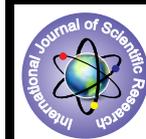


## Barriers in Access to Science Stream at Senior Secondary Stage



### Education

KEYWORDS :

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All human societies from the simplest to the most complex exhibit some form of social stratification based on various forms of inequalities among individuals and groups. Man's dream of establishing an egalitarian society is as old as his civilization. Inequalities of wealth, education, power and prestige have resulted in the formation of various strata arranged hierarchically and the membership of a stratum determines an individual's life chances from chances of survival at birth to good health, to completing a certain level of education, to entry into a certain occupation and to earn a certain income. Thus, the members of a lower class have lower chances of survival at birth, as the infant mortality rate is highest among the poor. These infants, if lucky to survive, have fewer chances of going to school, completing an elementary education and still fewer chances of completing high school education and almost no chances of entering a college, when compared to the children from the middle class families. Again, the former have fewer chances of entering non manual occupations as compared to the latter. Similarly, in the traditional Indian caste structure, the sudras were doomed to illiterate, unclean occupations, low income and perpetual servitude.

Despite the fact that education is a basic right in itself and an essential pre-requisite for reducing poverty, improving the living conditions of rural people and building a self-sufficient society, access to education in rural areas is still a great concern as compared to urban areas. Although the rate of literacy both in rural and urban areas in the past couple decades has significantly gone up still the percentage of literacy among rural areas as compared to percentage of population in the urban areas is not very impressive. More over non-attendance in school, early drop out of students, adult illiteracy and gender inequality in education are found disproportionately high in rural areas as is poverty.

From the various studies it has been noted that some socio-economic variables certainly barring the students' for access to science stream at the senior secondary stage. Those may be Parents choice, Personal ambitions, Friends influence, Teachers influence, Religious factors, Gender differences, Availability of Institutions, Availability of jobs, Relatives, Neighbours, Financial factors, Teachers availability, Climatic conditions, Distance of the institution, Location of the institution, Availability of the tuitions, Advertising factors etc., Hence the present study attempts to decipher various factors act as barriers in access to science stream at senior secondary stage in Asom by looking at the demand and supply side factors.

### OBJECTIVES

#### The objectives for the present study

- 1) To study about the enrolment of students at senior secondary stage in different states in India.
- 2) To find out the factors influenced the respondents to choose the non-science stream at senior secondary stage in Asom
- 3) To suggest some measures to improve the student choices towards science stream at the senior secondary stage in Asom.

### METHODOLOGY

The present study is based on primary and secondary data. The primary data was collected through the structured questionnaires from non-science students of thirty two schools randomly chosen from Humanities/Arts and Commerce streams from

Barak valley i.e., which comprises of three districts i.e., Cachar, Hailakandi and Karimganj. A sample of 1182 students studying +2 level at senior secondary schools of Barak Valley during the year 2007-08 from Arts/ Humanities and Commerce streams form the sample unit for the present study. The study period covered from 2007 to 2008. The secondary data was collected from various relevant websites.

### STUDENT ENROLMENT IN SENIOR SECONDARY STAGE IN THE YEAR 2007-08

Table-1 shows the gender wise enrolment in senior secondary education in different states of India during the period 2007-08. It clearly shows that, though the enrolment of female percent to total enrolment of Asom(45.22%) is better than the states of Arunachal Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, and Uttar Pradesh, its position in North Eastern States registered low when compared to its counterparts which have registered 51.49 per cent, 50.86 per cent, 49.36 per cent, 48.23 per cent, 47.94 per cent and 46.81 per cent in Meghalaya, Sikkim, Mizoram, Nagaland, Manipur, and Tripura respectively. Through which we can presume that the environment of North eastern region is not a constraint to the enrolment of the female student in senior secondary education in Asom.

**Table-1**

**Student enrolment in senior secondary stage in the year 2007-08**

States	Total enrolment	Male enrolment	% of male to total	Female enrolment	% of female to total
Andhra Pradesh	3468713	1877017	54.11	1591696	45.89
Arunachal Pradesh	50396	27789	55.14	22607	44.86
Asom	719469	394097	54.78	325372	45.22
Bihar	1758297	1132439	64.41	625858	35.59
Chattisgarh	690278	402325	58.28	287953	41.72
Goa	64712	32598	50.37	32114	49.63
Gujarat	1915887	1127804	58.87	788083	41.13
Haryana	1072111	597825	55.76	474286	44.24
Himachal Pradesh	410591	220159	53.62	190432	46.38
Jammu & Kashmir	363433	204414	56.25	159019	43.75
Jharkhand	514062	303464	59.03	210598	40.97
Karnataka	2520436	1313542	52.12	1206894	47.88
Kerala	1556582	760296	48.84	796286	51.16
Madhya Pradesh	2881733	1795793	62.32	1085940	37.68
Maharashtra	4837584	2663061	55.05	2174523	44.95
Manipur	103569	53918	52.06	49651	47.94
Meghalaya	68726	33342	48.51	35384	51.49
Mizoram	40953	20739	50.64	20214	49.36
Nagaland	52634	27248	51.77	25386	48.23

Orissa	1252180	686368	54.81	565812	45.19
Punjab	839383	454502	54.15	384881	45.85
Rajasthan	2313069	1524283	65.90	788786	34.10
Sikkim	18579	9129	49.14	9450	50.86
Tamil Nadu	3318523	1654972	49.87	1663551	50.13
Tripura	139781	74349	53.19	65432	46.81
Uttar Pradesh	9334365	5462237	58.52	3872128	41.48
Uttarakhand	519812	284111	54.66	235701	45.34
West Bengal	2715083	1520946	56.02	1194137	43.98

Source: Based on Education in India, Selected Educational Statistics.

**MANAGEMENT AND STREAM WISE DISTRIBUTION OF SENIOR SECONDARY SCHOOLS IN BARAK VALLEY**

Table-2 clearly exhibit the different types of senior secondary schools exists at Barak valley in 2007-08. Out of total 100 schools, 92 schools are having Arts/Humanities streams. 15 schools have Commerce stream and 33 schools have Science stream. Though the schools having Science streams are more than Commerce stream schools, but the students enrolled for Science streams are relatively low when compared to Commerce students. Out of 57 in Provincialised Higher Secondary & M.P.Schools schools and 30 Affiliated / Permitted General Colleges of Asom University only 18 and 7 schools have Science streams which accounted for only 31.58 per cent and 23.33 per cent. Whereas they have majority of Arts/Humanity streams. Even Commerce stream is so negligible when compared to Science stream in terms of number of schools.

**Table-2**  
Management and Stream wise distribution of senior secondary schools in Barak valley

S.No	Types of Senior Secondary Schools	Higher Secondary Schools		
		Total	Having Science Stream	Having Arts/ Humanities Stream
1	Asom Govt HS Schools	4	4	4
2	Kendriya Vidyalayas	6	6	1
3	Jawahar Navodaya Vidyalayas	3	3	1
4	Provincialised Higher Secondary & M.P.Schools	57	18	56
5	Affiliated / Permitted General Colleges of Asom University	30	07	30
Total	100	33	92	15

Source: From the field study

**FACTORS INFLUENCED THE RESPONDENTS TO CHOOSE THE NON-SCIENCE STREAM AT SENIOR SECONDARY STAGE**

Table-3 states that out of 1182 respondents 553 were males and 629 were females. Among them 799 (67.70%) persons stated that non-science subjects are their parents' choice in which 347 were males and 452 were females. Interestingly 797(67.43%) persons revealed that due to financial factors they have chosen the non-sciences among them 392 were males and 405 females. Even personal ambitions obviously reiterated their parents choices, hopefully which are artificially germinated among the innocence mind but not by their own in nature. When it comes to personal ambitions 728(61.59%) of persons; 369 were male; 359 were females stated that personal ambition influenced them to go for non-science streams.

**Table-3**  
Factors influenced the respondents to choose the non-science stream at senior secondary stage

Factors	Persons	Males	Females
Parents choice	799 (67.70)	347 (62.75)	452 (71.86)
Personal ambitions	728 (61.59)	369 (66.73)	359 (57.07)
Friends influence	710 (60.07)	360 (65.10)	350 (55.64)
Availability of Institution	416 (35.19)	166 (30.02)	250 (39.75)
Availability of jobs	503 (42.55)	226 (40.87)	277 (44.04)
Relatives	436 (36.89)	205 (37.07)	231 (36.72)
Neighbours	375 (31.73)	136 (24.59)	239 (38.00)
Financial factors	797 (67.43)	392 (70.89)	405 (64.39)
Teachers availability	538 (45.52)	219 (39.60)	319 (50.72)
Distance of the institution	315 (26.65)	145 (26.22)	170 (27.03)
Location of the institution	262 (22.17)	134 (24.23)	128 (20.35)
Availability of the tuitions	375 (31.73)	151 (27.31)	224 (35.61)
Advertising Factors	146 (12.35)	65 (11.75)	81 (12.88)
Any other factor	29 (2.45)	21 (3.80)	8 (1.27)
Total	1182 (100.00)	553 (100.00)	629 (100.00)

Source: From the field study  
Note: Figures in the parentheses are percentages.

**CONCLUSIONS**

From the study it can be concluded that the environment of north eastern region is not a constraint for the enrolment of the female student in senior secondary education in Asom. In fact girl students dominate the boys in number at the senior secondary stage. Out of 100 senior secondary schools in Barak Valley of Asom, only 33 schools have Science stream and 15 schools have Commerce stream. Out of 1182 respondents 799 (67.70%) persons stated that non-science subjects are their parents' choice in which 347 were males and 452 were females. Interestingly 797(67.43%) persons revealed that due to financial factors they have chosen the non-sciences among them 392 were males and 405 females. Of course these two factors support the basic fact to each other i.e., due to financial constraints parents wouldn't have chosen the science streams for their wards having concept in their mind that science courses require lot of financial support that they were unable to bear in, put their children into reputed colleges which were not easily accessible to both rural and urban parts of Barak Valley in Asom. Even personal ambitions obviously reiterated their parents choices, hopefully which are artificially germinated among the innocence minds but not by their own in nature. When it comes to personal ambitions 728(61.59%) of persons; 369 were male; 359 were females stated that personal ambition influenced them to go for non-science streams.

The authors felt that the factors determine the curricular choice as a non-science stream is mainly socio-economic condition of students, cost of education and state policies and practices.. The financial factors like i.e., fees of schools, cost of books, tuitions etc., and school related factors like lack of senior secondary schools having science streams, hostel facilities, financial support to the needy encourage the students to go for non-science streams in general and lack of separate girls' senior secondary schools, security in their movements to the schools, lack of hostel facilities, toilets facilities, evince barriers at senior secondary stage for girls students. Hence every government need to initiate some needy steps to strengthen opportunities to choose

science streams at senior secondary stage by establishing good number of schools having science stream at par with Arts/Humanities streams, appointing the potential teachers, establish-

ing all equipped class rooms, labs , strengthening basic amenities like drinking water facilities, toilets etc., and support the needy financially.

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