

**COMPARATIVE EDUCATIONAL STATUS AND ENROLMENT OF
POPULATION BY GENDER IN SECONDARY AND HIGHER
EDUCATION: A STUDY OF PASCHIM MEDINIPUR DISTRICT, WEST
BENGAL**

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ABSTRACT

The purpose of the present study is to give an account of sample household demographic characteristics and to analyze their comparative educational status of Population by Gender in Paschim Medinipur. More precisely, this paper analyzes gender wise demographic, literacy and enrolment status of the district. The present paper tries to find out educational status, level of gender inequality of this district. Paschim Medinipur District in West Bengal is one of the backward and rural based districts Literacy rate of the district is 79.04%. Female literacy rate is 71.11 % against the 86.66 % of male literacy.

Keywords: Educational status, enrolment, Paschim Medinipur, gender parity index

Introduction

Higher Education is generally defined as education beyond secondary school, i.e. education provided by colleges, universities and professional institutes. It is well-known that higher education is a key to achieving economic and socio-cultural progress and human development in any country. It is also necessary that access to higher education should be available to every citizen of the country, regardless, of gender or caste. The six pillars of human development: equity, sustainability, productivity, empowerment, cooperation and security cannot be achieved in a system where only a part of the population has access to quality higher education. Hence, equal access and opportunity to all is the basic requirement for building sustainable societies. The United Nations International Covenant on Economic, Social and Cultural Rights of 1966 declares, in Article 13, that "higher education shall be made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education". India with a GER (Gross Enrolment Ratio) of about 11% lags behind to a great extent as a compared to the developed state, as well as other developing countries. Rural and

urban disparities in GER are evident from the enrolment being 6.73 percent and 19.80 percent for the rural and urban areas respectively.

Review of Literature

The study conducted by **Siddhanta & Nandy (2004)** it is found that the pattern of gender disparity in the literacy rate in the urban and rural segments of different states of India. Cluster of states with gender gap in literacy rate. The gap between men's and women's literacy rate is a rough but informative indicator of the gender difference in many forms of human capital (Schultz, 2001).

The study conducted by **King and Pritchett (1998)** he observed that Gender disparity in education is not unvarying within different states in India. There are much greater differences in gender disparity in education among the states of the India than in the countries in the rest of the world.

The study "towards gender equality in education" conducted by Vimala Ramchandran noted that rural urban differences in enrolment & attendance in education institutions are greater than male female difference, backward-forward regional differences enrolment in education are greater than the gender or social group differences. Differences between social groups especially between tribal communities are present.

The study conducted by **Dyson and Moore (1983)** reveals that distinguish between disparity and Discrimination. Disparity simply refers to differences in the outcome under consideration (wages, mortality rates, educational attainments, or any such indicator).Such disparities may be caused by differences in socio-economic characteristics.

In India, the education of girls has historically lagged behind that of boys (**Aggarwal 1987; Agrawal and Aggarwal 1994**). In addition studies have shown that certain communities and classes fare much worse than the others. Though some researchers have recently attempted to lay down the determinants of the inequality in educational attainment for boys and girls, only a handful of these (**Bandopadhyay and Subrahmaniam 2008; Das and Mukherjee 2007, 2008; Sengupta and Guha 2002; Raju 1991; Burney and Irfan 1991**), have explicitly looked at the factors responsible for the relative gender inequality in educational attainment. But none of these works have examined variations in gender discrimination over regions.

In the article conducted by **Sunita Kishor Kamla Gupta** in it has been found Only two-thirds of girls and three-fourths of boys age 6-17 years are attending school. Educational

attainment remains very low. Even among the 20-29 age groups, only 27% of women and 39% of men have 10 or more years of education.

The article by **Pallav Mukhopadhyay** noted that Gender discrimination has been an important feature of economic and social processes in any region, The problem of gender inequality and discrimination is interlinked with the differential rates of literacy of a particular locality, access to secondary and higher education, health and nutrition indicators.

Subhashis Choudhury and Dulon Sarkar (2012) conducted their study in one district of West Bengal mainly Cooch Behar to show Gender Inequality in Education and Employment of Cooch Behar District. This study shows that there is gender equality in school attendance of children in urban areas; but, in rural areas, the female disparity in education is marked and that increases with age. School dropout is a major problem for girls. A consequence of high dropout beyond the primary school level is the low educational attainment of adults. There are many barriers in the way of girls to attend school regularly. Most of the parent's can't afford the high cost of education for girls, because they think that the investment in educating a girl is wastage of money as the girl is ultimately married off. Inadequate infrastructural facilities (like lack of accommodation, proper and separate sanitation, female teachers, hostel etc.) in the schools are another important factor for the women educational development.

Objectives of the study

The main objectives of the present study are:-

1. to describe comparative educational status of population by gender and literacy rate
2. to enrolment of male-female student in education institution of this district: and
3. to analyse the level of gender inequality in education.

Data base and Methodology

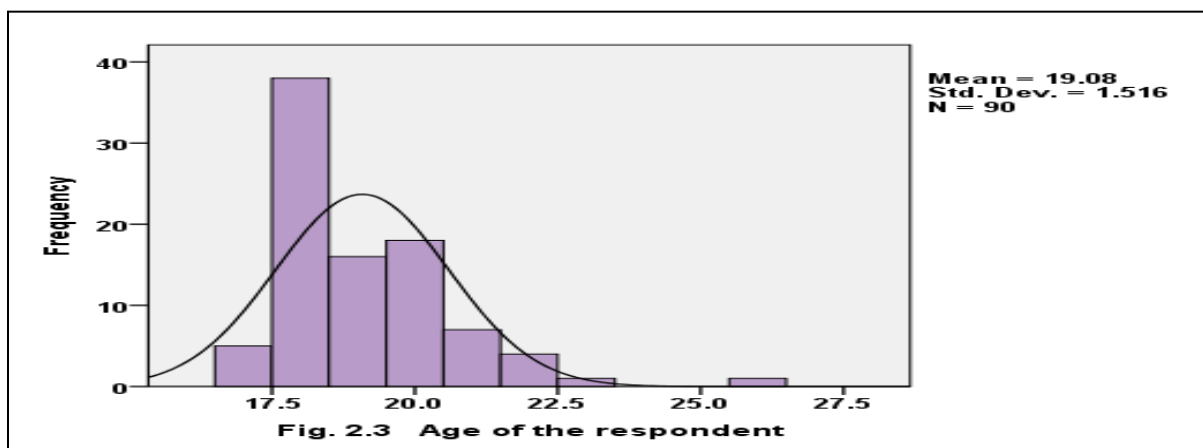
The study is based on both primary and secondary data. Primary data was collected on the basis of stratified random sampling method. As per guide lines, five places namely Binpur, Daiquiri, Radhanagar, Bamda and Ghoradhara etc. have been selected. Some hostels which situated in this region are also selected for primary survey. The secondary data were collected from websites of census, higher education department, Paschim Medinipur Zilla Parisad West Bengal Government etc. published materials such as-Paschim Medinipur Annual Administrative Report, District Statistical Handbook(2010-11) Bureau of Applied Economics & statistics(GoWB) as well as concerned state/district/ block/ GP offices associated Paschim Medinipur District. This study uses a Disparity Index suggested by Sopher (1980) and modified by Kundu and Rao (1986). The

index measures disparity between two groups in their possession of a particular property (in this case completion of education) in terms of the logarithm of the odds ratio-that is the ratio of the odds that any member of one group(male) has completed school to the odds that any member of the other group(female) does. GIS techniques are also use in this paper.

Demographic Profile

According to population census 2011 the overall sex ratio in Paschim Medinipur is 947 females per 1000 males.3.3% of the respondents are married and 36.7% respondents are unmarried in this study area. Looking at the demographic profile of the sample households age group wise population are nearly 65 per cent in 17-19 years, 38 per cent in 20-22 group and 2.2 per cent between 22-23 years . A close look at the demographic profile of the respondents reveals that the size of the respondent. Caste composition of households reveals that 55.50 percent of respondent belong to scheduled castes, 6.50 percent of the respondent belong to scheduled tribes.

Fig.-1



This graph shows frequency of respondents various age groups. Mean age of this distribution is 19.08 years. Standard deviation 1.516 which means there is less dispersion of age between respondents in this distribution.

Literacy Status

Literacy rate of the district was 70.40 % which is slightly higher than state average but much below the required 100 %.There is significant gender inequality. Female literacy rate is below 60 % against the 80 % male literacy. Literacy rate is 68.7 % in the rural areas and 82 % in urban areas. There are also significant differences in literacy rate among the S.T., S.C.,

O.B.C., Minority Groups and Other Castes. The female literacy in LWE Blocks is only 49.08 and male is 75.80 % and the total literacy in these Blocks is only 62.71 %.

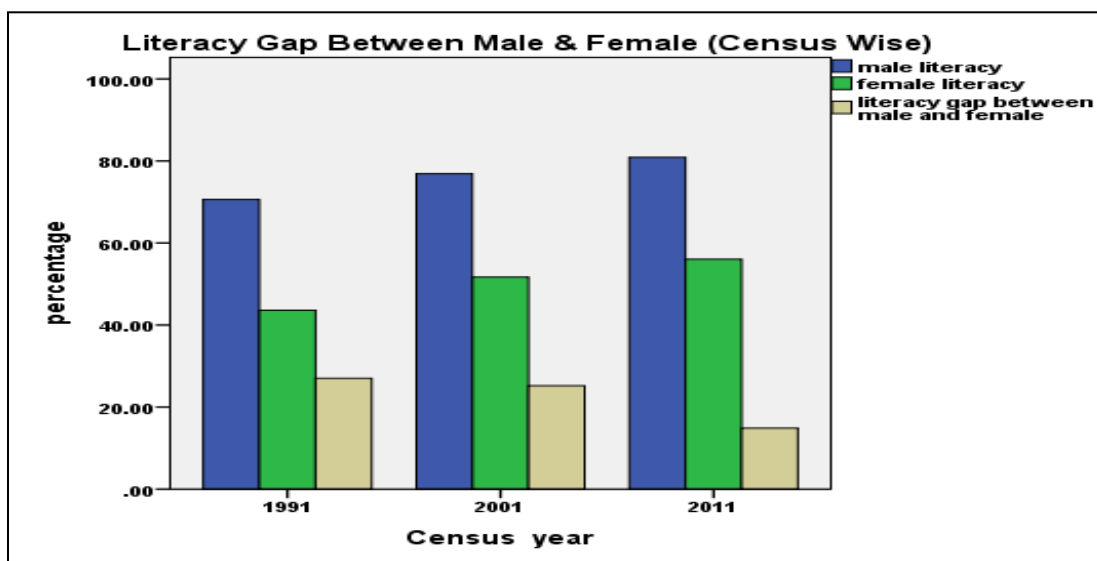
Table 1: literacy rate in Paschim Medinipur district, 2011

Literacy rate total	Male literacy rate	Female literacy rate	Gender gap	Rural male literacy rate	rural female literacy rate	Urban male literacy rate	Urban female literacy rate
79.04	86.66	71.11	15.55	85.97	69.54	91.61	82.25

Source: census report, 2011

Though the overall literacy rate of the district is 79.04% the picture is slightly gloomy in western part of the district i.e. Jhargram Sub-division and certain parts of Medinipur Sadar Sub-division. These are as are mainly dominated by scheduled tribes and primitive tribe groups who remain economically and educationally backward for over the years. The 2011 census report indicates that literacy among women as only 71.11 percent it is clear that literacy rate female higher than state average. Female literacy rate in urban area is 91.61% against 85.97% in rural areas. It clearly indicates that there is narrow gap of literacy rate between male and female population in Paschim Medinipur district.

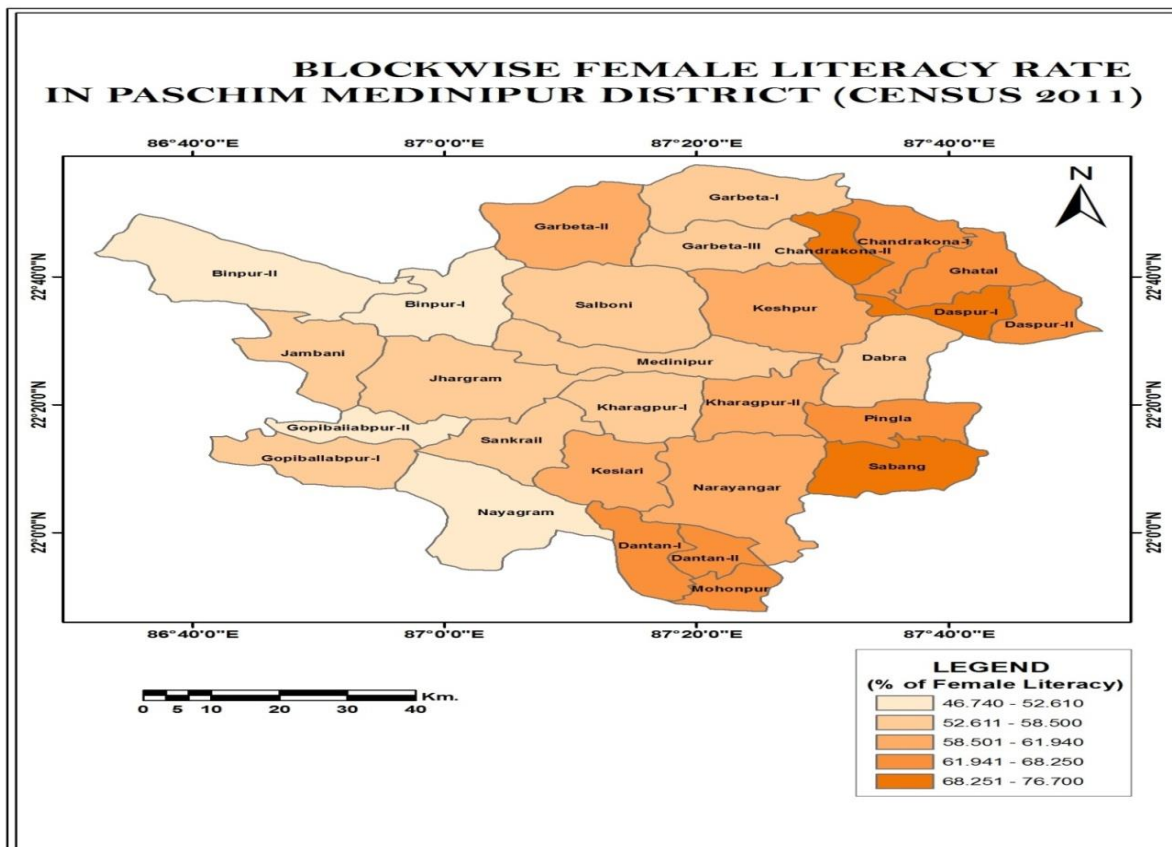
Fig.-2



Source: census report, 2011

This figure represents literacy gap between male & female in Paschim Medinipur. But one subject keep in mind that the male & female literacy gap decreasing through different census year. According to 1991 census data literacy gap was 27% but now it is 14.87%. Sarva Siskha Avijan (SSA) & other various govt. schemes take initiative steps to low male & female literacy gap. The gap between male and female literacy rate decreases through different census year due to implementation of Sarba Sikhya Abhiyan (SSA) and mid meal programme. Male literacy status in rural areas is 80.21% against 88.75% in urban areas in Paschim Medinipur district.

Fig.-3



Source: census 2011

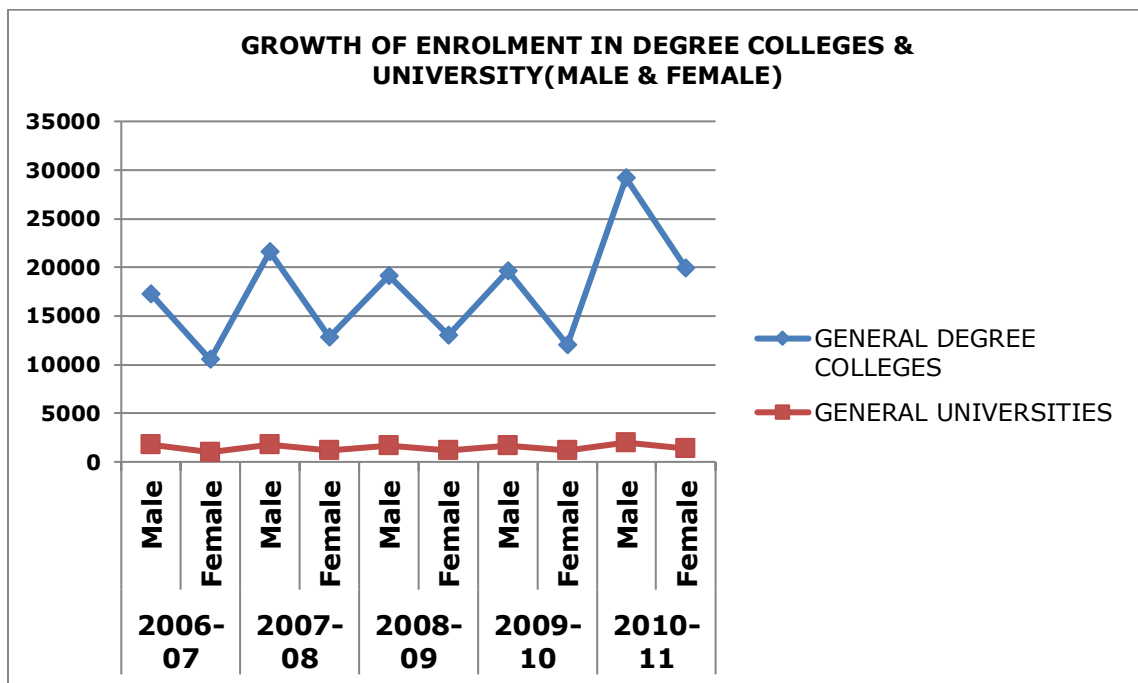
This choropleth map showing female literacy rate of Paschim Medinipur District. It clearly indicates that there are regional variations of female literacy rate in this district. Sabang, Chandrakona-III, and Daspur-I block exhibits higher female literacy rate. Female literacy rate is very low in Binpur-I, Binpur-II & Nayagram block. Jhargram, Medinipur, Kharagpur represents medium female literacy rate. Some Blocks (Binpur-I&II, Jamboni) in western part of this district are more behind in female literacy rate due to most of tribal population lives in this region.

Maximum no. of female are engaged for collecting forest wood & other domestic activities in this region. They are not willing go to school.

Enrolment Status

Enrolment ratio in higher education (general degree college & university) is increasing from 2006-07 to 2011-12. In the year of 2006-07 male enrolment in higher education was 17325 but it increase to 29184 (2011-12) but increase of female enrolment is lower than the male. There is gap of male & female enrolment in higher education. Female are more behind than the male. There is also inequality in enrolment in higher education in rural and urban areas. Jhargram block falls under most western part of Paschim Medinipur District. Urban population of this block is 61712 out of 170097.

Fig.-4



Source: district statistical handbook, BAE&S 2010-12

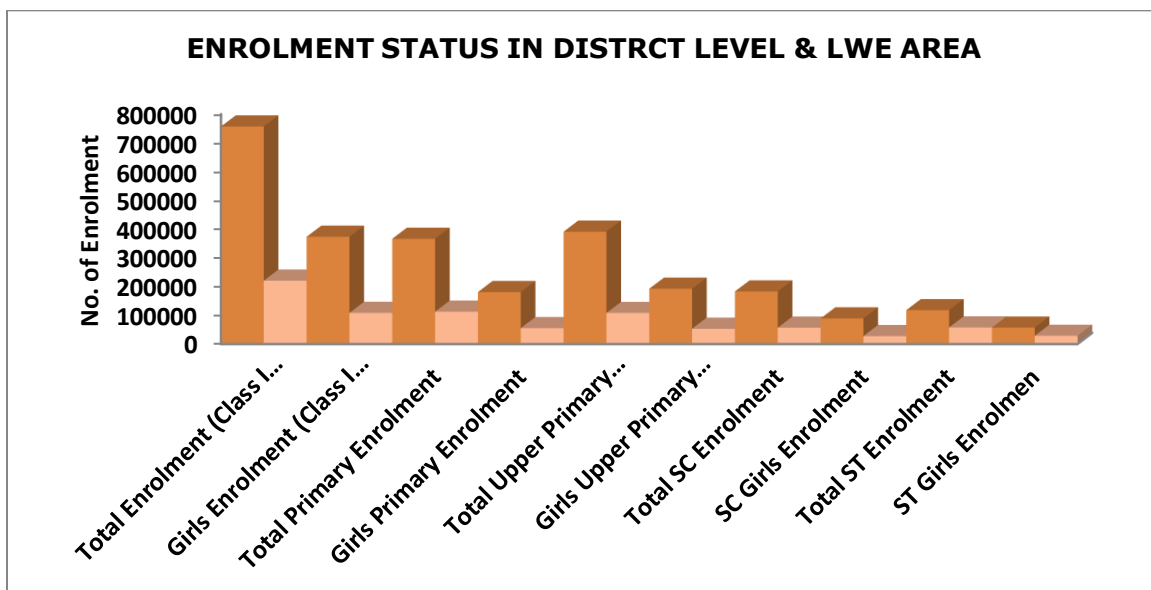
In 2011-12 male enrolment were 59.37% general degree colleges against 41% female enrolment in general degree colleges. Male enrolment in university is also much higher than female enrolment in university. Male enrolment is 59.29% against 40.71% female enrolment. It clearly interpret that there are gender inequality enrolment in higher education. In 2008-09 male student enrolled 58% against 42% of female student in institution. Though the no. of colleges and university increases but enrolment of female students are lower. It is of evident from table that

the period 2006-07 to 2010-11 witnessed a profound expansion of enrolment of male and female students.

Growth of Enrolment

The educational system has greatly expanded since independence to cater to the needs of all sections of society. Educational expansion was aimed at meeting the needs of growing economy and to foster equality among different sections of population. Accordingly, the educational needs of marginal groups like SCs and STs were addressed by opening educational institutions at elementary and secondary level in habitations dominated by them. The higher education sector has also witnessed a steep increase during this period. The colleges have gone by more than 30 times from merely only two (2) colleges in 1980-81 to nearly six colleges in 2009-10. Now state govt. has decided construct three new colleges in Lalgargh, Salboni, and Nayagram. One women’s college will establish in Jhargram in this financial year (2012-13).

Fig.-5



Source: district statistical handbook, BAE&S 2010-12

Status of female is gradually decreasing from primary level to university level. At all educational level male enrolment is high than female. In general degree colleges’ male enrolment is 29184 & female enrolment is 19966. Paschim Medinipur has the largest SC and ST population concentration in West Bengal. About 35 percent of the population in Paschim Medinipur is categorized into SC and ST. The tribal community constitutes 20.27 percent and the SC community constitutes 15.17 percent of the total population of Paschim Medinipur District.

Primitive Tribal Groups (PTGs), namely Santal are the main tribal group living in this district. Among the remaining population a large percentage of people belong to the category of Scheduled Cast (30%). The literacy rate among tribal is 41.2 percent as against state’s literacy rate of 64.1 percent. The above data describe that caste wise enrolment of girl’s are also low. ST girl’s enrolment in each education level is also very low.

Table 2: Institution wise enrolment status of male & female students in this district

	Male Students	Female Students
Recognised Primary School	548040	470862
Recognised Secondary School	154763	134344
Recognised Higher Secondary School	201033	150744
I.C.S.E./ C.B.S.E	3223	2193
High Madrasahs	1839	2491
General degree colleges	29184	19966
Centres of open universities	3913	2137

Source: district statistical handbook, BAE&S 2010-12

This data represents enrolment of male & female student in general degree colleges & general universities from 2006-07 to 2010-11. Enrolment of male students is increasing much higher rate than female. In 2009-10 male enrolment was 19588 & it increases to 29184 in the year of 2010-11. But female enrolment increases in slower rate. In the more recent years (2007–2008 to 2010–2011), the total GER(Gross Enrolment Ratio) at higher educational level in Paschim Medinipur (Table 3) has shown a rather gradual rise of 7.39% (from 59.61% to 67%). The trend one of the reasons for increased enrolment at the sec has also been promising in different social groups in our society. The reasons for increasing enrolment in this district in the last decade are the effects done by Sarva Shiksha Abhiyan (SSA), the flagship programme of India Government. These programmes provide more school quality teachers, teaching learning infrastructure from the primary level to higher education. This programme also encourage and motivate children to access at least primary level education particularly girl’s children. Higher education continues to

be a mixed bag in the district. In west Bengal, the highest percentage of students in combined UG& PG is occupied by Arts followed by Science, Commerce. With respect to the enrolment of female post graduates, it can be observed that the enrolment of SC women students is greater than that of all ST male and female students. The enrolment status of ST women is indeed appalling.

Level of gender inequality in education

Gender inequality means disparity between men and women in different social, economic and political aspects. This problem is simply known as gender bias, which in simple term means the gender stratification or making difference between a male or a female. There are various measures of gender inequality such as- Gender Parity Index (GPI), Gender inequality index.

GENDER PARITY INDEX:

Another point of consideration is the Gender Parity Index (GPI) in enrolment. In our district it shows consistent increase in the share of girl's enrolment to total enrolment in both primary and upper primary section. In fact through community mobilization, gender sensitization of teachers, other community stakeholders and active involvement of Mother Teacher Association (MTA) members, girls are getting more access to education.

Gender parity index is the female to male ratio enrolment in education institution. It is a measure that tells us about number of boys and girls who are enrolled /attending recognised education institution.

$$\text{Formula of GPI} = \frac{\text{Male enrolment}}{\text{Female enrolment}}$$

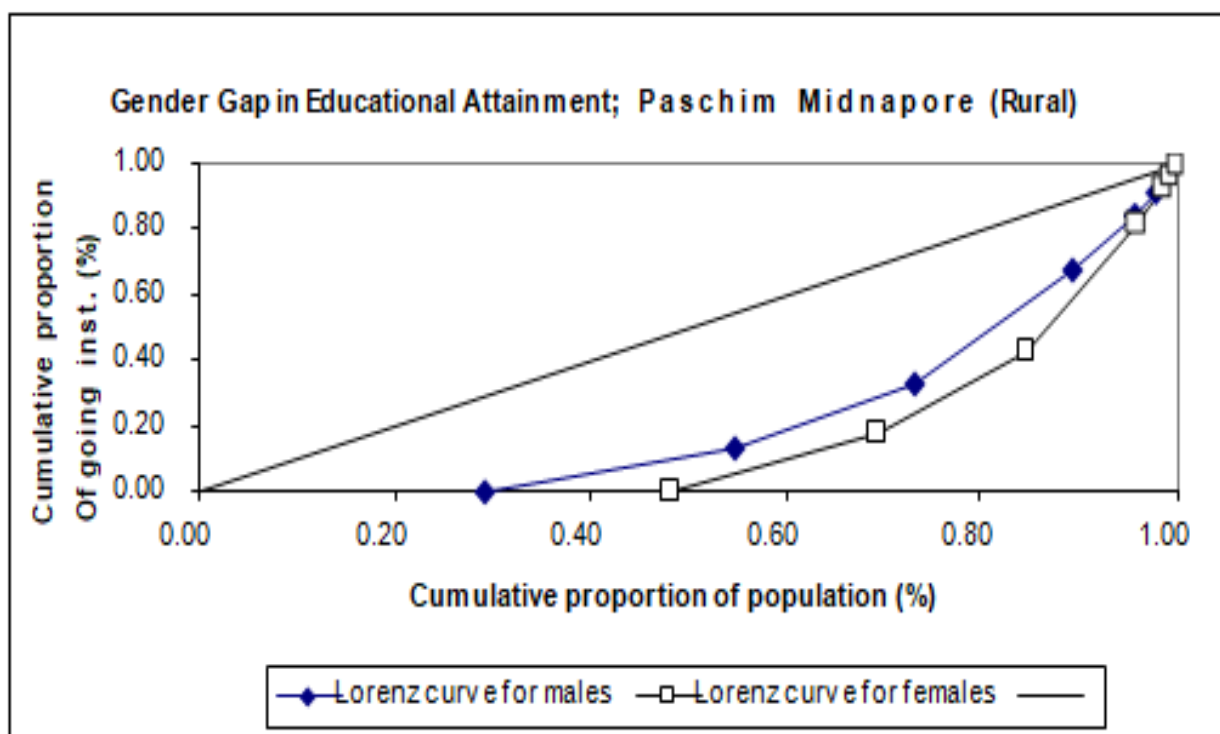
Gender parity index (GPI) is another index for measurement of gender disparity in education. GPI is the ratio of girls' enrollment to boys' enrollment in education. Value of one signifies equal access of education for boys and girls. Over the years the gender disparity in education has been decreasing, yet substantial gap still exists From the graph it is clear that Ghatal has higher gender party index (1.03) and Jhargram exhibits lower GPI (0.89) in Paschim Medinipur District.

Lorenz curve to measure inequality

Generally standard deviation and Gini coefficient are often used to measure Inequality. But for measuring relative gender inequality, construction and use of educational Gini are very much needed. On the basis of NSSO 55thround data, we construct Educational Lorenz Distribution. A

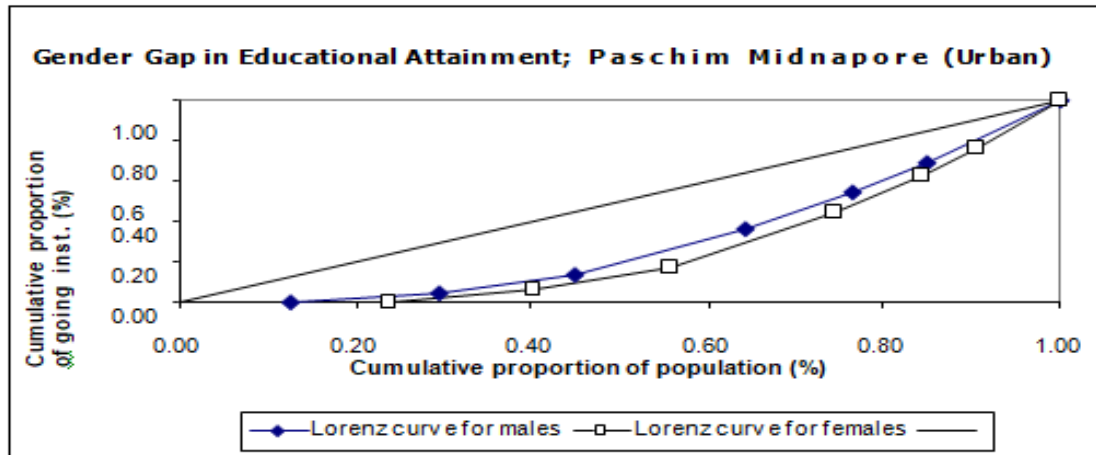
handy device for representing this data is sex specific Lorenz distribution of scholastic attainment level. The education Lorenz curve is constructed by putting the cumulative proportion of population on the horizontal axis, and by putting the cumulative proportion of going institution on vertical axis. Use of Lorenz curves for males and females in the same diagram, a pictographic representation of data is useful in this particular context, since these two Lorenz curves never cross for the simple reason that, gender deprivation in education.

Fig.-6



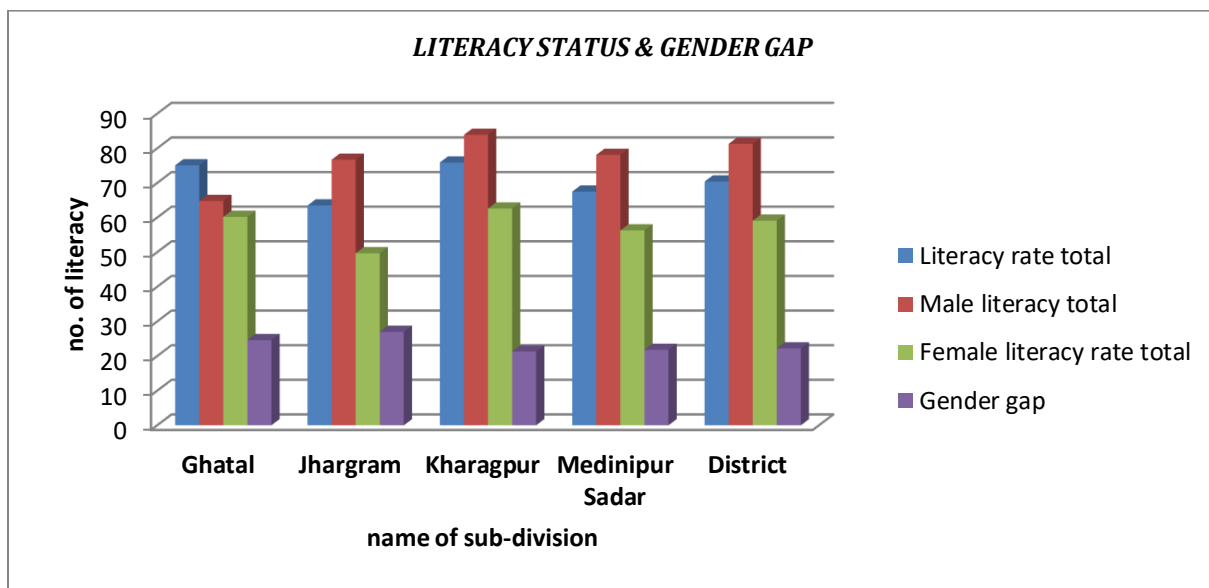
Gender gap in average years of schooling is necessary but not sufficient to reflect the characteristics of gender differential in education. To grasp the distributional dimension of education and its gender perspective, this section develops way to measure gender inequality in education with the help of sex specific Lorenz curves and corresponding Gini coefficients. Generally standard deviation and Gini coefficient are often used to measure inequality. Standard deviations of school attainment are used in a few studies (Ram 1990, London 1990). Ram, London used standard development of schooling to investigate absolute dispersion of human capital. But for measuring relative gender inequality, construction and use of Lorenz curve are very much needed.

Fig.-7



Paschim Medinipur is a district with wide regional inequality in many sphere of Social development. On one hand we have the sub-division like Midnapore, Kharagpur, where the level of Per Capita income is somewhat comparable with Jhargram, Ghatal sub division. This Lorenz curve shows cumulative proportion of schooling% and cumulative proportion of population % of Paschim Medinipur district rural and urban. This curve shows the education attainment of male and female population. It clearly indicates that rural area has higher level of inequality of education attainment. Straight line shows equal distribution line.

Fig.-8



Source: census report, 2011

Gender Equality Index indicates a higher degree of Gender Discrimination

The Gender Equality Index (GEI) is a new index for measurement of gender disparity. This index is a composite measure which captures the loss of achievement, within a country, due to gender inequality, and uses three dimensions to do so: reproductive health, empowerment, and labour market participation. In terms of gender equality index, Paschim Medinipur with an index value of 0.748. The GEI capture the loss in achievement due to gender disparities in the areas of reproductive health, empowerment and labour force participation with values ranging from 0 (perfect equality) to 1 (total inequality) The GEI index value of 0.748 indicates a higher degree of gender discrimination in Paschim Medinipur compared to district like Kolkata (0.405) and Sri Howrah (0.599) (West Bengal Development Report 2011-12). An analysis of the data on school attendance by age, however, reveals gender disparity is largely a rural phenomenon. In urban areas, about equal proportions of boys and girls attend school at each age; however, in rural areas, gender inequality in attendance is evident in every age group and increases with age. Household survey reveals that most of the respondents opine that they are least interested in studies, both in rural and urban areas. Some argue the same with “cost too much” point of view.

Gender Gap and Disparity Index (GG & DI):

Table 4: enrolments of students by faculty, social groups and gender 1990-91to2009-10

	SC				ST				OTHERS				TOTAL			
	M	F	GG	MSDI	M	F	GG	MSDI	M	F	GG	MSDI	M	F	GG	MSDI
ARTS	7.15	2.7	4.45	0.43	1.28	0.52	0.76	0.39	25.65	22.31	3.34	0.07	34.07	25.53	8.54	0.15
SCIECE	2.54	0.88	1.66	1.66	0.28	0.12	0.16	0.37	17.67	9.71	7.96	0.28	20.47	10.57	9.60	0.31
COMMERCE	1.42	0.12	1.3	1.3	0.21	0.032	0.18	0.82	6.7	0.89	5.81	0.89	8.32	1.04	7.28	0.92
	11.11	3.7	7.41	7.41	1.76	0.67	1.09	0.42	50.01	32.91	17.10	0.23	62.86	37.11	25.75	0.30

Source: survey data

In brief, if p and q are the probabilities of males and females completing school respectively, then the disparity index (DI) is given by:

$$DI = \log\left[\frac{p*(1-q)}{q*(1-p)}\right].$$

The objective of taking log is to reduce the levelling off effects. Gender gap is highest in the faculty of Arts for SC and ST students (i.e. 4.45% and 0.76% respectively) and it is highest in the faculty of Science for others (i.e. 7.96%). But in order to see the discrimination between male and female student we use here David Sopher's Disparity Index (SDI) which transform enrolment percentage values for male and female in log scale, which is better measure than gender gap (GG). (i.e. simple arithmetic gap between two percentages). Thus, by MSDI, gap between male and female at higher values for enrolments show a lower disparity as compared to identical gender gap at lower values. It can be seen using this index that gender discrimination remains higher in the case of SC social groups (0.49) than that of ST(0.42). Female belonging to the SC is the worst group as the Modified David Sopher's inequality index (MSDI) between sc male and sc female students are highest across faculties (i.e. 0.43, 0.46, and 1.08 for Arts, Science and Commerce respectively).

Summary of Findings

The status of secondary and higher education in rural and urban areas Paschim Medinipur district as discussed above is characterized by low enrolment, poor completion and high drop outs. Despite of growth in terms of number of colleges and universities and the number of enrolment, the numbers are not sufficient to cater to the higher education needs of increasing young population in the rural area. From the analysis it is evident that enormous expansion of enrolments of male and female students, but it has been more pronounced for females as compared to males for all social groups. Another important observation is that the gender parity in higher education is more in the case ST than that of SC social group in recent periods through the proportional enrolments of ST social group, particularly ST females is a worst one. There are also wide social and regional disparities in enrolment rates and availability of institutions of higher education in rural areas of this district. Our findings indicate that gender gap is indeed greater of enrolment in education.

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