CHAPTER 8

CONCLUSIONS AND SUGGESTIONS

8.1 Conclusions

Based on Univariate Analysis

✓ It was found that largest numbers (64%) of schools are private. Public schools viz. NMMC and ZP together accounted for one third (36%) of the total number of schools in the city.

✓ The bulk (85%) of students’ enrolment belonged to the private schools whereas students’ enrolment (15%) in both the public schools was too low.

✓ The growth of schools conforms to the pace of development of nodes/areas in time domain. For example, the Panvel Taluka is the oldest area and thus has the highest number of schools.

✓ The medium of instruction of more than 70% students is English irrespective of their mother tongue. About 72% of Marathi speaking households prefers to send their children in English medium and 27% households in Marathi medium.

✓ From the demand analysis of schools, it is revealed that the demand of private schools was more during the year 2010-11 as compared to the corresponding figures of public schools.

✓ The growth rate of students’ enrolment in private schools was 25% more as compared to NMMC schools and 62% more as compared to ZP schools during the year 2010-11. Similar pattern was observed for class wise enrolment of students for the years 2006-07, 2007-08, 2008-09 and 2009-2010. This shows that more students and their parents opted for private schools.

✓ Officially there should be no dropout in primary schools because all the children should be promoted to next grade (as per RTE Act, 2009). Therefore, all children will be able to reach class 8. An attempt is made to calculate the difference between numbers of students who took admission in a school and did not appear for exam or say exit from school during the academic year 2010-2011. On an average 4% students exit (dropout) the primary school during the year 2010-11. About 9% students exit from ZP schools, 3% from NMMC schools and 1% from Private schools.
The composite index proposed for measuring overall level of infrastructure and physical facilities in a school revealed that majority of schools of private management were classified as having ‘good’ and ‘very good’ infrastructure facilities. The classifications of index values of school were assigned the average rank. The first rank was occupied by private schools and second position was occupied by NMMC and third by ZP school management for availability of overall infrastructure and physical facilities in a school.

Another method viz. Chernoff face – technique to present multivariate data as human face was used in assessing and comparing the overall development of infrastructure and physical facilities of schools by type of management. Simply by seeing the gestalt of the faces, it was found that private schools have cheerful faces (better infrastructure and physical facilities) while majority of ZP and NMMC schools had frown faces (lacking in infrastructure and physical facilities). Chernoff faces not only characterizes the availability of infrastructure facilities of schools but also facilitates to find out which variable(s) is/are responsible for classifying them into various stages of infrastructure facilities of schools. Such finer analysis may not be possible from the composite index constructed by formal statistical procedures. Although, the composite index is useful to rank the type of school management according to the level of infrastructure facilities of schools, the analysis using Chernoff faces may help to understand the differences with respect to infrastructure facilities within the management.

The faces of three types of school management were shown to 21 respondents to identify the cluster of faces which look alike and which are unique or outliers. Based on the response of respondents the schools were arranged in hierarchy of development of infrastructure and physical facilities by type of school management. A wide variation within three types of school management was observed.

It was concluded that, the use of Chernoff faces along with the composite index may supplement the information and may ameliorate the researcher’s ability to interpret the data in a way that is much more meaningful.
Based on Bivariate Analysis

- There was a significant association between type of school management and performance of schools.
- There was no association between gender wise enrolment of student and type of school management.
- There was significant difference in academic achievement (average percentage) of students and type of school management.
- There was significant difference between average student-teacher ratio by type of school management.
- There was difference between average class size and type of school management.
- There was difference between average years of teaching experience of teacher and type of school management.
- There was difference between percent of trained teachers and type of school management.
- The average family size of bright students (3.9) was slightly less than that of dull students (4.1).
- The average year of education of father of the children was higher for bright student (11 years) than that of dull students (7 years). The mean year of education of father was highest (15 years) in case of private schools as compare to public schools.
- The mean year of education of mother was 12 years for private school students, 6 year for NMMC school students and 2 years for ZP school students. The average years of education of mother of the children were higher for bright student (8 years) than that of dull students (4 years).
- There was significant difference in the average monthly income of households by type of school management. The household income of bright student was little higher than that of dull students.
- There was difference in the average built-up area of house of the student of private school and public school management. The average built-up area of house of bright and dull student was 500 sq. ft. and 400 sq. ft. respectively.
- It was found that majority of father’s occupation was blue collar if students were in ZP schools and white collar if students were in private schools. The occupation of fathers for NMMC student was almost in equal proportion of white and blue collar jobs.
The data also revealed that household factors, such as parent’s education, father’s occupation, household income and type of school management had significantly influenced the education performance of students.

*Based on Multivariate Analysis*

- **Multiple Regression Analysis**

  The multiple regression analysis shows that there was predominant effect of type of school management and father’s education followed by student-teacher ratio and household income on quality of school education. In an analysis of variance, all the four variables (types of school management, father’s education, student –teacher ratio and monthly income of households) accounted for 87 percent of overall variance in quality of school education.

  The result shows that type of school management was a salient governing factor which has highly significant effect on quality of education in primary schools. The academic performance of public schools was better than that of private schools. The father’s education affects the academic achievement of student in positive ways with its intentional, consistent interaction with parents. It can be seen from the result of multiple regression that father’s education was strongly related to academic achievement of his child. The findings revealed that the schools having lower student-teacher ratio perform better as compared to the performance of schools which had higher student-teacher ratio. The academic achievement is inversely proportional to student-teacher ratio implies that lower the student – teacher ratio, higher is the academic achievement of student. The average student-teacher ratio in public school was lower than that of private schools.

  The results further revealed that students’ academic achievement and educational attainment is affected by household income in positive direction. A child from a well educated family with high socio-economic status is more likely to perform better than a child from an illiterate family. This may be because higher income can provide better environment for study, reading material such as informative books and computer etc. and decent feeding. Parents can afford fees for the best school.
Multiple regression analysis found that the type of school management, father’s education, student-teacher ratio and household income affects the quality of education. It has been also observed that the quality of education is better in public schools than that of private schools.

➢ Multiple Classification Model and Analysis

Besides the type of school management, three other factors namely, percentage of trained teachers, class size and student-teacher ratio had been hypothesised to influence the quality of primary education in MCA model. It was found that type of school management had clearly come out as a dominant variable affecting the quality of education (performance of students). The next variable which seems to have affected the quality of education was student-teacher ratio after controlling the remaining predictors and covariates (percentage of permanent teachers’ and ‘number of years of experience in teaching’ were included as covariates) in the model. The class size appeared as another significant predictor in determining the quality of education. However, percentage of trained teachers had little effect on quality of education. Trained teachers could be the contributory factor in the quality of education in terms of performance of school. The multiple classification analysis revealed that the type of school management, student-teacher ratio and average class size affected the quality of education. It has been also observed that students-teacher ratio and class size were low in ZP schools compared to NMMC and Private schools. The performance of students was better in ZP public schools. Nevertheless, despite better infrastructure and physical facilities in private schools, the final examination results were far more impressive in ZP public schools.

➢ Path Modelling

The direct and indirect effects of the factors affecting quality of education at primary schools was examined using path modelling - a statistical technique used primarily to examine direct and indirect relationship through one or more intervening variables. In this way, path analysis played a unique role from other linear equation models.
Path Model-1 has considered the type of school management, student - teacher ratio and class size as the causal factors in determining the quality of education in primary schools. From the results of the study, it was evident that the direct impact of the type of school management on academic performance was dominant. The indirect effect of type of school management through student - teacher ratio on quality of school education showed inverse relationship between students’ achievement and student - teacher ratio, i.e. lower is the student - teacher ratio, higher is the quality of education. The quality of education was measured in terms of results of final examination. The results clearly brought out that ZP schools have lower student- teacher ratio and higher quality of education in terms of academic performance of students as compared to other two types of school managements.

Another important variable class size was when introduced as second intervening variable assumed as a factor that was causally related to student - teacher ratio through type of school management to quality of education. Thus class size was found as another dominant variable affecting the quality of education. It can be concluded that ZP schools had lower student – teacher ratio, smaller class size, and higher score of academic achievement.

Path Model -2 has utilized the type of school management, percentage of trained teachers and percentage of permanent teachers as the contributing factors to the quality of education in primary schools. It was found that, the total effect of type of school management on quality of school education indicated that type of school management had direct and significant effect on quality of education.

From the outcome, we can say that ZP schools have high percentage of trained teachers and better quality of education which implied that percentage of trained teachers was a casual factor in affecting the quality of primary school education. The percentage of trained teachers was an important factor in determining the quality of education. The study concluded that higher is the percentage of trained teachers, better is the academic achievement of student.

The percentage of permanent teachers was another intervening variable added in the model, to know the effect on the quality of primary education. The percentage of permanent
teachers was indirectly related to the percentage of trained teacher in the sense that teacher are eligible for permanent post only after getting appropriate training like diploma or degree in education. The result showed that higher is the percentage of permanent teachers, better is the academic achievement of student. It was found that ZP schools outperformed in quality of education as compared to others, mainly due to relatively higher percentages of trained teachers and permanent teachers employed in ZP schools than that of others. It was concluded that untrained teachers and appointment of teachers on temporary basis was the cause of concern for the quality of education.

➢ Logistic Regression Model

To know the effects of student’s household characteristics and type of school management on educational performance in final examination – A Logistic Regression Model was constructed. It was found that the predictor variables, type of schools, categories of completed years of father’s education and mother’s education and monthly income of households and type of job of father have significantly affected the results of students in examination.

The finding further revealed that that parents’ education had significantly influenced the academic achievement of students. It may be seen from the results that as level of education of parents increases the influence on academic performance of student also improved. Because the parents may be in a better position to be second teacher to the child; and even guide and counsel the child on “how to give his/her best performance?” and also sense the educational needs and requirements of their child and fulfil them.

The results further revealed that type of school management stood next to parents’ education in predicting academic achievement of student. The household income was third influencing variable affecting the academic achievement of student. In addition to above factors, it was found that father’s occupation was fourth intervening variable in measuring the academic achievement of student. There was a positive association between father’s occupation and child’s educational achievement and attainment. If father had better occupation (white collar job) then the child is likely to have better educational performance at School. Since father is
generally head of the family the child intuitively imitates his/her father. A child may acquire high achievement motivation from the father who had better job as compared to those children whose father was in blue collar occupations. Hence father’s occupation seems to have affected on student academic performance.

It was conclude that type of school management, parent’s education, household income and father’s occupation were important determinants of academic performance of students. This conclusion clearly points to the fact that differences in socio-economic background of students breed achievement gaps.

To sum up, in order to accomplish the objectives of the present thesis the researcher made extensive use of bivariate, multivariate, and binary logistic statistical models including path models for casual analyses. The results based on the applications of these statistical models clearly brought out that the type of management of school had played a dominant role in influencing the quality of primary education though some other selected factors also contributed significantly in explaining the variation in the dependent variable.

Student-teacher ratio was second dominant predictor variable in determining the quality of primary education. The other factors such as class size, trained teachers and employment status (permanent / temporary / contract) of teachers and number of year of teaching experience had also significantly affected the quality of education.

It was found that among the household factors, parent’s education was a vital factor in promoting the academic performance of student. The other factors affecting the performance of students significantly were ‘income’ and ‘occupation’ of father.

From the above results, it was concluded that the ZP public schools management provided better quality of education as compared to the rest of two types of school managements, irrespective of the fact that private schools had better infrastructure and physical facilities. The further analysis revealed that ZP schools had low student-teacher ratio, higher percentage of trained teachers, higher percentage of permanent teachers and more experienced teachers.
The further in-depth analysis carried out to look into the reasons of better educational performance of ZP schools, revealed that the ZP schools had low student-teacher ratio. The reason for lower student-teacher ratio in ZP schools could be better school management. The other reason may be that during last decade the growth of private schools was quite high (32%) in Navi Mumbai. These schools made efforts to provide more infrastructure facilities like sports, indoor games and gymnasium etc. which attracted the parents of children of a section of the society to send their wards to these schools.

The ZP schools had higher percentage of trained teachers, higher percentage of permanent teachers and had relatively higher percentage experienced teachers.

8.2 Suggestions

As found, school management was dominant factor and other important component were student-teacher ratio, class size, trained teachers, employment status (permanent / temporary / contract) of teachers and years of teaching experience in influencing the quality of primary education. Among the household factors, parent’s education, household income and occupation of father were vital factor, in promoting the academic performance of student.

The type of school management is responsible for “making policies conducive for academic environment of their school”. The management also decides the criteria of admission, appointment of teachers, training requirement; curriculum and providing infrastructure facilities etc. As such school management is a very strong factor in influencing the academic achievement of students. Therefore, it is suggested that school management should modify their policies and program to improve the quality of education.

It is suggested that there should be uniformity in infrastructure and physical facilities in primary schools. The curriculum should be identical for primary education. This may discontinue the practice of students shifting from CBSE to state syllabus or vice versa and may consequently maintain the uniformity in enrolment of students. This in turn, may reduce the variation in enrolments of students in different type of school management and narrow down the large gap in student - teacher ratio.

It is recommended that the practice of appointing teachers on temporary or contract basis should be stopped. Faculty development programmes should also be introduced to encourage teachers
to attend seminar / conferences in order to update their knowledge and sharpen their teaching skills. This will enhance the quality of education.

It is further suggested that to improve the quality of education, meetings of teachers with parents should be arranged more frequently to appraise the progress of their wards. In case of poor performance of the child in class, parents / guardians should be told the ways in which the child should be handled at home to overcome his / her shortcomings.