

Is Travel Time An Obstacle To Grades? An Analysis

Dr. Amit Nandu

Associate Professor, Dept. of Accountancy
H.R. College of Commerce & Economics
Mumbai, Maharashtra, India.

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ABSTRACT

Stronger the foundation, stronger is the structure. Who doesn't want to perform well in higher education? But the process begins in primary education. Every parent wants their children to do well in studies and get educated from the best institution. But to get into the best institution, one needs good grades and the key to good grades is ones performance in exams. Most of the times the reason students don't perform well in exams is because they don't have proper basic understanding of the subject which begins at the primary level. Hence this paper focuses on finding out is there any direct correlation between a student's performance in secondary education with the time they spend while travelling to their respective schools?

For this purpose, Mathematics was taken as the base subject because that is one subject which a student has to study right from primary education till higher education. So the researcher has tried to find out how the students have performed in Mathematics in class X. Is there any correlation between the time taken to travel and the performance?

Key Words:

Travel Time: Time taken by a student in reaching his/her school from their homes.

Grades: Marks obtained in the subject of Mathematics in class X.

SSC: Secondary School Certificate (Maharashtra State Board)

ICSE: Indian Certificate of Secondary Education

CBSE: Central Board of Secondary Education

IGCSE: International General Certificate of Secondary Education

IB: International Baccalaureate

I. INTRODUCTION

Overview of Education System in India

"Education is the most powerful weapon which you can use to change the world."

Nelson Mandela.

Quality Concern in Education

Locating the term quality in educational discourse is now a universal concern today. "Quality is somewhat problematic: like beauty, it lies in the eyes – or rather the mind of the beholder" (Cliff. et al. (1987). Quality has been extensively defined by Dewney et al. (1994) as, "meeting, exceeding and delighting customer's needs and expectations with the recognition that these needs and desires will change over time." Its practice in the sphere of education demands that the education available to all children in different regions and sections of society has a comparable quality. J. P. Naik describes equality, quality and quantity as the elusive triangle of Indian education. Dealing with this metaphorical triangle requires a deeper theoretical understanding of quality in education than has been what available in schools today. United Nations educational, Scientific and Cultural Organization's (UNESCO) recently published global monitoring report which discusses systematic standards as the appropriate context of the quality debate (see Global Monitoring Report 2006 – Literacy for Life, UNESCO, 2006). From this point of view, the child's performance needs to be treated as an indicator of systematic quality. With reference to education, quality is a relative term and hard to define and even more difficult to measure.

School Education System under Different Boards

In the minds of many people, school boards have considerable influence over educational decisions and provide a key social and political connection to the schooling process. In India, though there is the provision of central authority, but primary education is a state system and power officially resides with the states. A

school board functions locally, within the confines of the state's delegation of power and the geographical boundaries of the district, but is a legal agency of the state and thus derives its power from the state's constitution, laws, and judicial decisions. By state legislative enactment, school boards delegate power and authority to develop policies, rules, and regulations to control the operation of the schools, including system organization, school site location, school finance, equipment purchase, staffing, attendance, curriculum, co-curricular activities, and other functions essential to the day-to-day operation of schools within the district's boundaries.

School Boards in India

There are 33 different educational boards in the country, including the Central Board of Secondary Education (CBSE), Council for the Indian School Certificate Examinations (CISCE) which is the umbrella for ICSE and ISC and the various State Educational Boards.

However, our major focus in this study is on the Central Board of Secondary Education (CBSE), Indian Council of Secondary Education (ICSE), International Baccalaureate Organizations (IBOs), The International General Certificate of Secondary Education (IGCSE) and Secondary School Certificate (SSC).

II. LITERATURE REVIEW

There has not been much research done on this subject in India. In some universities abroad, researchers have tried to study this topic but in a limited way. No one has tried to compare the impact of different types of primary education in a country and no researcher has so far tried to find out which stream of education is the best for the child.

2.1 Research Papers

Punch S. (2004), University of Stirling studied the impact of primary education on school-to-work transition for young people in rural Bolivia and concluded that formal education was unlikely to increase children's future livelihood options.

Loxley W. (1983) from the education department, World Bank, studied the impact of primary school quality on learning in Egypt and revealed that the incremental effects of school quality on the poor are greater than those found for children of advantaged backgrounds.

Berlinski, S. and Galiani, S. and Gertler, P. (2006) studied the effect of pre-primary education on primary school performance and concluded that preprimary school attendance positively affects student's self-control in the third grade as measured by behaviors such as attention, effort, class participation, and discipline.

Michaelowa K. (2007) from University of Zurich studied the impact of primary and secondary education on higher education quality and her results suggest that certain minimum levels of enrolment at primary and secondary level represent a necessary condition for the development of functioning higher education. Another relevant result is that strong differences between educational institutions at secondary level may be detrimental for tertiary education quality.

Project objective and Research Question: Objectives

To determine whether the travelling time wasted in commuting to the educational institution results in poor performance of students.

Research Question:

Is it true that the more the distance of school from home, the lesser are the marks the student scores?

Project Scope and Limitations

Project Scope

The scope of the project includes preparation of questionnaire, data collection and analysis of data collected, review of existing literature, findings and recommendations. The field work involves visiting a few students' houses and interviewing their parents.

Limitations of the study

Sample Distribution: Though the sample size was large, I wasn't able to obtain sufficient students from IB and IGCSE board. As a result, the study focuses more on three boards viz. SSC, CBSE and ICSE.

Access: Due to unavailability of sufficient funds, I had to use Microsoft Excel for statistical analysis which is not as comprehensive as SPSS.

Time Factor: Due to paucity of time, I could not visit each respondent's house and take the interviews.

Project Benefits

Relevance to Society: This is a pioneering study in the field. It will analyze the performance of those

children in secondary education i.e. Class X to judge the impact of distance on the performance in Mathematics in Class X. This research project will be extremely helpful to all parents who are right now confused about enrolling their child in a school near to their residence, not considering the quality of the institution or to ignore the distance but go with the best available option.

III. RESEARCH METHODOLOGY

Study Design

This research is primarily about students who had opted for Mathematics as a subject in class X. This research is to try and find out whether the students performance in Mathematics in Class X is influenced by the travelling time to school. Hence I have used the method of primary data collection via questionnaires to obtain information about the marks & distance. The data so collected was then analyzed using various statistical techniques and conclusions were drawn from the results.

Study Setting

Students from H. R. College of Commerce and Economics who had opted for Mathematics in class X and who have passed class XII were included in the primary study. The reason for selecting students only from one institution was to eliminate external influencing factors like teachers quality which could impact their performance in class XII. Since they are from the same college, it would mean they have studied Mathematics in class XII from the same teachers, which in turn would mean that that is a constant factor.

Sampling

The sample was selected through a method of Systematic Sampling. 30 questionnaires were distributed to each of the 8 divisions of F.Y.B.Com. Out of 240 forms so distributed, 193 students submitted the forms, out of which 26 forms were rejected because of incomplete

information. Hence, the final sample size for the study was 157 students. Also, since the sample was chosen from a single college, almost all had the same socio-economic status and hence had the same exposure to information.

Variables

For the purpose of statistical analysis, following variables were taken into consideration. No control variables were taken in the study.

Dependent Variable:

Marks: This is the marks obtained in the subject at the yearend examination, a quantitative variable.

Independent Variables:

Distance: This is a qualitative variable, to know how far the student stays from his/her school.

Study Methods

Questionnaire: A short, simple and objective type of questionnaire was prepared and distributed among the classes of F.Y.B.Com of H.R. College of Commerce and Economics. It contained various questions in order to provide the necessary data to carry out this survey.

Data Collection

Data was collected from a sample of 157 students which included 59 boys and 98 girls through the questionnaires.

IV. RESULTS

Representation of data collected

Once the data is collected, it is easier to draw patterns in the data via representation through diagrams. Based on my data, I have represented them through pie diagrams and bar diagrams wherever applicable. Further conclusions are drawn once the data is analyzed.

Data was collected from 157 students of first year B.Com which included 59 boys and 98 girls. The following diagram represents this distribution:

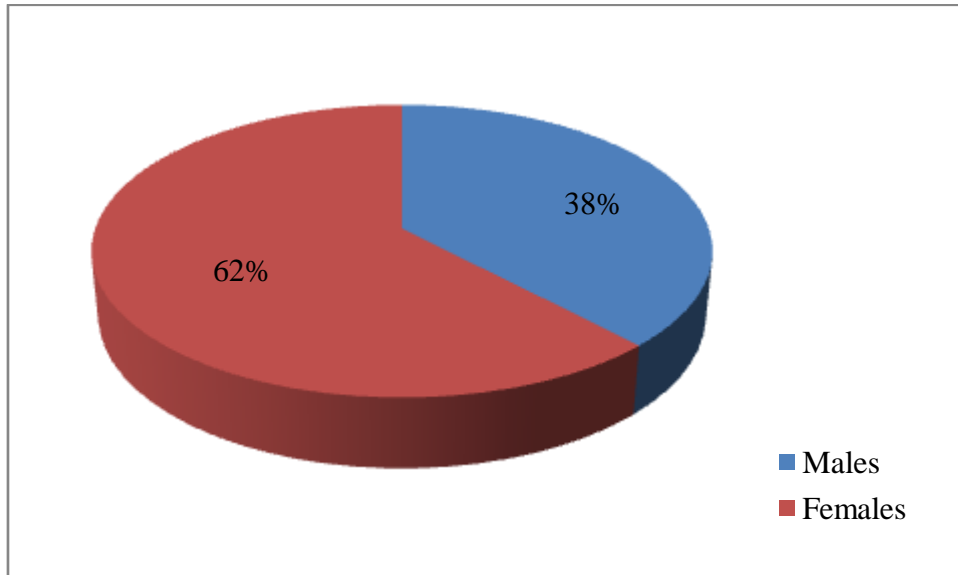


Figure 1: Distribution of boys and girls in the data collected

Four boards emerged from the data collected.

These were

- SSC
- ICSE
- CBSE
- IGCSE

The questionnaire also included the IB board. However, there were no students from that board in the data collected. Hence they are not represented in the results.

It is seen that maximum students are from SSC board: 103 students, followed by ICSE: 47 students. CBSE and IGCSE had 5 and 2 respondents respectively.

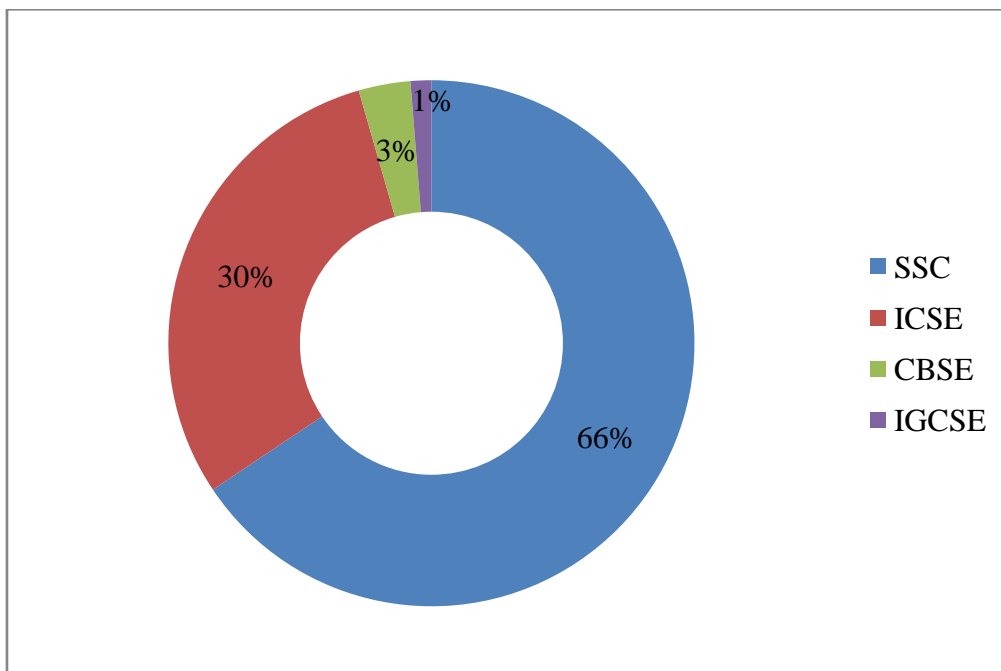


Figure 2: Distribution of students in different boards

In order to determine the correlation between students who have scored high marks in

Class X and the marks obtained by them in Mathematics in Class XII, the students were asked

their percentages in the class X examination. It was seen that maximum students fall in the range 90% - 95%.

The percentage of students who scored higher than 95% and lower than 90% were 11% and 20% respectively. This is represented in figure 3.

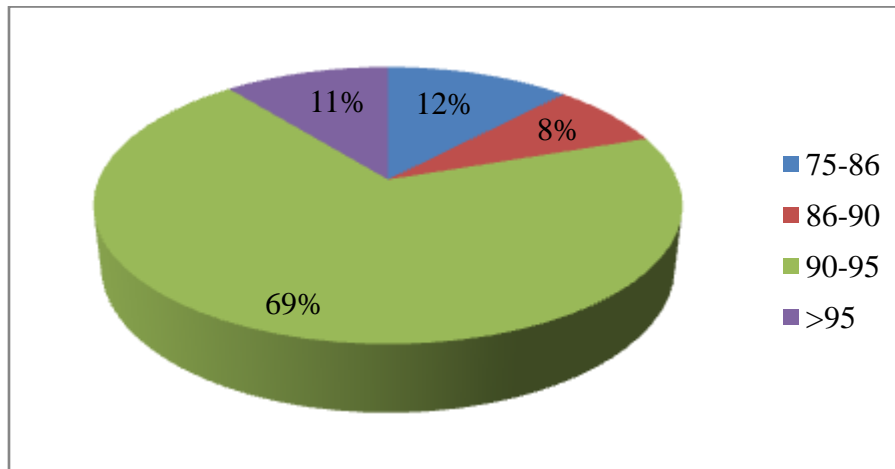


Figure 3: Distribution of marks scored in Class X examination

The following figure gives the distribution of marks of students in Mathematics in Class XII. It is seen that maximum students have scored more than 90% marks.

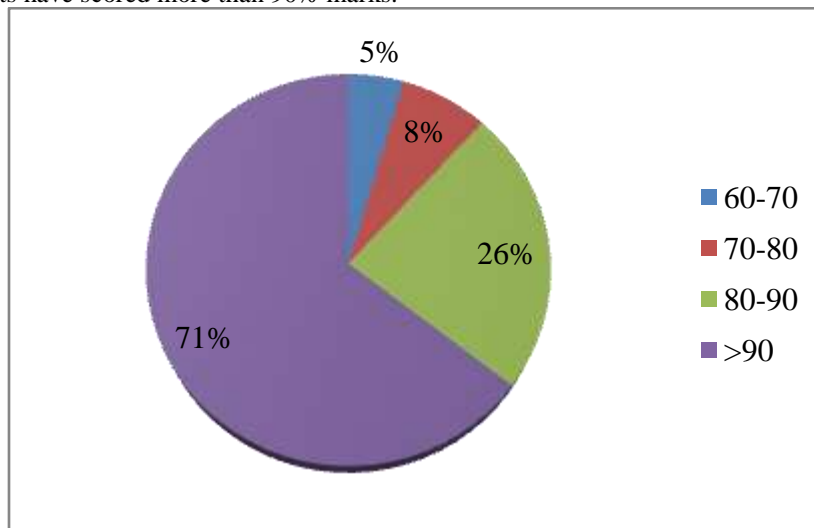


Figure 4: Distribution of marks scored by students in Mathematics in Class XII

As the objective of the paper is to determine whether boards impact the marks obtained in Mathematics in Class XII, averages marks were calculated for the different boards. Figure 5 shows the average marks obtained in the same. It is seen that average of CBSE is the highest, followed by ICSE& SSC.

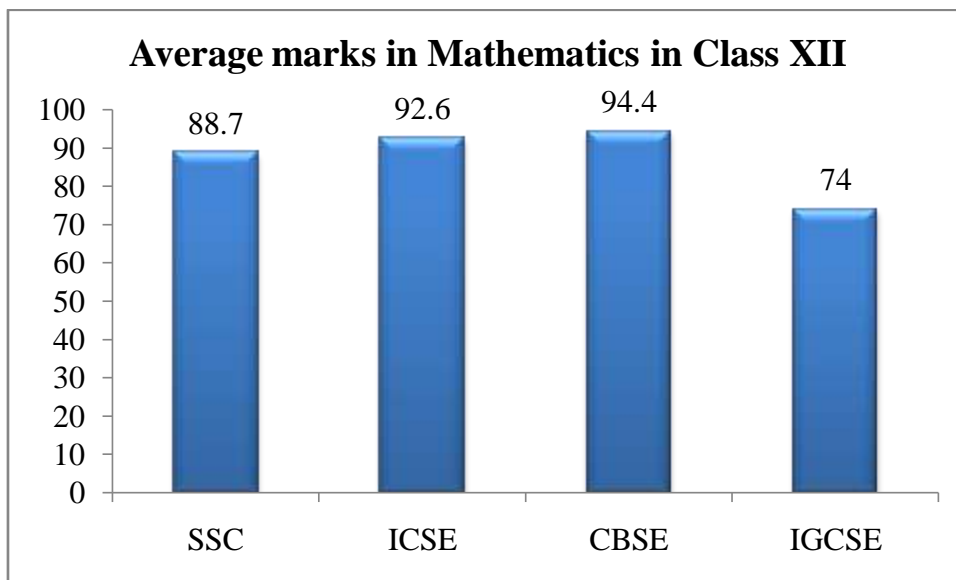


Figure 5: Average marks in Mathematics in class XII

In order to check if there is a correlation between the time taken to commute to school (which is directly proportionate to the distance of the school from home) and the marks secured by the students, I asked the students the distance of their school from home.

The results show that maximum number of students i.e. 89 students stay near their school i.e. at a distance upto 2 kilometres. 31 students stay at a distance of 2 - 4 kms while 17 students stay at a distance of 4 - 6 kms. However, there were 20 students whose school was at a distance of more than 6 kilometres as well.

The distribution of students is shown in Figure 4.3

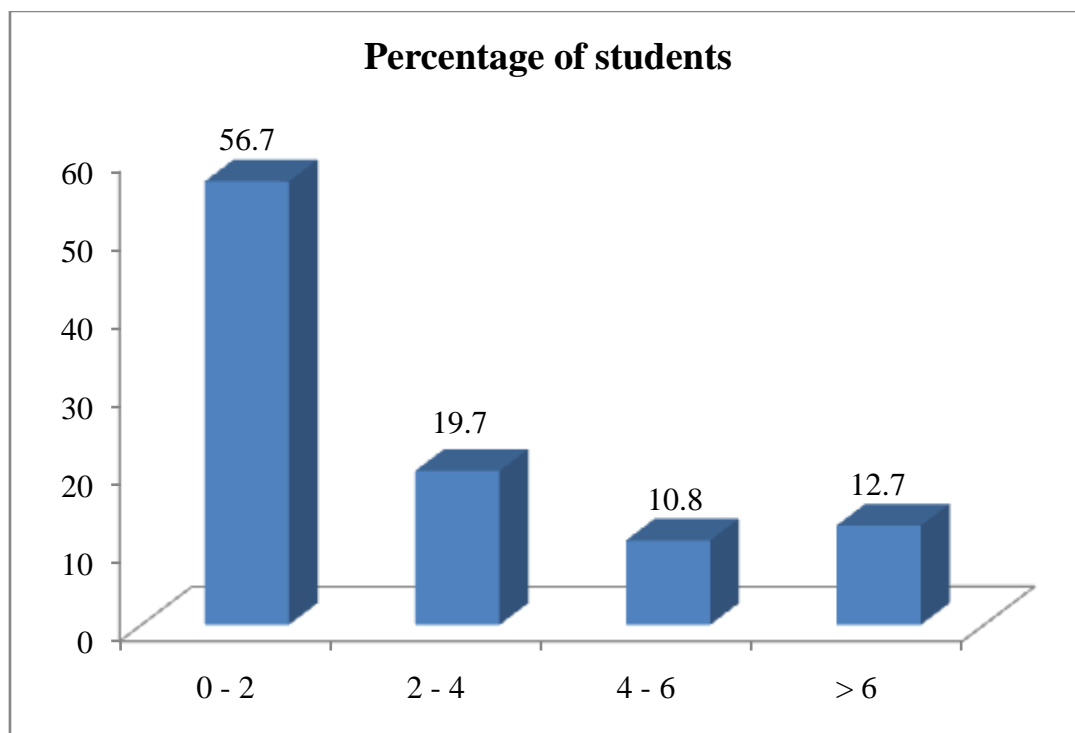


Fig 4.3 Distribution of students falling in different distance brackets (Distance is measured in kms)

Hypothesis.

The time spent in travelling to school is generally unproductive and students spend a lot of energy as well in commuting to school. Hence if the school is nearby, the student has more time and energy to study as compared to a student whose school is very far.

H_0 : Marks obtained in Class X is independent of distance of school from home

H_1 : Greater the distance of school from home, lesser are the marks obtained in Class X

For this hypothesis, I plotted the distance in kms of the school from home and the percentage

obtained in Class X for each student on a scatter diagram. But unfortunately, no relationship emerged from the diagram. Even though the distances varied, the marks almost remained the same throughout. The scatter plot is shown in Figure 4.10.

Karl Pearson’s coefficient of correlation taking variable X as distance of school from home in kms and variable Y as the percentage obtained in Class X was found to be 0.033834 which again emphasizes the fact the there is hardly any correlation. This shows that the distance of school from home has no effect on the marks that the student scores in Class X.

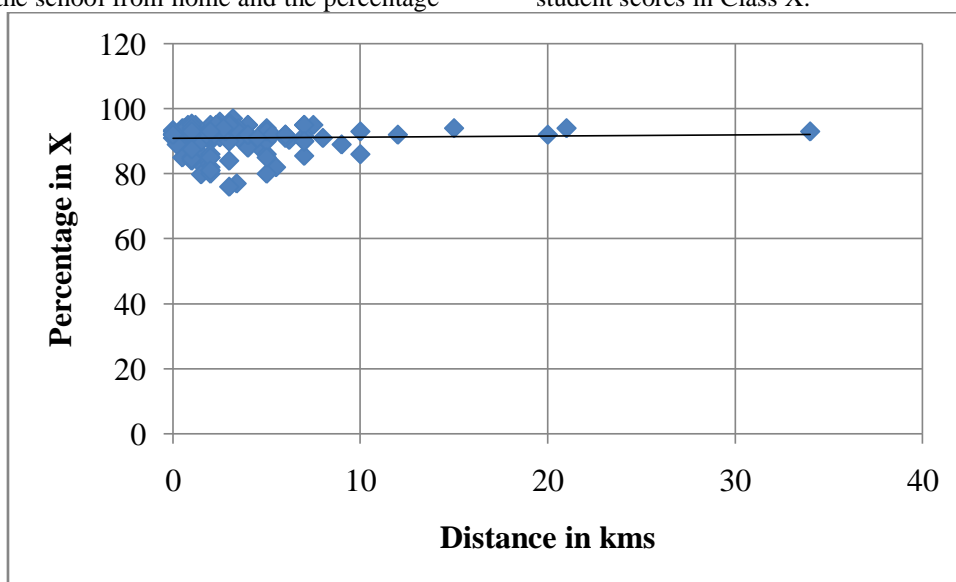


Figure 4.11 Correlation between distance of school from home and % marks secured in Class X

V. CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

The results show that maximum number of students i.e. 56.7% students stay near their school i.e. at a distance upto 2 kms. 19.7% students stay at a distance of 2 - 4 kms while 10.8% students stay at a distance of 4 - 6 kms. However, there were 12.7 students whose school was at a distance of more than 6 kms as well. This clearly shows that majority of parents want their children to study in a school which is closer to their houses. Then this data was compared with the marks scored by the same students in class X to determine whether distance had any impact on their marks. Karl Pearson’s coefficient of correlation taking variable X as distance of school from home in kms and variable Y as the percentage obtained in Class X was found to be 0.033834 which emphasizes the fact the there is hardly any correlation. **This shows**

that the distance of school from home has no effect on the marks that the student scores in Class X.

Recommendations:

Based on my study, I would like to recommend the following:
The parents should go for the best school, even if it is located a bit far away from their home.

Future Scope:

Further research can be carried out regarding schools situated in other towns. A study can be carried out for analyzing performance of students staying in hostels v/s those staying at homes.

REFERENCES

[1]. Punch S (2004) The impact of primary education on school-to-work transitions for

- young people in rural Bolivia, *Youth and Society*, 36 (2), pp. 163-182
- [2]. Loxley W (1983) The impact of primary school quality on learning in Egypt, *International Journal of Educational Development*, Volume 3, Issue 1, pp. 33-45
- [3]. Berlinski, S.; Galiani, S.; Gertler, P.; (2006) The effect of pre-primary education on primary school performance. (IFS Working Papers W06/04). Institute for Fiscal Studies: London, UK
- [4]. Michaelowa K, (2007) The impact of primary and secondary education on higher education quality, *Quality Assurance in Education*, Vol. 15 Issue: 2, pp.215-236
- [5]. Sylva K, et al. (2008), The effect of starting pre-school at age 2 on long term academic and social-behavioural outcomes in Year 6 for more deprived children: Analyses conducted for the Strategy Unit, *Effective Pre-School and Primary Education 3-11 Project (EPPE 3-11)*
- [6]. Final Report on Quality in School Education, Quality Council of India, Institute for Studies in Industrial Development.
- [7]. Thareja S. (2015), End the Debate...CBSE vs ICSE, *Towards Excellence: An Indexed Refereed Journal of Higher Education*, Vol 7, Issue 2, pp 45-50
- [8]. A Comparative Analysis of the International Baccalaureate Primary Years Programme (PYP) and Middle Years Programme (MYP) in the Context of the Indian Education System (2016), The National Recognition Information Centre for the United Kingdom