

**Educational Outcome:  
Identifying Social Factors  
in South 24 Parganas  
District of West Bengal**

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# EDUCATIONAL OUTCOME: IDENTIFYING SOCIAL FACTORS IN SOUTH 24 PARGANAS DISTRICT OF WEST BENGAL

Jhuma Halder\*

## Abstract

*The key questions facing primary education are whether the students are learning and the factors affecting learning outcome. Among all the factors, social context plays an extremely important role even today. Social factors like gender, caste and religion create the most common form of educational inequality. This inequality is very prominent in the regions which are geographically backward. Using primary and secondary data, a case study has been carried out to explore the learning levels of primary school children and the social factors affecting its outcome. The study finds that social factors significantly influence educational outcome.*

## Introduction

There are multiple levels of social and economic disparities in India. More than half the population still cannot meet their basic needs in this country. The McKinsey Global Institute Report (2015), commissioned by the Indian government, found that 56 percent of the population or 680 million people, still lack the means to meet essential needs, such as food, energy, housing, drinking water, sanitation, healthcare, education and social security. The report revealed that Indian households, on average, lack access to 46 percent of the basic services they need. The report also identifies wide geographic disparities in the availability of social infrastructure which is all the more evident in the field of basic elementary education and particularly in learning outcomes. It has been widely acknowledged that socio-economic conditions are responsible for the inequalities in primary education in the country. Social inequalities of gender, caste, class and religion have been identified as major causes of educational backwardness in India. Several empirical studies have shown that social context is extremely relevant in the field of elementary education in India (Govinda and Varghese (1993), Dreze and Kingdon (2001), Dreze (2003), Jalan and Panda, 2010) and achievement of Universal Elementary Education (UEE) needs to be viewed in this social context. The goal of UEE is to achieve universal enrolment and universal quality of education. According to Jean Dreze (2003), "educational disparities, which contribute a great deal to the persistence of massive inequalities in Indian society, also largely derive from more fundamental inequalities such as those of class caste and gender". The social backwardness always persists with economic backwardness and unequal social and economic background deeply influences children's access to education and their participation in the learning process.

The most common form of educational inequality in India is based on gender disparity. Several studies have revealed the vulnerability of girls in terms of enrolment, attendance and outcome (UNESCO, 2005; Govinda, 2008). To cope up with the problem, elementary education has recently been made a fundamental right for all children in the age-group of 6 to 14.

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Similarly, almost all empirical studies reveal that social status in terms of caste affects the schooling pattern of children. Scheduled caste and backward caste children have a lower chance of enrolment and completion of primary education (Sheriff 1991; Kanbargi and Kulkarni 1991; Acharya, 1994; Sipahimalani, 1996; Kaul, 2001; Vaidyanathan and Nair, 2001; Jha and Jhingran, 2002). Further, lower caste girls often face the double burden of discrimination based on gender and caste. Nayar (1993) adds one more dimension to this tangle by stating that in rural India, women belonging to the historically deprived groups like the SCs and STs suffer the 'triple jeopardy' of caste, class and gender.

Another important factor relevant to primary education is the parental background of the children. The educational status of both parents is known to have a positive impact on the schooling of children, both boys and girls (Sipahimalani, 1996; Krisnaji, 2001; Jha and Jhingran, 2002).

Likewise, family size can be expected to have a negative impact on school attendance rates, mainly for the girl child. According to PROBE report (1999) "eldest daughters in poor families with several children have rigid work duties that may be difficult to reconcile with schooling".

This paper investigates some social issues associated to school outcomes in different geographical regions with the objective of understanding the educational outcomes from a social perspective in different geographical locations.

## **Data and Methodology**

The study is based on both primary and secondary data. The primary data has been collected from South 24 Parganas district of West Bengal. As the study involves the comparison of two regions with different geographical background, the district South 24 Parganas has been selected. The district has two distinct geographical areas—forested blocks (13 blocks) and non-forested (16 blocks). With a view to have coverage of different geographical locations, four blocks have been selected —two blocks from the forested area and two blocks from non-forested area. These blocks are Diamond Harbour- I (Non-forested), Magrahat- I (Non-forested), Basanti (Forested) and Mathurapur-II (Forested). In these blocks, 31 sample schools were visited, covering 400 students. The secondary data used in this study are taken from Census Reports, West Bengal Sarba Siksha Abhiyan Report (for South 24 Parganas district), National Achievement Surveys Report by NCERT (2012) and ASER Report (2014).

The learning outcomes are measured by a test score of class IV students. A test has been developed to evaluate numeracy and language (Bengali) skills. While the numeracy questions test the ability to count and read numbers, add, subtract, multiply, divide and problem solving skills with units of money, length, weight, area and time, the language test covers reading and answering questions based on it, identifying opposite words, filling the blanks and making a minimum three word sentences with commonly used words. The questions of this test were prepared by primary school teachers employed in Government primary schools in West Bengal. The questions were based on third standard syllabus of West Bengal Board of Primary Education. Students were given 45 minutes for the test.

## Study Area

The geographical area of South 24 Parganas district of West Bengal consists of 4,26,300 hectares of which Sundarban mangrove forest accounts for about 41.54 percent. Its huge size and large population, the varied topography with urban metropolitan conditions at one end of the district bordering Kolkata, and people's relentless struggle against the uncompromising nature at the other end in Sundarban mangrove forest, make the district's problems complex and multi-dimensional. According to the West Bengal Human Development Report (2004) the Sundarban region has a high percentage of minorities and disadvantaged social groups, and scheduled caste population in the district accounts for over 40 percent of the total population. The same report identifies this region as one of the most problematic regions among the three problematic regions in West Bengal. South 24 Parganas may be divided into two distinct parts—non-forested blocks close to Kolkata metropolis influenced by the cosmopolitan culture of Kolkata, and blocks in the rural areas of Sundarban mangrove delta which face regular visitation of natural disaster, and consequent devastation. The abundant natural resources in this region have always attracted people not only from neighbouring tracts but also from the countries abroad. Currently, over 89 percent of population depends on agriculture, and 37.21 percent population is Below Poverty Line in the district.

As per 2011 census figures, the total population of the district is 81,53,176 accounting for 8.61 percent of the total population of West Bengal. The decadal growth rate of population between 1991 and 2001 was 20.85 percent, and between 2001 and 2011, 18.05 percent, both higher than the state average of 13.93 per cent. The percentage of child population (0-6 years) in total population of the district decreased from 19.00 percent in 1991 to 14.82 percent in 2001 and further to 12.57 percent in 2011. This indicates that the decline in the decadal growth rate of this district is basically due to a fall in the birth rate. Proportion of 0-6-year-old boys is 12.52 percent and girls 12.62 percent as per 2011 census. Nearly 84 percent population of the district lives in the rural areas, where development is taken care of by the panchayat bodies. The scheduled caste comprises 32 percent and Scheduled Tribe comprises 1.23 percent of the total population. The percentage of Muslim population is also high at 33.24 per cent to the total population. So, the social identity wise share of population in South 24 Parganas is more or less equally distributed among Scheduled Caste, Muslim and General Caste population. There are 29 blocks and 7 municipalities in the district. Out of these, 23 blocks are SC & ST dominated and 28 blocks/Municipalities minority dominated.

As mentioned above, the district covers two distinct geographical areas—forested region (13 blocks) and non-forested region (16 blocks). The forested region of the district is part of Indian archipelago named Sundarbans mangrove forest. There are 102 islands of which 54 are inhabited. After independence and partition of Bengal, huge number of refugees from erstwhile East Pakistan (now Bangladesh) settled in these islands (District Human Development Report South 24 Parganas, 2009). Remoteness and isolation of this forested region forced the inhabitants of this region to depend on forest and fishing for livelihood. Till date, the livelihood options in this region are limited. This background explains the backwardness and related poor economic condition of this region.

## **Trends and Patterns of Primary Education in the Study Area**

This section provides information about the trend and pattern of primary education in the district over the years. The analysis begins with literacy rates and move on to the number of schools in the district and enrolment rates in the schools.

As per census 2011, literacy rate in South 24 Parganas district stands at 78.57 percent which is higher than the literacy rate of the state of West Bengal. The male literacy rate at 84.72 percent is predictably higher than the female literacy rate of 72.09 percent. The district recorded a higher decadal percentage point increase in literacy from 55.10 per cent in 1991 to 70.16 per cent in 2001, but the literacy remained below national average among ST and Muslim population. The proportion of overall female literacy, particularly among scheduled tribe population, was also very low (29.88 per cent) in this district. At regional level, non-forested blocks had a literacy rate of 67.82 percent while forested blocks had 65.03 percent. All 5 worst performing blocks, in 2001 and 2011, were in the Sunderban region. About 30 percent blocks in Sunderban region had literacy rate of less than 60 percent.

The total number of primary schools in the district was 5,789 in 2013-14 of which 86 percent was government schools. During years 2008-09 to 2009-10, about 1,174 new primary school were established in district (Table 1) and about 50 new primary schools were added in the following 2 years, i.e. 2011-12. In 2013-14, some schools were merged due to lower enrolment.

After the Sarva Siksha Abhiyan became operational in 2000-2001, there has been a remarkable rise in enrolment rate in primary schools of South 24 Parganas district. There has also been significant improvement in the support services like provision of free text books, uniforms, mid-day-meal, health care facilities, etc as a result of which enrolment of children has increased rapidly. The Net Enrolment Ratio (NER) in primary school increased from 76.0 percent in 2002-03 to 100.0 percent in 2009-10 (Table-1). The Right of Children to Free and Compulsory Education (RTE) Act, 2009, became operational in 2010 and as per the Act, primary education is free and compulsory to all children. The state will have the responsibility of enrolling the child as well as ensuring attendance and completion of 8 years of schooling. However, 2010 onwards, there has been a decline in the NER in the district (Table 1) indicating the increase of out-of-school children. The probable cause of increase in the number out-of-school children in the district is backwardness of the rural areas of this region. According to the 2011 Census, 3.2 per cent of the total population in the age group of 5-14 years in West Bengal are child labourers, and concentration of child labour is the highest in three districts including South 24 Parganas, and the district ranks first in the state for the number of lost children due to unsafe migration and human trafficking (State Crime Records Bureau Report, 2014).

The blocks in Sundarbans forest region have a long history of backwardness. Interestingly, these blocks do not lag behind in terms of enrolment rates. At the regional level, 30 percent blocks in the Sunderban region and 31 percent blocks in the non-forest region had decreasing NER. Thus the Sunderban forest areas, which were lagging behind in literacy rate, are catching up with their non-forest counterparts on enrolment. But in spite of the 'no-detention' policy, introduced under the Right to Education Act which automatically promotes students up to Class VIII, the dropout rate of the district has been quite high. Dropout rate is particularly high among Muslim students in the district. Muslim

students' dropout rate was 42.31 percent among males and 42.19 percent among females (CSSSC Household survey, 2008).

**Table 1: Number of Primary Schools, Net Enrolment Ratio and Dropout**  
**South 24 Parganas District**

| Year    | No of Primary School | NER  | Drop out |
|---------|----------------------|------|----------|
| 2013-14 | 4987                 | 91.4 | 12.09    |
| 2012-13 | 5004                 | 93.7 | 8.31     |
| 2011-12 | 4992                 | -    | 10.72*   |
| 2010-11 | 4953                 | 100  | -        |
| 2009-10 | 4904                 | 100  | -        |
| 2008-09 | 3730                 | 94.0 | -        |

**Source:** SSA, South 24 Parganas Report, \*Cohort Study Report, SSA, West Bengal

## Educational Outcome

The main question about schooling is whether the students are learning or not. Here, an attempt is made to evaluate the learning levels of children in order to find out the factors related to educational outcome. Since Grade IV is the final grade of the lower primary school, a test was administered among them to find out the quality of children who were entering in the upper primary level. Their background information was also collected to find out how social background of a child affects his/her educational outcome. The factors like gender, caste and religion, parental background and role of private tuition are reviewed for the purpose of the study.

## Empirical Findings

### Test Score of the Children

The overall mean performance of class IV students in mathematics and language was 29.38 percent and 50.17 percent respectively for the entire region. The test score in Mathematics and Language varied from 0 to 100 percent. The test score of a sizeable number of students in mathematics (197) was in the range of 0-30 percent. However, in language test, the number of students in 0-30 range was the lowest. While 34.27 percent students in mathematics and 54.52 percent students in language scored over 50 percent marks, 23.37 percent in mathematics and 53.90 percent in language scored over 60 percent marks. Overall, Students achievement was better in language than in mathematics.

The mean performance level of students in Mathematics across the geographical regions was 37.78 percent (Standard Deviation 32.11) in the non-forested blocks and 22.54 percent (SD 31.64) in the forested blocks (Table 2.1). The mean performance level of students in Language across the geographical regions was 60.96 percent (SD 26.48) in the non-forested blocks and 41.38 percent (SD 32.30) in the forested blocks.

Table 2.1: Pattern of Test Score

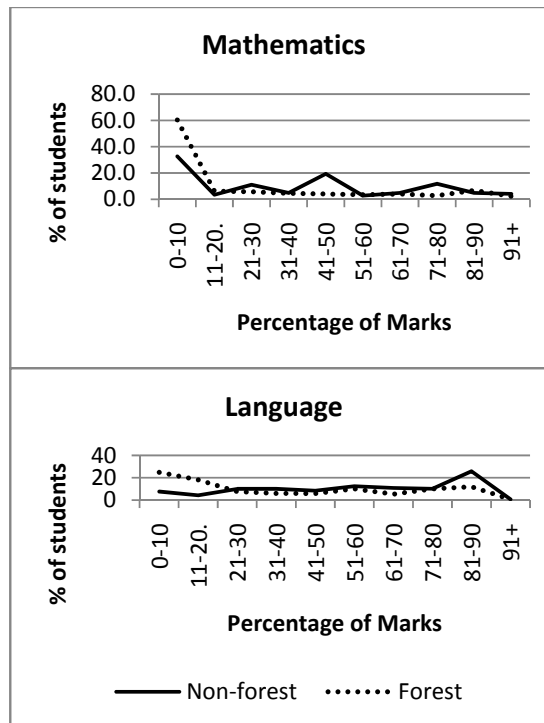
| Subject     | Non-forested Region |               |       |                | Forested Region |               |       |                |
|-------------|---------------------|---------------|-------|----------------|-----------------|---------------|-------|----------------|
|             | Minimum Marks       | Maximum Marks | Mean  | Std. Deviation | Minimum Marks   | Maximum Marks | Mean  | Std. Deviation |
| Mathematics | 0.00                | 100.00        | 37.77 | 32.11          | 0.00            | 100.00        | 22.54 | 31.64          |
| Language    | 0.00                | 95.00         | 60.96 | 26.48          | 0.00            | 95.00         | 41.37 | 32.29          |

Source: Author's calculation from Sample Survey

Figure 1 show the mathematics and language scores of the non-forested and forested regions. In the non-forested blocks, 47.3 percent students did not get the minimum qualifying marks (i.e. 34 percent marks). This percentage was very high in the forested regions where 72.3 percent students did not get the minimum qualifying marks. The percentage of students getting more than 60 percentage marks is found high in the non-forested regions. The language score is also on the same lines; in the non-forested region, 21.8 percent students did not get the minimum qualifying marks and in the forested region, 50.6 percent students did not get the minimum qualifying marks (state-mandated passing grade is 34 percent).

The results have been compared with the results of two large-scale learning assessments conducted in India Viz, Pratham/ASER Centre's Annual Status of Education Report (ASER) and NCERT's National Achievement Survey (NAS). The methods of the test were different for different organisation, but all the tests were for primary grade student and for mathematics and language.

Figure 1: Students Achievement



Source: Author's calculation from Sample Survey



Table 2.2 compares the results published by different organisations and the sample survey conducted for the present study. The ASER report for South 24 Parganas district shows a decreasing trend over the years 2011 to 2013. The sample survey report also maintains the same trend. It was particularly low in the forested region where none of the students got the qualifying marks in mathematics.

**Table 2.2: Comparative Results**

| Organisation                        | State/District/Block | Standard | Mathematics | Language |
|-------------------------------------|----------------------|----------|-------------|----------|
| NCERT (3 <sup>rd</sup> Round, 2012) | West Bengal          | V        | 57.4        | 64.01    |
| ASER (2014)                         | West Bengal          | III-V    | 45.3        | 63.8     |
| ASER (2013)                         | South 24 Parganas    | III-V    | 43.6        | 59.1     |
| ASER (2012)                         | South 24 Parganas    | III-V    | 49.1        | 61.8     |
| ASER (2011)                         | South 24 Parganas    | III-V    | 59.6        | 76.2     |
| Sample Survey (2014)                | Non-forested Region  | IV       | 37.78       | 60.96    |
|                                     | Forested Region      | IV       | 22.54       | 41.37    |

**Source:** National Achievement Surveys (NAS), NCERT, 2012; ASER Report 2014; Sample survey 2014

## Factors Affecting Outcome

### Gender:

The most common form of educational inequality is the one based on gender disparity. Several studies have pointed out that girls are vulnerable to enrolment, attendance and outcome (King *et al.*, 1999; UNESCO, 2005; Dewan, 2008; Glick, 2008; Govinda, 2008; UNICEF, 2009). In recognition of the urgency and importance of providing elementary education, the recently enacted Right to Education Act has included the provision of education to children in 6-14 age groups among the fundamental rights. The three crucial variables — enrolment, attendance and outcome — are discussed here.

### Enrolment across Gender:

Gender difference in enrolment is evident in the schools across forested and non-forested blocks. Significantly, both in the forested and in the non-forested blocks, the proportion of girls was little higher than boys (see Table 2.3), the difference being 3 percent in forested and less than 1 percent in non-forested block. At the block level, proportion of girl's enrolment was 6 percent higher in Basanti and 7 percent higher in Magrahat-I block.

**Table 2.3; Gender-wise Distribution of Enrolment in the Sample Schools**

|                    | Block             | Total       | Boys        | %            | Girls       | %            |
|--------------------|-------------------|-------------|-------------|--------------|-------------|--------------|
| Forested Block     | Mathurapur II     | 533         | 282         | 52.91        | 251         | 47.09        |
|                    | Basanti           | 1898        | 894         | 47.1         | 1004        | 52.9         |
|                    |                   | <b>2431</b> | <b>1176</b> | <b>48.38</b> | <b>1255</b> | <b>51.62</b> |
| Non-forested Block | Diamond Harbour-I | 288         | 172         | 59.72        | 116         | 40.28        |
|                    | Magrahat-I        | 873         | 405         | 46.39        | 468         | 53.61        |
|                    |                   | <b>1161</b> | <b>577</b>  | <b>49.7</b>  | <b>584</b>  | <b>50.3</b>  |

Source: DISE data, 2014

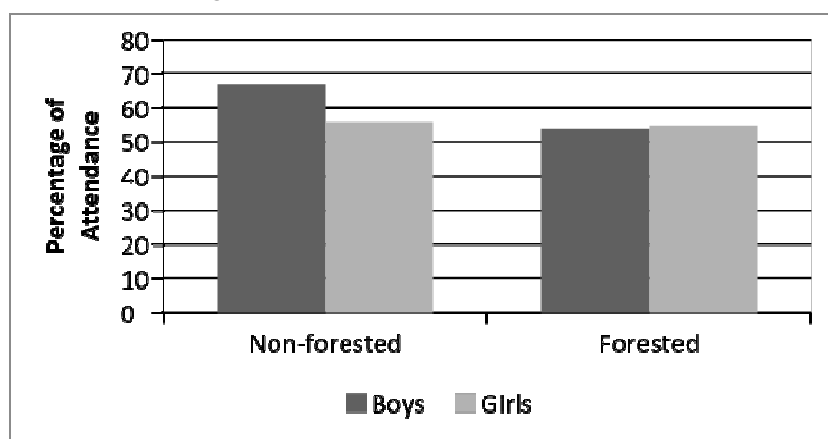
### Attendance across Gender:

Generally, attendance rates are calculated in relation to the number of school working days and children actually attending a class. However, obtaining accurate attendance rate is a challenging task. Information on attendance can be obtained only through the teachers or through school attendance register. But attendance is often manipulated for various reasons like to get higher mid-day meal ratios and to ensure that schools with low enrolments are not merged with other schools etc. (PROBE, 1999). Generally, three sets of enrolment are available in the schools (Mehta, 2003). First, the number of students whose names are written in the class register, second, those who are marked present in the register, and third, those who are physically present in the class on the day of the visit. To overcome these deficiencies in the present study, attendance rates were obtained during school survey when the achievement tests were administered. The schools were surveyed without prior notice. The attendance rates were estimated by the head count of the students who were present on the day when the achievement test was taken. The information about enrolment was taken from the attendance registers of respective grades, and attendance was checked by actual head count of children. Figure 2 shows the total attendance of the students. The overall attendance of the sample schools was 61.41 percent in non-forested blocks and 54.38 percent in forested blocks. There was a slight variation between boys and girls in the matter of attendance, i.e. girls' attendance was lower in non-forested blocks than boys, and it was 0.5 percent higher in forested blocks.

Many previous studies have highlighted the inherent advantage of boys in school attendance and also the upper hand of developed sections of Indian society in educational outcomes. This phenomenon becomes quite apparent when one looks at the situation in the non-forested regions. However, a somewhat unexpected result is observed in case of forested blocks where attendance of girls was a little (0.5 percent) higher than boys and almost equal to the attendance of girls in non-forested blocks. This could be the result of the various intensive schemes initiated by government in this backward region like mid-day meals and other interventions meant to ensure equal educational opportunities to the deprived children. As expressed by a teacher, mid-day meal scheme in school has made attendance rate high and equal among boys and girls in the deprived sample blocks of Sundarban forested region.

The main reasons for children's absence from schools, as given by the teachers, were (a) lack of adequate facilities in school, (b) teacher shortage and overcrowded classrooms, (c) children being required for household work or sibling care at home and (e) parents' indifference or lack of interest in child's education. Parents generally feel that lack of facilities in school and unwillingness of the child are the main reasons for child's frequent absence from school.

**Figure 2: Attendance Rate across Gender**



**Source:** Author's calculation from Sample Survey

### Test Score and Gender:

Pupil's test scores were analysed by gender for different geographical areas (Table 2.4). The forested blocks were found lagging behind the non-forested blocks in terms of results. The overall scores of mathematics and language in forested block were lower than non-forested blocks. As can be seen, the total mean mathematics and language scores in non-forested blocks were 35.50 percent and 58.25 percent respectively, and in forested blocks, the scores were 22.36 percent and 41.71 percent respectively. None of students got pass mark in mathematics in the forest area. The boys of the non-forested blocks scored higher marks both in mathematics (46.54 percent) and language (61.20 percent) than girls (25.45 percent in mathematics and 55.56 percent in language). The gender difference in test score in the non-forested blocks is quite high. The difference was 21 percent in mathematics and 6 percent in language. So, these results are generally consistent with the conventional belief that girls do not perform as well as boys. The Standard Deviation (SD) indicates that boy's scores are more variable in mathematics and girl's scores are more variable in language. Students from the forest blocks did not perform well. Boys got 20.88 percent in mathematics and 35.97 percent in language. Girls' score was a notch higher than boys at 23.63 percent in mathematics and 46.65 percent in language. The SD indicates that girls' scores in both mathematics and language are more variable than boys. None of boys and girls got the minimum qualifying marks. Such poor performance in mathematics is a serious cause of concern as it points to the lacunae in imparting basic mathematical skills to the students. Language being the mother tongue, students would naturally have some grounding in it, and the relatively better score in it is quite understandable.

**Table 2.4: Mean Test Score across Gender**

| Region       | Mathematics |       |                | Language |                |
|--------------|-------------|-------|----------------|----------|----------------|
|              | Gender      | Mean  | Std. Deviation | Mean     | Std. Deviation |
| Non-forested | Boy         | 46.54 | 31.99          | 61.20    | 28.05          |
|              | Girl        | 25.45 | 29.49          | 55.56    | 31.45          |
|              | Total       | 35.50 | 32.39          | 58.25    | 29.93          |
| Forested     | Boy         | 20.88 | 30.17          | 35.97    | 31.00          |
|              | Girl        | 23.63 | 34.56          | 46.65    | 33.51          |
|              | Total       | 22.36 | 32.56          | 41.71    | 32.74          |

**Source:** Author's calculation from Sample Survey

### Religion and Caste:

Further, Table 2.5 provides the religion and caste wise comparison of students' learning achievement across different geographical areas. The mean learning achievement level of Hindu students in the non-forested blocks was 61.94 percent and in forested block, 66.63 percent. In spite of getting special privileges, like free uniform, monthly stipend etc., Scheduled Caste and Scheduled Tribe children were still lagging behind the general caste children in terms of learning achievements. The scores of SC students in non-forested and forested blocks were 58.38 percent and 43.53 percent respectively. Non-forested blocks did not have any ST students in the sample and in forested blocks ST students scored 22.23 percent marks. The mean achievement level of Muslim students was 39.81 percent in non-forested blocks and 22.23 percent in the forested blocks. Hence, the lowest achievement was observed among the Muslim students of the forested blocks who constitute the largest share (61.63 percent) of students in the forested blocks as well as in the sample. The ST students of the forested blocks also scored very poor marks (23 percent). The score of both categories were below the state-mandated passing grade of 34 percent. The SC children performed better in the non-forested blocks (58.38 percent).

This study notes with great unease the literacy and work participation rates among the Muslims are much below the expected levels in the district. As pointed out in the report of the Government-appointed Sachar Committee (2005), the Muslims of West Bengal are lagging behind other communities in educational development and are also the most deprived community in West Bengal. The report also revealed that this community has higher poverty ratio than the SCs and STs in the state. Findings of the present study supports the Sachar committee's finding that economic backwardness is the reason for Muslim students scoring poorer marks than the ST students of the district.

**Table 2.5: Religion and Caste-wise Mean Learning Achievement**

|                | Non-forested Blocks | Forested Blocks |
|----------------|---------------------|-----------------|
| Hindu General  | 61.94               | 66.63           |
| Muslim General | 39.81               | 22.23           |
| SC             | 58.38               | 43.53           |
| ST             | Nil                 | 23.00           |

**Source:** Author's calculation from Sample Survey data.

## Educational Level of Family Members

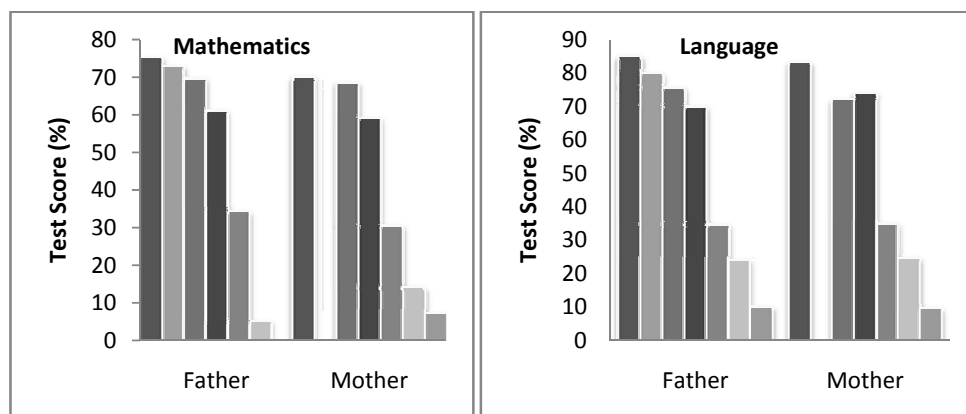
Two factors - parental education and elder sibling's education are analysed here. The test score of 'first generation learners' is analysed separately.

### Parental Education

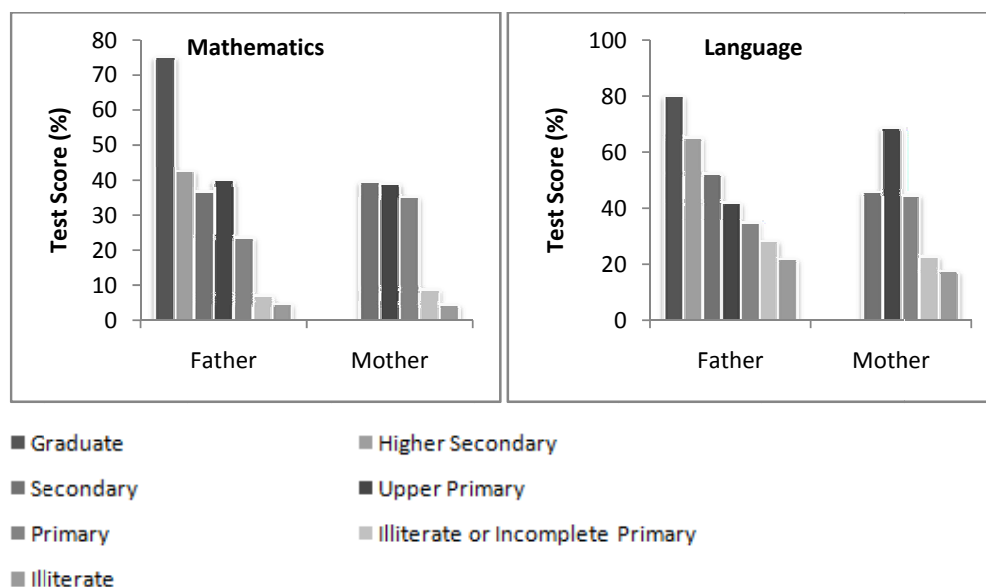
The educational status of both parents is known to have a positive impact on the schooling of children, both boys and girls. The overall result points to the comparative advantage of children from households where parents have completed at least primary education over others. The test score of the students has a direct correlation with parental educational level; it gradually decreases in line with the level of parental education both in forested and non-forested blocks (Figure 3 & 4). Graduate parents' children are found to have scored maximum scores in both forested and non-forested blocks, though the number of Graduate parents was very few in the sample (1.05 percent in non-forested blocks and .95 percent in forested blocks). Both in numeracy and literacy, there was as high as 30 percent difference in scores between students whose parents had at least passed upper primary degree and those without lower level/nil education in the forested blocks in particular. In the forested blocks, the overall scores were lower for all excepting children of Graduate parents. These results possibly reflect the support that the pupil gets from parents in schooling, like in homework or other school related activities, as also encouragement.

As revealed by this study, about 46 percent parents from general caste in the entire region have educational qualification above 8<sup>th</sup> standard, and this percentage is higher in the non-forested blocks. Another 46 percent general caste parents have passed primary class and rest of the parents (8%) are illiterate. Parents' educational level is found playing an important role in children's educational attainment. For example, children of general caste parents with educational qualification above upper primary class are found to have scored better marks compared to general cast parents with low or nil education. Among the Muslim parents in the sample, 5 percent have upper primary level education; 35 percent have primary level education and the rest 60 percent are illiterate or have not completed primary education. Moreover, about 65 percent of Muslim parents in forested blocks are illiterate and the children of these parents got very poor marks (on an average 5 percent marks in mathematics and 30 percent in language). The SC parents are educationally advanced than the Muslim parents among whom only 17 percent are illiterate in forested blocks and 14 percent in the non-forested blocks. The average scores of children in this category are 31 percent and 50 percent respectively in mathematics and language in forested region, and 40 percent and 65 percent respectively in the non-forested blocks.

**Figure 3: Test Score of Students and Educational Level of Parents in Non-forested Blocks**



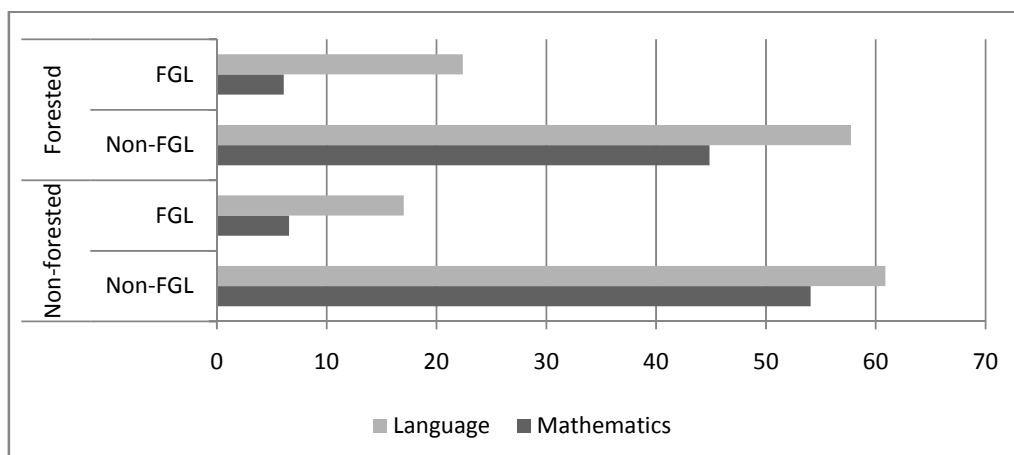
**Figure 4: Test Score of Students and Educational Level of Parents in Forested Blocks**



## First Generation Learners and Outcome

The learning outcome of children from households with little or no previous educational experience was found to be much below others. In the forested block, 52.15 percent children were first generation learners. This percentage was comparatively low in the non-forested blocks (33.51 percent). Figure 5 shows that the first generation learners got lower marks than the non-first generation learners. The difference is nearly 38 percent in mathematics and 35 percent in language. Among the first generation learners of forested region, 80 percent are of Muslim parentage. Similarly, among the first generation learners of non-forested region about 68 percent are of Muslim parentage.

**Figure 5: Test Score across First Generation Learners**

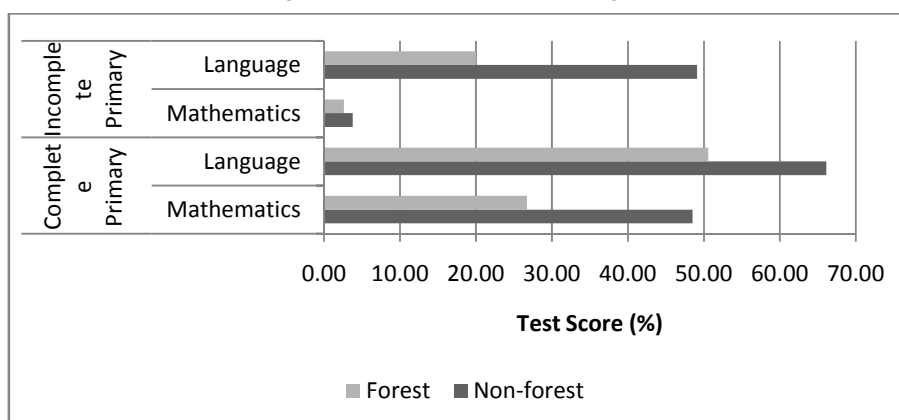


**Source:** Author's calculation from Sample Survey

### Education of Older Sibling

Educational level of siblings in the family also has some impact on students' learning outcome. Educated older siblings create an inherent atmosphere of learning and that affects the other children. Elder siblings assist younger sibling in the possible absence of guidance by parents or private tutor. In the present study- ample, 71 percent children in forested blocks and 52 percent in non-forested blocks had elder sibling/s (14 to 18 years old). The test scores were compared between households where older sibling had completed upper primary education and households where the older sibling had not completed upper primary. Another important finding is that the impact of older siblings' education on younger siblings is more in non-forested blocks than forested blocks (Figure 6). However, the students who had a sibling with at least primary level education scored equally better in forested and non-forested blocks. On the other hand, the students whose siblings hadn't completed primary school got poor marks particularly in mathematics in both forested and non-forested blocks.

**Figure 6: Test Score and Sibling's Qualification**



**Source:** Author's calculation from Sample Survey

## **Family Size and Test Score**

As a part of the survey, we ascertained the number of people who lived in the student's household including the student. The number of people in each family ranged from 3 to 9 in the non-forested blocks and 3-11 in the forested blocks, the average family size being 5 in non-forested and 6 in forested blocks.

An examination of the relationship between family size and pupils' performance was undertaken. Results from this study indicate that pupils with smaller families had higher test scores in both mathematics and language in both types of geographical area. In the non-forested blocks, there was a negative and significant correlation between pupils' mathematics score ( $-0.227$ ;  $p=.01$ ) and the pupil's family size as well as language score ( $-0.350$ ;  $p=.01$ ) and family size. In the forested blocks also the correlation shows negative results. The results are  $-0.208$  ( $p=0.01$ ) in mathematics and  $-0.153$  ( $p=0.05$ ) in language. The correlation coefficients for both mathematics and language are low for both types of blocks. It can therefore be surmised that families with large number of members do not provide a favourable environment for pupils to study and score better. Further, large families are more likely to have lower levels of education (findings from household survey), in which case such families could not support their children's academic work. Besides, attention of the parents is likely to be divided among many people.

As has been observed by this study, most of the Muslim families are large in both the regions. In the forested region, the average Muslim family size is 7 and in non-forested region, it is 5. The average general-caste family size in the forested blocks is 6 and in non-forested blocks, it is 4. Similarly, the number of family members in SC/ST category families is the same as general caste families (average number of members is 6 in forested blocks and 4 in non-forested blocks). The impact of variation in family size, caste and religious groups on children's learning outcomes is on expected lines; larger the family of children, lower the outcome and smaller the family, higher the outcome. Further, children from Muslim families from the forested blocks with 7 or more members scored only 6 percent marks in mathematics and 20 percent marks in language. Likewise, in the non-forested blocks, children from Muslim families with 7 or more members scored only 10 percent marks in mathematics and 30 percent marks in language. In contrast, both general caste and SC/ST category children got better marks than Muslim student. It is therefore clear that family size and attainment levels of children are inversely related, particularly in the case of Muslim children in both forested and non-forested regions.

## **Pupil's Age and Test Score**

It has been observed that there were different age group of children in the same class. As per RTE norm, the age of a grade VI student should be in 9+ years but less than 10 years. The proportion of over age pupils was found higher in the forested region. The problem of over age is due to late entry in schools. The overage children did not perform well as younger children. The findings revealed a negative correlation between the age of pupil and test score in both mathematics and language; higher the age, lower was the score obtained. For the entire sample, the value of correlation for mathematics



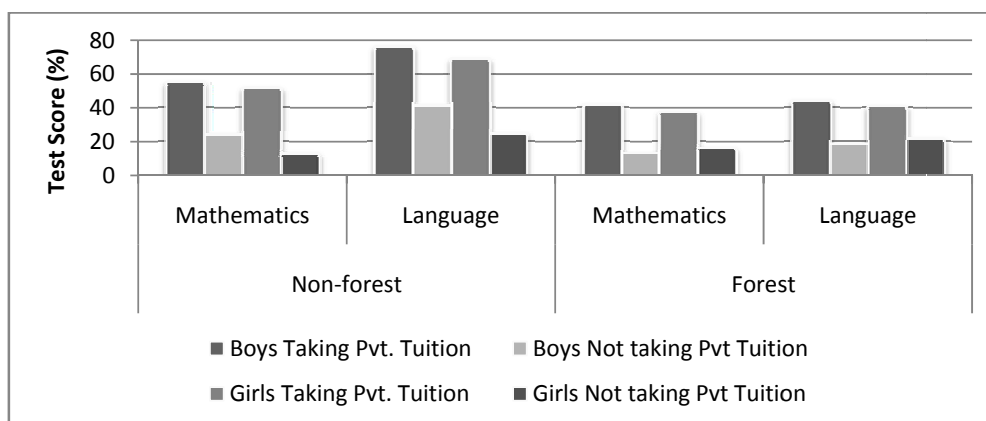
is -.227 and Language -0.283 (the correlation is significant at the 0.01 level). It is clear that over aged children do substantially worse than others.

## Private Tuition and Outcome

To improve a child's learning, parents invest money in private tuition. According to Jalan (2010), "engaging a private tutor for their child is a common investment that parents often make to compensate for inadequate quality of teaching in school". The West Bengal Education Commission report (Report of the West Bengal Education Commission, chaired by Ashok Mitra, 1992) found this practice to be rampant and recommended banning it. Yet, 83.33 percent children in forested blocks and 84.29 percent children in non-forested blocks take private tuition. In Magrahat-I block, 92 percent children attended private tuition and in Basanti block 78 percent children attended private tuition. The question that arises is, how does private tuition affect test scores? Figure 7 shows that private tuition has a positive effect on test scores i.e. the students who took private tuition got higher score both in forested and non-forested blocks. Male students who took private tuition scored 5 percent higher points than their female counterpart in non-forested blocks against 4 percent points in forested blocks. In the household survey, the parents were asked about the amount of money they spent on private tuition. It has been observed that the parents spend higher sums on male children than on female children both in non-forested and forested blocks. Children who did not get private tuition either got home assistance by family members or they did not have anyone to assist at home.

Further, a deeper analysis shows that all the general caste children both in forested and non-forested blocks took private tuition. About 88 percent SC/ST children from forested region and about 97 percent children from non-forested region took private tuition. Similarly, 82 percent Muslim children from forested region and 90 percent children from non-forested blocks took private tuition. It has also come out from data that Muslim children who do not have any private tuition also do not have anyone to assist at home. These students got the poorest marks in the test score. The average score of these students in forested blocks was 8 percent in mathematics and 10 percent in language, and in non-forested blocks, 15 percent and 22 percent respectively.

**Figure 7: Test Score and Private Tuition across Gender**



**Source:** Author's calculation from Sample Survey

## Conclusion

A considerable variation in mathematics and language test scores was observed across geographical boundaries within a district. Geographically, forested blocks are lagging behind the non-forested blocks in terms of the test results. The overall scores of Mathematics and Language in the forested block are lower than that in non-forested blocks. The difference in test score across genders among the non-forested blocks was quite high, but in the forested blocks girls got slightly higher marks than boys. The SC and ST category students underperformed as compared to students of 'Others' category in mathematics and language in both forested and non-forested blocks. Religion wise, the lowest achievement was observed among the Muslim students of the forested blocks. Students' attendance rate was also low in both geographical areas. The result shows that child's learning outcomes are directly related to-

- Educational level of Parents: In households where parents have completed at least primary education, test score is comparatively high. The test score of the students gradually decreases with decrease in parental education both in forested and non-forested blocks
- Elder sibling's educational participation: There is a positive impact on learning levels of a student if his/her older sibling has completed primary school.
- Family Size: Students from larger families tend not to do well in mathematics and language than students from smaller families.
- Private Tuition: Students who took private tuition scored better. This factor indirectly suggests that students are not learning much in school, and that given extra care, would learn better. This also reveals that either schools are overcrowded or number of teacher is less or the environment of the school is not suitable for learning. This is evidently the reason for a large number of children resorting to private tuition. The obvious conclusion therefore is that given sufficient care, children can score better irrespective of socio-economic background, parent's education level, age-group and place of up-bringing (forested or non-forested block).

The above analysis makes it clear that for policy intervention to succeed, the social backgrounds of the children should be kept in mind particularly in underdeveloped regions like Sundarban forest area and other similar regions. There have been a lot of efforts to reduce the social gap particularly in children's education since Independence. But, even after six decades of Independence, the ground reality remains the same, particularly in areas like Sundarban, and more so for socially and economically backward sections like SCs and STs. Therefore, specific attention needs to be given to children of socially backward and geographically remote regions. The dual effect of social and geographical backwardness makes the region more backward in terms of basic education. Hence region- centric policy intervention is required for the entire district.

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