The data analysis revealed that

- The school Textbooks were periodically revised and necessary updations were made, the content was organized systematically with ample examples provided for better understanding.
- The noteworthy elements were the inclusion of the latest information in connection with some of the topics; the attempts to correlate specific topics with other disciplines and also Life-skills and the attempts at continuous formative evaluation for student self assessment via intermittent self-testing exercises.
- Thus all attempts were made to make the text books relevant, updated, correlated and well presented both with respect to mechanical and content aspects.

**ANALYSIS OF THE MATH TEXTBOOK**

- Revisions were done periodically. The Math textbook of Std.V revealed that revisions were done as frequently as 2000, 2001, 2002, and 2003.
- The overall content organization was from simple to difficult topics; the chapters began with a brief recapitulation of the previous topic, often with a short exercise for self-evaluation. Each new concept was introduced along with a detailed explanation, solved examples, and often alternative methods of solving the same problems were also shown. Following these were related assignments for self-evaluation.
- Activities were suggested alongside the newly introduced topics for teachers to design meaningful activities in case of concept clarification.
- There were intermittent evaluation exercises in the form of a short test for the purpose of formative evaluation – these tests were however only at the application level without any higher order questions being posed.

- The content was analyzed into sub-topics with the corresponding MLLs stated alongside. For certain topics, relevant, current and additional information were provided.

- The layout was found to have appropriate headings and subheadings with topics and subtopics highlighted. The printing was in black and white and the diagrams and pictorial representations were clear, appropriately placed and labeled.

**ANALYSIS OF THE LANGUAGE TEXTBOOK**

- The textbooks showed frequent revisions for example the Language textbook of Std.VI showed revisions done frequently (1998, 1999, 2000, 2001, and 2002).

- The organization of the content was in terms of listening, speaking, reading and writing skills; each unit (prose/poetry) began with a brief introduction to Author/poet followed by a brief summary of the following poem or prose piece, exercises for self-evaluation and self study exercises, related exercises given for knowledge enrichment and also guidelines given to the teachers for designing of meaningful student activities.

- In the initial grades, Language was introduced with a brief section on proper pronunciation, intonation and manner of reading - this input was however not repeated in the future classes.

- The textbook attempted a co-relation between the topics and related information.

- The presentation was found to be with appropriate headings and subheadings with topics and subtopics highlighted. The printing was in black and white and the diagrams and pictorial representations were clear, appropriately placed and labeled.

However,

- Despite the noteworthy attempts made to make the text books relevant, updated, correlated and well presented both with respect to mechanical and content aspects – it was found that these Textbooks were crammed with awesome information, concepts and vocabulary.

- The Language textbook focused mainly on the language structures and other mechanical aspects - the nature of the text was far too formal and removed from the spoken form; there was no attempt to include colloquial forms (used in daily conversations) from the different dialects with the assumption that children would learn to communicate only through rote memorization and repetition.

- The Maths textbook revealed excessive accumulation of facts and although examples, applications, teacher activities and student self-assessment exercises were provided, there was lack of correlation with daily life experiences .

- Although in very rare instances, there were typographical and factual errors in the books.

**ORGANIZATION OF THE TIME-TABLE,**

- The curricular load was maintained at a minimum in the lower grades and gradually allowed to increase with increase in age. The noteworthy feature was that the initial instruction was done in the child's own mother tongue, a feature recommended for effective future instruction to happen.

- There was also inclusion of extra-curricular activities such as Art, Music, SUPW and Physical Education interspersed with academics so as to take care of the monotony of classroom teaching.

- The time table organization seems to have considered many psychological and academic truths, but, the limitation of adequate Staff and other trained persons defeated all well thought out efforts.

**MODE OF CLASSROOM TRANSACTION**

- The Maths lessons were introduced by recapitulation of previous knowledge primarily and also by referring to the Teaching Learning Materials made by teachers for the various topics. Observation of the Language classes revealed that the Teaching Learning Material was used to relate to, during the introduction phase.

- It was only in rare circumstances that a relevant activity was done to introduce the topics.

- During the Mathematics Instructional process, the strategies most predominantly used by the Teachers were explanation of concepts with the available TLM materials, followed by solving of numerical problems (96%).

- The students were mostly passive and were assigned the task of writing solved mathematical numericals and language answers from the blackboard .They were often found to be assigned the task of memorizing facts and definitions from the textbook.

- The same was seen even in the Language classes. The most dominant Teacher activities were reading from the textbook, explanation of concepts while the students were asked to write the answers from the blackboard. It was also found that students were very rarely asked to do any reading, thus, the skills of reading and speaking were rarely catered to.

- The use of audio-visual aids for teaching mathematics was very rare and the usage of available TLM for the explanation of concepts too was rare.

- Although the concepts were related to previously taught concepts in Maths, topics were not related to the immediate environment –in Math, only in 8% of times were concepts found to be correlated to the immediate environment and in Languages the same was found to be 34%. Thus, the teaching of subjects was done in isolation and not integration thereby rendering the teaching meaningless and irrelevant to the learner.

- With respect to student behavior patterns in the class, the most prominent behavior exhibited by students was doing assigned work and copying from the blackboard.

- Very few students in the Mathematics classes (20 %) and Language classes (10 %) were found to ask any questions or had any queries. However, the data also revealed that these students very rarely were distracted or engaged in mutual play indicating a rather passive atmosphere.

- In both the subject classes, the student participation was found to be moderate. Questions were posed to the students and a chosen few students answered these questions with the larger student population not being able to answer them. In each

class there were a few students who were academically brighter than the remaining students and other than them the classes were predominantly passive.

- Very few pupil responses showed a good understanding of the content being taught.
- Teacher's explanations were found to be easy to understand and very rarely were difficult terminologies used.
- Regarding the usage of teaching aids it was found that the blackboard was the most predominantly used instructional tool and only under rare circumstances were some other teaching aids used. In some rare instances it was found that the tape recorder was used in the language class for the lower primary classes. The Teaching Learning Material made by the teachers were also used by them during the teaching-learning sessions although not too frequently.
- Since the classrooms were not too big and neither was the student population too large, the audibility in the classrooms was found to be satisfactory. The visibility too was satisfactory – since the student population was less, they were seated near the windows and thus, visibility was satisfactory. Otherwise, in most cases, the rooms were not too well lit and the classrooms were quite poor in visibility.
- Home assignments were given to the students but they were rarely checked by the teachers. The assigned work was generally checked by student monitors mainly for the regularity of the work done and not so much for the quality of work submitted. Thus, there was no regularity in checking and identifying learning disabilities through the homework.
- All the classes were concluded by a quick recapitulation done mainly through consolidation of main points both in the Maths and Language classes – the other recapitulation strategies were problem solving and questioning. The probabilities of these occurring were more so in the Language classes (50 %) than in mathematics (32 %). But whatever be the strategy employed, recapitulation was done after each class to consolidate the just taught content matter.

**EVALUATION MECHANISMS,**

- The above Evaluation pattern was indicative of a comprehensive evaluation pattern which took into account all aspects of the student's development.
- While giving importance to academic areas, it also gave importance to non-academic areas and these were activities designed meaningfully in accordance with the respective grades.

However,

The evaluation pattern was not a formative one with regular evaluation not being done to ascertain student progress in different learning areas at frequent intervals. Thus, the diagnosis of learning difficulties and their remedying was not an ongoing process.

**STUDENTS ACADEMIC ACHIEVEMENT (MATH AND LANGUAGE)**

The data analysis of the achievement revealed that

- The overall pass percentage was found to be less than 50% in most of the cases and in certain cases it was 0% as well.
- Very few cases recorded pass percentage more than 50%.Thus, the overall fail percentage was very high indicating very poor student academic performance in the two areas taken up for the study – literacy and numeracy.
- While in the lower classes, the performance in Mathematics was found to be better than in Language, in the higher grades i.e. Std. VI, VII the students fared better in language than in mathematics. There was a gradual decline in the performance of mathematics in the higher grades.
- There were instances where all students in certain grades had failed in a given subject indicating no learning having taken place at all.

**MATHEMATICS**

- A closer look into the performance revealed that the students of these standards did not understand very fundamental concepts of Mathematics.
- The areas that needed attention were modulus values; mathematical addition of negative and positive numbers with consequent change of signs thereafter; graphs and their implications, constructing numerical statements, etc.

**LANGUAGE**

- There was need for more writing practice as the students although expressive orally were not able to write and thus fared poorly.
- Also students were not able to do the grammar related questions and their knowledge of Idioms and phrases needed attention. They had little knowledge of Synonyms and Antonyms and the questions related to these questions were mostly left un-answered.
- Thus, their knowledge of language structures was limited and consequently their expression was poor.

**REMEDIAL CLASSES CONDUCTED FOR WEAK STUDENTS.**

- The Remedial classes were conducted at the end of the academic and at the very beginning of the new academic year.
- Students from the different grades whose academic performance were below the expected level were then given remedial classes in a Bridge Course which consisted of academic inputs in all the subjects and with the aim of overall improvement in the learner's academic performance. On satisfactory performance only were these students promoted to the next grade – in case of very poor performance these students were detained in the same grade (albeit, very rarely).
- These Bridge Courses were conducted in all the Samiti schools to raise the academic performance of poorly performing students and thereby bring them on par with the others in the same group.
- This program was beneficial to the students but was only done once at the end of the year and was not a periodically conducted exercise.

**PARTICIPATION IN DIFFERENT CO-CURRICULAR ACTIVITIES.**

- The analysis of data with relation to participation in different co-curricular activities revealed that the academic planning did take into consideration the importance of co-curricular activities and both the time-table and the co-curricular organization revealed that such activities were indeed incorporated on a regular basis.

- However, not all activities could be conducted sometimes due to lack of trained staff and at other times due to the unavailability of related material. Also, for the Competitions, participation was limited to only a few students ultimately as the requirements stated that only a few students per school could participate in these competitions and so a majority of students were unable to participate in these competitions.

- The school Principals and Coordinators wanted that the Report cards should be designed in such a manner that it would reflect different aspects of the students' achievements – curricular and extra-curricular.

**VIEWS OF FUNCTIONARIES AND BENEFICIARIES.**

- Both Functionaries and Beneficiaries were in favor of pre-school experience and parents wanted that there should be provision of Balwadi for all.

- Teachers felt that translated versions of the textbooks were often found lacking with respect to translation of difficult terminologies and thus extra reference material was required.

- A majority of the Principals felt that the existing teacher qualifications were appropriate while 32.95 % felt that the existing teacher qualifications needed to be upgraded.They wanted teachers to be allotted teaching subjects according to their individual specializations.

- 35.23 % of the respondents opined that sudden and strict supervision would help to ensure quality while 53.41% respondents felt that the existing system of supervision needed no change as it was satisfactory.

- A large percentage - 55.68% were of the opinion that monthly tests should be introduced to ensure regularity in the students' work and formative evaluation would enable detection of learning disabilities.

- Some of the major reasons that emerged for student absenteeism were – students engaged in other activities (68.18%), school situated in a communally sensitive area (36.36 %) and also that school was far from place of residence (26.14%)

- Some of the other responses to the issue of student absenteeism evoked such answers as – students were not interested in their studies, harassment as a result of being a Muslim student and absenteeism due to parental ignorance of the benefits of education.

- It was interesting to note that as per the understanding of the Teachers, being a girl child was not a barrier to education. Also, Teachers disagreed that school distance was a major barrier and neither was disinterestedness any obstacle to learning – these were positive observations and reflected well on social attitudes, availability of schools within reachable distances and teaching practices.

- Parents were frequently called to the schools (54.55 %) and regular PTA meetings were organized (46.59 %).

- Parents, in general were unhappy regarding their child's academic achievements, the remedial classes conducted and also the quality of food served to their children.

- A majority of parents strongly supported their child's education despite all challenges and thus, voiced concern regarding the present system of schooling and the quality therein.

- Majority of the children said that they liked going to school and most students were happy with the teaching in the schools.