

Literacy and Their Differential in West Bengal

Kalyan Sundar Som¹, R.P. Mishra²

¹Research Scholar, General and Applied Geography, Dr. H.S.Gour University, Sagar (M.P.), India

²Professor and Head, General And Applied Geography, Dr. H.S.Gour University, Sagar (M.P.), India

Abstracts: *Education is a human right. Education is essential for human emancipation and social development. It contributes to better health, higher productivity, greater income, human freedom, capability and esteemed living, increased participation in community life. Education is the single best development investment and a powerful instrument to develop an economically prosperous society. The long term social and economic return from education is enormous. The level of development of any region or any area may be gauged through the socio-economic characteristics of people. Of the various elements of population characteristics, the level of literacy and education gives the best exposition of regional development because of its dual functions as cause and effect of modernization. The case of West Bengal has been taken to know the spatial pattern of literacy and their differential and why they occur by the set of explanatory variables. The level of literacy differential in the state has been evaluated by creating differential index. On the basis of the analysis create a blue print for planning for reduce or vanishing the differential on literacy and education in West Bengal.*

Keywords: Human emancipation, regional development, literacy differential index, spatial pattern, regional planning.

1. Introduction

Literacy and education is also one of the main components of human development index (HDI), as it has direct impact on the per capita income, level of living and ultimately on life expectancy. There is a strong empirical co-relation between literacy and life expectancy (Khan, 2004). In international usages, literacy is defined as the ability to read write and least a simple message in any language (Hassan, 2005). There is also change in the definition of literacy over time. But present time, Census of India defined literacy as “a person age above six year who can read and write with understanding in any language is called literate”. Children up to six year age treated as illiterate in the country. UNESCO defined literacy as the, “ability to identify, understand, interpret, create, compute, and use printed, use printed and written material associate with varying contracts. Literacy involves a continuum of learning in inability individual to achieve their goal, to developed their knowledge and potential and to participate fully in their community and wider society”. Education is a dynamic process that starts form the birth. A child surrounded by parents and other siblings experiences her surroundings and responds. Education is a process of character building, strengthening mind and expansion of intellect.

According to an old proverb, a man without education is a best without its horns or tail. He is a burden on the earth and a parasite on society. The purpose of education according to Mahatma Gandhi is to establish a non-violent, non-exploitative social and economic order. Education is a highway to that goal. Keeping on this view of this accepted fact there has been a major thrust on education since independence; but as far as ensuring quality education in India is concerned it has always been one of the biggest challenges for the government.

Literacy and education is considered as one of the key indicators of human resource development. Literacy could be considered as both cause and effect of development. Various dimensions of socio-cultural change in any society

can be understood in light of the level of literacy and education. Education is the single –most deterrent of long-term economic growth of a nation. Literacy reflects the socio-economic and cultural setup of a nation, ethnic group or community. It influences and determines qualitatively and quantitatively not only the human resources but also other population attributes like fertility, mortality, age of marriage and economic participation of a population ultimately, aiming towards welfare of the society (Sawant and Lewis, 2004). In this context, both men and women will have to play an equal and vital role in contribution to the nation development. Therefore, equal opportunities of education should be provided to both on equal footing. A recent study by world bank (2013) says that educating women is not a charity, it is good economics and if developing nations are to be abolish poverty, they should educated there women. India represents a picture of contrast when it comes to the educational opportunities for girls as compared to boys and it is also an admitted fact that the society can progress only when its women will act as a strong barrier in realizing its goal.

Elementary education is one of the components of millennium development goal. To achieve the goal “Right to education Act” came into force in the entire country from April 1st, 2010. It is now legally enforceable for every child between the age of six and fourteen years to demand free and elementary education. If the literacy and education improves, people can employ modern tools and techniques, and improve productivity and earning potentials, and thus benefit their own welfare and that of the country.

2. Study Area

The state of West Bengal has been selected as a study area which is located between 21°25' to 26°50' north latitudes and 86°30' to 89°58' east longitudes with three international boundaries i.e., Bangladesh, Nepal and Bhutan. It occupies a geographical area of about 88,752 sq. km. (2.70 per cent of the India's total geographical area) and extending from the Himalayas in the north to the Bay of Bengal in the south. It

is surrounded by Sikkim and Bhutan in the north, Assam and Bangladesh in the east, the Bay of Bengal in the south and Orissa, Jharkhand, Bihar and Nepal in the west.

According to 2011 Census, its total population is 91,347,736 (7.55 per cent of India's total population), density is 1029 persons per sq. km. (in terms of population density West Bengal is on the second among the Indian states). Since the time of British raj west Bengal is a cultural heritage and educational developed state then other states of India, because this time Kolkata is the capital of British raj that's why the dispersion of education from Kolkata in the whole state. But this state has huge diversity of literacy rate on the district level and micro level also, on the spot light of various socio-economic categories.

In present, West Bengal has held the 20th position on literacy rate rank of the Indian state and union territory. According to 2011 Census west Bengal literacy rate is 77.08 percent, where Indian literacy rate is 74.04 percent. In last decade, India increases his literacy rate 9.21 percent, where West Bengal has increases his literacy rate below the national level (8.44 percent). West Bengal has a literacy rate 77.08 with differential of 82.67 percent male literacy and 71.16 percent females. West Bengal has 31.89 percent urbanization which differs from 100.00 percent in Kolkata to 8.36 percent in Bankura. There are 19 districts with an increase of one districts compare to 2001 census.

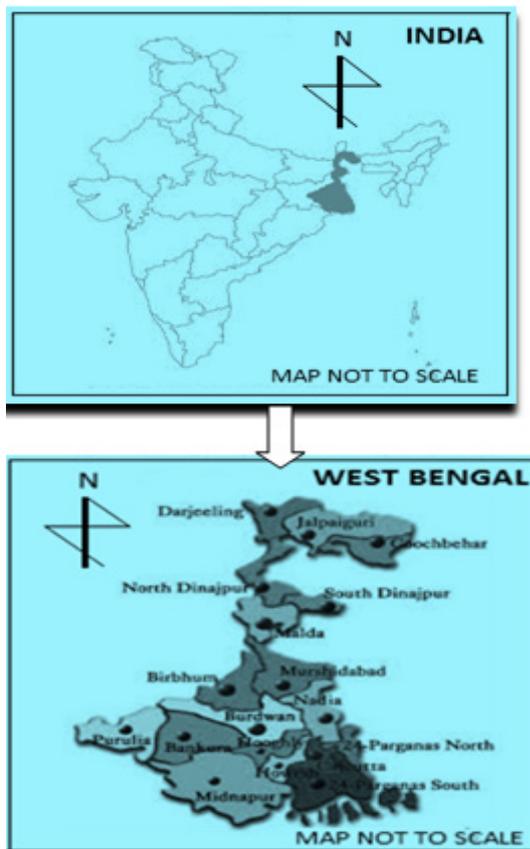


Figure 1: Locational Map

3. Previous Work

Aggarwal and Murlidhar (1986) studied disparity in the level of literacy between schedule caste and non-schedule caste populations in Maharashtra and concluded, "disparity become

more and more sharp as one moved from the urban to rural areas; within the rural female to rural scheduled caste females. The relative deprivation of females in field of education is particularly significant because it underlines all other attributes of deprivation in development context. The schedule caste are deprived no doubt in his historical root but Scheduled caste females are more than the males; the rural population is no doubt but the rural females more deprived than the male folk" While emphasizing on the importance of education, Raza says, "It is neither a deprived parameter which is essentially determined by exogenous forces, nor is it an isolated spring and restricted to the individual's psyche. It is intertwined in socio-economic development with every fiber of its being". Kundu and Rao (1982) made a comparative study of the nature and pattern of inequality in literacy among different segments of population at the state level. In their view,"..... Urbanization and metropolitanization have a distinct effect in reducing disparity between the two genders irrespective of all social groups".

Ahmad (1982) examined the inter district inequalities in literacy of tribal population of Bihar. Ahamad and Nuna (1986) studies inter-regional disparity in literacy in 1971 in Maharashtra. According to them the iniquitous development among the schedule caste /tribes populations on the one hand ,and among the male -female and rural -urban components of these population on the other, raises a number of issues , policy measures adopted so far to universalize literacy among the socially backward communities, particularly in the rural areas have not delivered the goals. Devi (1996) studied district wise disparity in literacy of Orissa at three points of time, i.e. 1971, 1981, and 1991. According to this study, ".....The inequality disparity in education is exists within the districts. Chaubey and Chaubey (1998) development a methodology to analyze the literacy among different segments of population. Based on 1981 and 1991 census data, Mohapatra (1993, 2002) brought out the inter-district disparity in literacy in north east India. According to the study, ".....wherever the literacy is higher, the inter-district disparity is lower, and thus a higher level in literacy is leading to lower disparity".

4. Objectives:

The main purpose of this paper is to study:

1. The regional disparity in literacy in the state (at the district level) for 2011 for which detailed data is available by census and ministry of education department West Bengal and also the segmental disparity in literacy (gender, rural-urban, rural male-female and urban male-female) in the state with same reference time period.
2. Attempt to explain these disparities with a set of explanatory variables and formulate suitable plan for reduce this disparities for stimulate all round development in West Bengal.

5. Database and Methodology

The study is based on secondary data obtained from census of India 2011. It examines regional patterns of literacy and

education level at two spatial scales: state, district. Currently 19 districts in the state, while in 2001 only 18 districts in this state. For the sake of comparison, newly formed district has been treated as a part of the present unit.

In mapping part, Choropleth techniques are used for showing the disparity pattern of literacy rate of West Bengal. Present paper is based on secondary data which obtained by census of India 2011. Data obtained from census has been analyzed and presented by applying differential index which is as follows:

DIFFERENTIAL INDEX:

$$1. \text{MFDI} = (\text{MLR} - \text{FLR}) / \text{TLR} \quad 2. \text{URDI} = (\text{ULR} - \text{RLR}) / \text{TLR}$$

Where, MFDI=Male-female differential index. Where, URDI=Urban-rural differential index.

MLR=Male literacy rate. ULR= Urban literacy rate.

FLR= Female literacy rate. RLR= Rural literacy rate.

TLR= Total literacy rate. TLR= Total literacy rate

After using this techniques, the result is divided into four categorize, which are high, moderate, low and very low.

After that selected independent variables (school per sq km., wealth index, urbanization, population growth and proportion of child population) are co-relate with dependent variables (literacy rate) by using Pearson co-relation method by SPSS16 with the level of signification test.

6. Spatial Pattern of Literacy

This paper has been discussed the spatial pattern of literacy of west Bengal. For showing the spatial pattern of literacy of west Bengal, literacy is divided into four categorizes pattern viz. general literacy, rural literacy urban literacy, male literacy, and female literacy. After this each categorizes divided into four parts which are (I) high (ii) moderate (iii) low (IV) very low.

6.1 Spatial Pattern of General Literacy Rate

West Bengal has 77.08 percent literacy rate which ranks 13th in Indian state. General literacy rate in West Bengal varies from 87.66 percent in East Mednipur to 60.13 percent in Uttar Dinajpur. Nine districts have high literacy in compare to state average which ten districts are below state average in West Bengal. General literacy rate are divided in two four categorizes i.e. high (above 85%), moderate (75 to 85%), low (65 to 75%), very low (below 65%).

Categorizes of literacy rate	Including Districts	Total number of districts
High (above 85%)	East Medinipur, Kolkata	2
Moderate (75 to 85%)	Darjeeling, Coach Behar, Burdwan, Nadia, North 24 Parganas, Hugli, West Mednipur, Howrah, South 24 Parganas	9
Low (65 to 75%)	Jalpaiguri, Dakshin Dinajpur, Murshidabad, Birbhum, Bankura, Puruliya	6
Very low (below 65%)	Uttar Dinajpur, Malda	2

Table 1: Various Dimension of Literacy in West Bengal, 2011

DISTRICTS	Total Literacy Rate	Rural Literacy Rate	Urban Literacy Rate	Male Literacy Rate	Female Literacy Rate	Rural Male Literacy Rate	Urban Male Literacy Rate	Rural Female Literacy Rate	Urban Female Literacy Rate
Darjeeling	79.92	74.97	87.48	85.94	73.74	82.5	91.23	67.2	83.65
Jalpaiguri	73.79	70.55	82.33	80.61	66.65	78.31	86.69	62.43	77.78
Coach Behar	75.49	73.87	89.01	81.52	69.08	80.25	92.41	67.07	85.54
Uttar Dinajpur	60.13	57.15	80.67	66.65	53.15	64.06	84.31	49.77	76.69
Dakshin Dinajpur	73.86	71.18	89.42	79.63	67.81	77.42	92.61	64.61	86.15
Malda	62.71	60.42	76.82	67.27	57.84	65.37	78.71	55.18	74.71
Mursidabad	67.53	66.27	72.65	71.02	63.88	69.52	77.15	62.84	68.02
Birbhum	70.9	69.25	81.74	77.42	64.07	76.01	86.75	62.18	76.55
Burdwan	77.15	73.39	82.75	83.44	70.47	80.05	88.43	66.39	76.63
Nadia	75.58	71.5	85.88	79.58	71.35	76.65	89.63	67.08	81.98
North 24 Parganas	84.95	78.11	89.8	88.66	81.05	82.86	92.79	73.08	86.66
Hugli	82.55	79.22	87.75	87.93	76.95	85.71	91.34	72.5	83.95
Bankura	70.95	69.6	85.23	81	60.44	80.06	90.97	58.66	79.24
Puruliya	65.38	63.75	76.24	78.85	51.29	77.96	84.68	48.93	67.21
East Mednipur	87.66	87.47	89.14	93.14	81.81	93.1	93.41	81.45	82.3
West Mednipur	79.04	77.92	87.01	86.66	71.11	85.97	91.61	69.45	84.98
Howrah	83.85	80.82	87.14	87.69	79.73	86.06	88.61	75.29	79.09
Kolkata	87.14	0	87.01	89.04	84.98	0	89.08	0	82.25
South 24 Parganas	78.57	76.78	83.62	84.72	72.09	83.59	87.93	69.59	84.52

Source: Census of India, 2011(P).

6.1.1 Spatial Pattern of Rural Literacy Rate:

West Bengal has 72.97 percent rural literacy which varies from highest in East Mednipur (87.44%) to the lowest in Uttar Dinajpur (57.15%). Only nine districts of the state have more rural literacy than the state average.

<i>Categorizes of rural literacy rate</i>	<i>Including Districts</i>	<i>Total number of districts</i>
High (above 80%)	East Medinipur, , Howrah,	2
Moderate (70 to 80%)	Darjeeling, Jalpaiguri, Coach Behar, Dakshin Dinajpur, Burdwan, Nadia, North 24 Parganas, Hugli, West Mednipur, South 24 Parganas	10
Low (60 to 70%)	Malda ,Murshidabad, Birbhum, Bankura, Puruliya	5
Very low (below 60%)	Uttar Dinajpur,	1

Kolkata has a districts that is 100 percent urbanized area so rural literacy rate is not applicable for this district. South eastern part of West Bengal has high rural literacy but western and northern West Bengal exceptional Darjeeling has low rural literacy rate privileged.

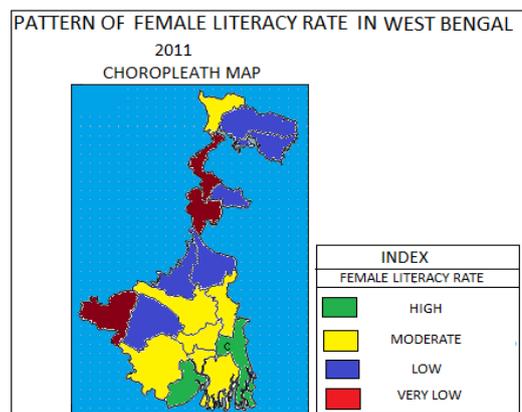
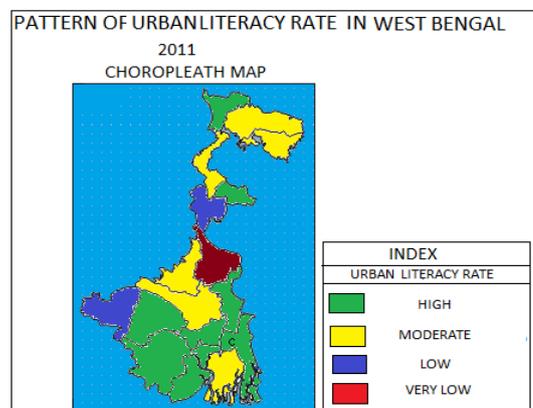
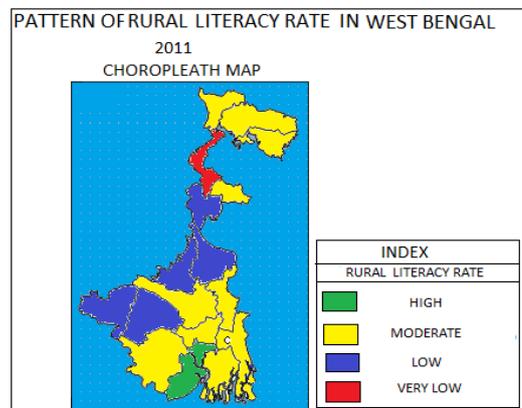
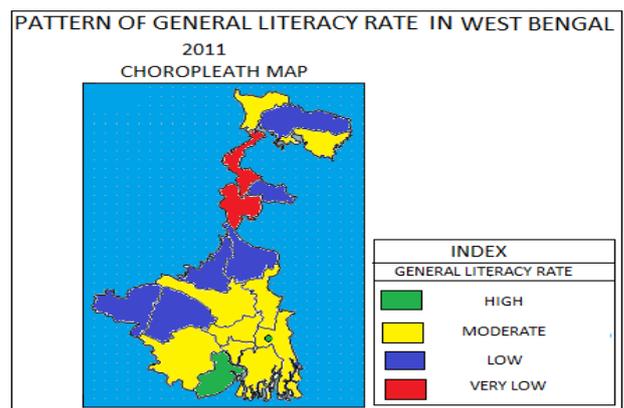
6.1.2 Spatial Pattern of Urban Literacy Rate

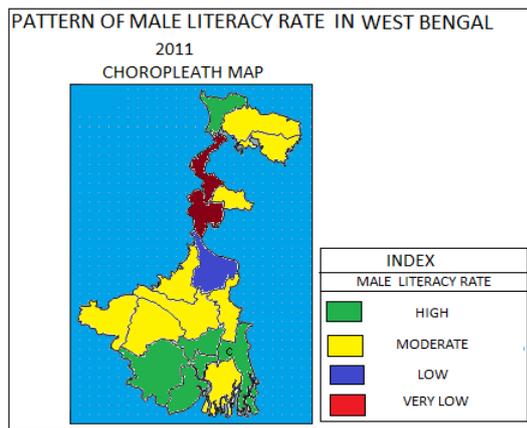
West Bengal has 85.54 percent urban literacy which varies from the highest in North 24 Parganas (89.80) to the lowest in Murshidabad (72.65%). Ten districts of the state have more urban literacy than state average while nine have low urban literacy than the state average.

<i>Categorizes of urban literacy rate</i>	<i>Including Districts</i>	<i>Total number of districts</i>
High (above 85%)	East Medinipur, Howrah, Darjeeling, Dakshin Dinajpur, Hugli, West Mednipur, Bankura, North 24 Parganas, Kolkata, Nadia,	10
Moderate (80 to 85%)	Jalpaiguri, Coach Behar, Burdwan, South 24 Parganas, Uttar Dinajpur, Birbhum	6
Low (75 to 80%)	Malda, Puruliya	2
Very low (below 75%)	Murshidaba	1

Bankura and Uttar Dinajpur have two district of West Bengal where a miracle figure of urban literacy is found in compare that general literacy in these districts respectively.

6.1.3 Various dimension of spatial pattern of literacy of West Bengal, 2011





6.1.4 Spatial Pattern Of Male Literacy Rate

West Bengal has a 82.67 percent male literacy compare to 82.14 percent Indian male literacy rate and district level in East Mednipur (93.14%) occupied first place while Uttar Dinajpur (66.65%) occupied last position in male literacy rate.

<i>Categorizes of male literacy rate</i>	<i>Including Districts</i>	<i>Total number of districts</i>
High (above 85%)	East Medinipur, Howrah, Darjeeling, Hugli, West Mednipur, North 24 Parganas, Kolkata,	7
Moderate (77% to 85%)	Jalpaiguri, Coach Behar, Burdwan, South 24 Parganas, Nadia, Bankura, Dakshin Dinajpur, , Puruliya Birbhum	9
Low (70% to 77%)	Murshidabad	1
Very low (below 70%)	Uttar Dinajpur, Malda	2

6.1.5 Spatial Pattern of Female Literacy Rate

West Bengal has 71.16 percent rural literacy which varies from highest in Kolkata (84.98%) to the lowest in Puruliya (51.29%). Maps no. 5 shows that there is clear cut scenario, where high and moderate level of female literacy is southern district, on the other most of the northern districts has low level of female literacy except Darjeeling.

<i>Categorizes of female literacy rate</i>	<i>Including Districts</i>	<i>Total number of districts</i>
High (above 80%)	East Medinipur, North 24 Parganas, Kolkata,	3
Moderate (70% to 80%)	Burdwan, South 24 Parganas, Nadia, Howrah, Darjeeling, Hugli, West Mednipur	7
Low (60% to 70%)	Murshidabad, Bankura, Dakshin Dinajpur, Jalpaiguri, Coach Behar, Birbhum	6
Very low (below 60%)	Uttar Dinajpur, Malda, , Puruliya	3

6.2 Spatial Pattern of Literacy Differential

Present paper has been analyzed the spatial pattern of literacy differential in various groups in west Bengal. Paper found that the literacy differential in various group like male

female differential. In literacy, male female differential in rural literacy, male female literacy differential in urban literacy, rural urban differential in literacy, rural urban differential in male literacy, rural urban differential in female literacy. Above group of literacy differential further divided into four categorizes which are follow (I) high (ii) moderate (iii) low (IV) very low.

6.2.1 Spatial Pattern of General Male-Female Literacy Differential

General male female literacy differential index varies in West Bengal from one district to others. The value of differential index varies from 0.046592 in Kolkata to 0.421536 in puruliya districts, while state average is 0.149325. The value of differential index of twelve districts is more than state average while rests are below the state average. The value of differential index is divided into four categorize viz. (I) very low (below 0.10), (ii) low (0.10 to 0.18) (iii) moderate (0.18 to 0.26) and (IV) high (above 0.26). Map no. 6 shows that the south eastern districts (Kolkata, Howrah and North 24 Parganas) has low general gender literacy differential index, on the other, western part of the states(Puruliya, Bankura and West Mednipur) has high general gender differential index. But in general northern part of the state has high gender literacy differential than his southern counterpart.

6.2.2 Spatial Pattern of Rural Male-Femal Literacy Differential

Rural male female literacy differential index varies in the state between 0.4553573 in Puruliya to 0.1008 in Murshidabad while state average is quite high (0.184048). Like former categorizes this is also divided four categorizes viz. (I) very low (below 0.14) (ii) low (0.14 to 0.22) (iii) moderate (0.22 to 0.30) and (IV) high (above 0.30). Maps no.7 shows district under low category lies in southern Bengal, moderate in northern Bengal while high category lies in the western part of the state.

6.2.3 Spatial Pattern Of Urban Male-Female Literacy Differential

Urban male female literacy differential index value varies from 0.04078 minimum in South 24 Parganas to 0.229145 maximum in Puruliya. State average of differential index is 0.091302, which is less than eight districts while eleven districts above the state average. Four categorizes of differential index as follow: (I) very low (below 0.07) (ii) low (0.07 to 0.12) (iii) moderate (0.12 to 0.17) and (IV) high (above 0.17).

6.2.4 Spatial Pattern Of General Urban-Rural Literacy Differential

General urban rural literacy differential index varies from 0.019051 in East Mednipur to 0.391153 in Uttar Dinajpur. West Bengal state average in this category is 0.163077. This categorize of differential is divided into four categories viz. (I) very low (below 0.15) (ii) low (0.15 to 0.20) (iii) moderate (0.20 to 0.25) and (IV) high (above 0.25). Rural urban differential map shows that there is the northern sides of West Bengal has high general rural urban literacy differential index, exceptionally the two of the northern district of the state (Darjeeling and Jalpaiguri), and western part of the state also moderate differential (Bankura and

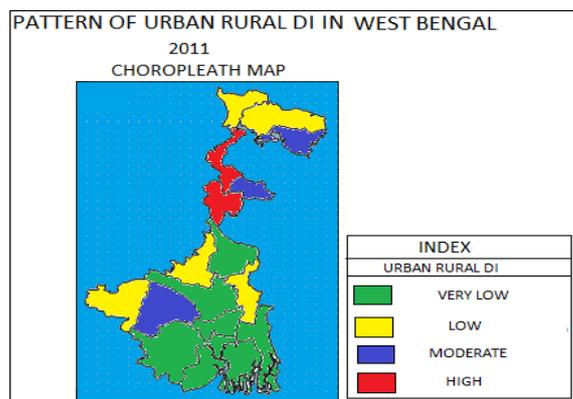
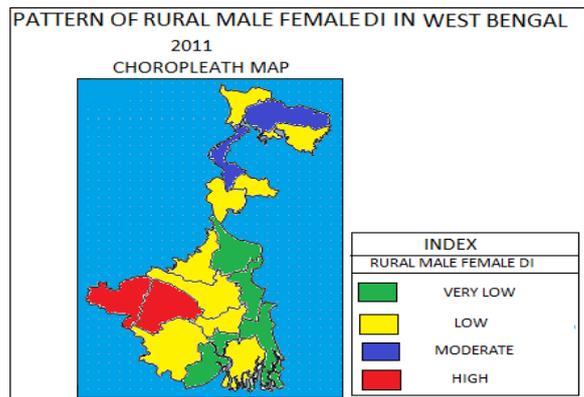
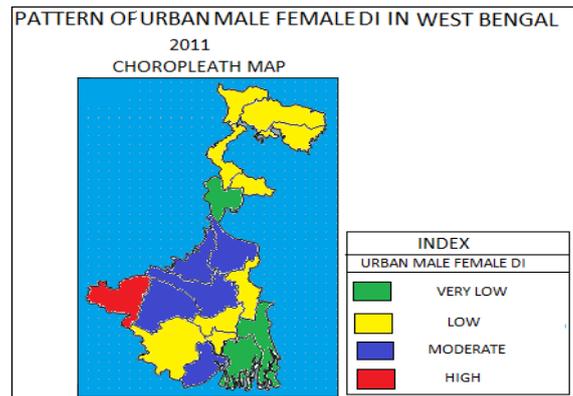
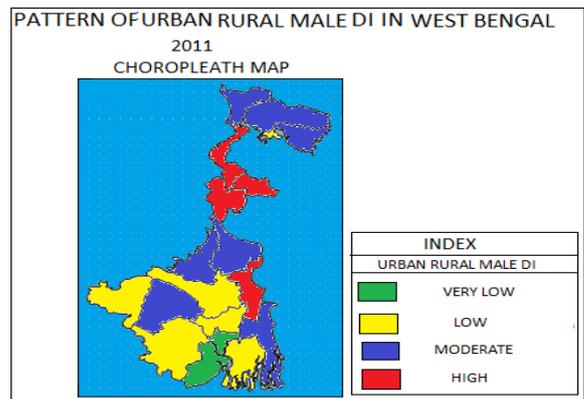
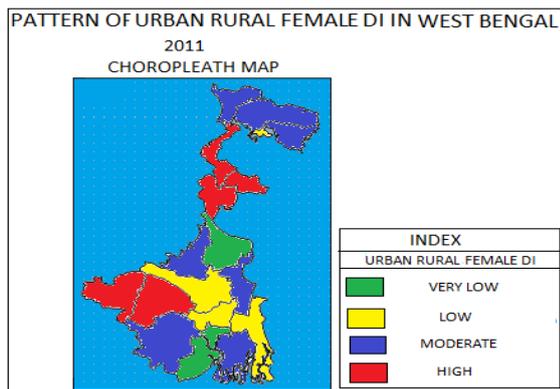
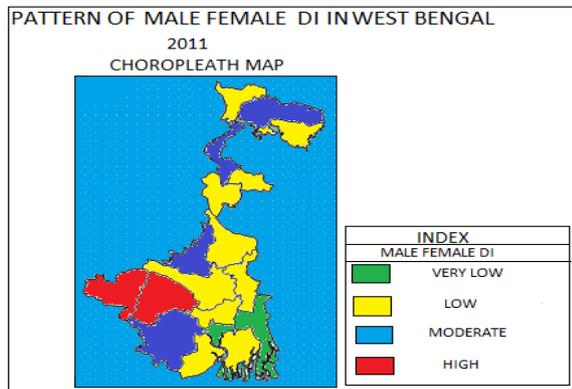
Puruliya) but rest of the district is low and very low differential index.

Table 2: Literacy Differential in West Bengal, 2011

Districts	Urban-rural di	Male-female di	Rural male-female di	Urban male-female di	Male urban-rural di	Female urban-rural di
Darjeeling	0.16	0.15	0.20	0.09	0.10	0.22
Jalpaiguri	0.16	0.19	0.23	0.11	0.10	0.23
Coach behar	0.20	0.16	0.18	0.08	0.15	0.27
Uttar dinajpur	0.39	0.22	0.25	0.09	0.30	0.51
Dakshin dinajpur	0.25	0.16	0.18	0.07	0.19	0.32
Malda	0.26	0.15	0.17	0.05	0.20	0.34
Mursidabad	0.09	0.11	0.10	0.13	0.11	0.08
Birbhum	0.18	0.19	0.20	0.12	0.14	0.22
Burdwan	0.12	0.17	0.19	0.14	0.10	0.15
Nadia	0.19	0.11	0.13	0.09	0.16	0.21
North 24 parganas	0.14	0.09	0.13	0.07	0.11	0.17
Hugli	0.10	0.13	0.17	0.08	0.06	0.15
Bankura	0.22	0.29	0.31	0.14	0.13	0.34
Puruliya	0.19	0.42	0.46	0.23	0.09	0.36
East mednipur	0.02	0.13	0.13	0.12	0.00	0.01
West mednipur	0.12	0.20	0.21	0.08	0.07	0.22
Howrah	0.08	0.09	0.13	0.11	0.03	0.05
Kolkata	0.00	0.05	0.00	0.08	0.00	0.00
South 24 parganas	0.09	0.16	0.18	0.04	0.05	0.21
	0.16	0.15	0.18	0.09	0.12	0.22

Source: Calculated by the author from Census of India, 2011

6.2.5 Various dimension of literacy differential in West Bengal, 2011



6.3 Spatial Pattern of Male Urban-Rural Literacy Differential

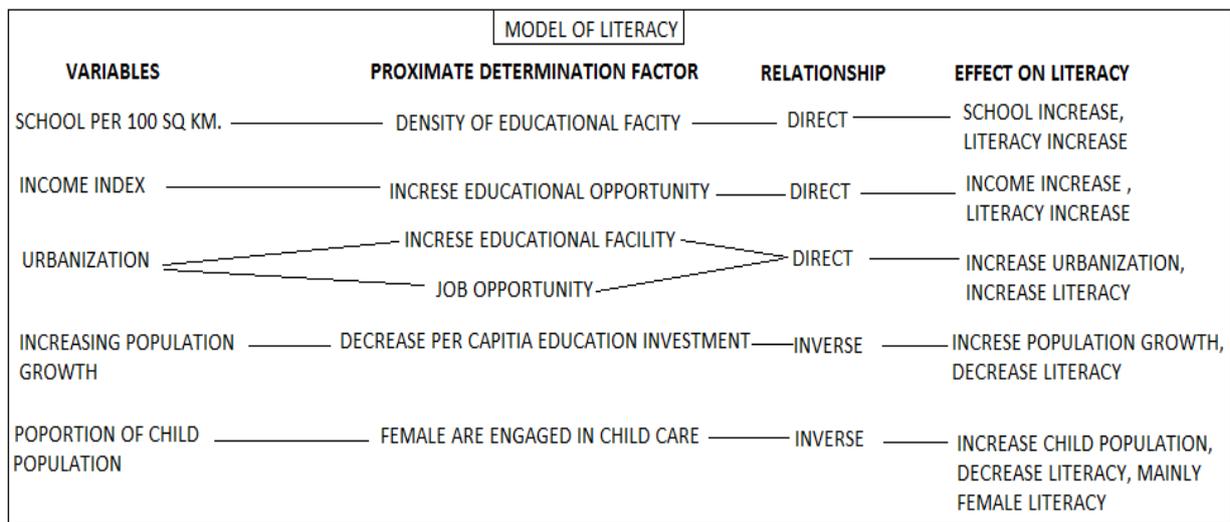
Differential index of this categorizes varies between 0.003328 in East Mednipur to 0.303826 in Uttar Dinajpur. Male urban rural differential is very low (0.12) in West Bengal. This category is also divided into following four categorizes; (I) very low (below 0.05) (ii) low (0.05 to 0.10)

(iii) moderate (0.10 to 0.15) and (IV) high (above 0.15). Map no. 10 shows that high categorizes districts lies in northern plain except Jalpaiguri, Coach Behar and Murshidabad, while southern districts of West Bengal show low and very low differential index.

6.4 Spatial Pattern of Female Urban-Rural Literacy Differential:

Female rural urban literacy differential index varies from 0.01039 in East Mednipur to 0.506491 which are high that the state average. A like other categories this category is also divided into four categories viz. (I) very low (below 0.10) (ii) low (0.10 to 0.20) (iii) moderate (0.20 to 0.30) and (IV) high above (0.30). Maps no. 11 shows that districts under high and moderate categories lies in northern part and western part of the state exceptionally Murshidabad (0.08109) while low and very low categories belongs in the southern part of the state.

7. Hypothetical Framework



7.1 Co-Relation between School per Sq Km. and Literacy Rate

The necessities of getting proper access to school to enhance schooling outcomes and adult literacy rates, especially for girls, have been supported by a number of studies. Vimala Ramchandran and Aarti Saihjee (2002) on the basis of desk review of DPEP and qualitative micro study in six states of India (Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Haryana, Karnataka and Tamil Nadu) focused on the issues that the presence of functional upper primary and secondary schools exert a significant influence on children’s and parents motivation to continue their education. PROBE report (1999) noted that the positive association between school facilities and pupil achievements is stronger in the educationally backward regions (e.g. M.P., Orissa).

The present study in this respect has found and interesting result. In district level, the density of primary school is measured by the total no. of primary school divided by the area of districts. It is found from the co-relation result that

has a positive impact on literacy rate (r=0.41) and especially impact in enhancing female literacy rate(r=0.47).

7.2 Co-Relation between Income Index and Literacy Rate

Several Indian studies (NSSO, 1989; Panchmukhi, 1991; Spahimalini, 1994; NCAER, 1996; Basu,1997; Bhattya,1998; PROBE team, 1998; Devi,2001; krishanji,2001; Nambissan and sedwall,2002; Dholakia,2003;) have tried to establish that economic backwardness is indeed a significant factor in explaining the low literacy rate and lower educational attainment among all segment of population. There are also many evidences former the studies of different countries in this respect (Lave et al. 1981; Psacharpoulos et al. 1989; king and Lillard, 1987; Knodel and Wongsith, 1990; Tansel, 1997). The present analysis incorporates income index of the district calculated by the government of West Bengal. In the district level, income index bears a significant positive impact (r=0.74) on literacy rate.

7.3 Co-Relation between Urbanization and Literacy Rate

Urbanization is the causes and effect of literacy and education. Urbanization creates job opportunities that stimulate the people for literate because without the knowledge and literacy, job opportunities are nil. On the other hand urbanization helps to develop the basic facilities that also include the school education, that help to children to make literate and educated person.

In present study urbanization and literacy rate co-relate district level data of West Bengal. Co-relation between this two variable is moderate positive ($r=0.62$), that means direct moderate degree relationship.

7.4 Co-Relation between Population Growth and Literacy Rate:

The average estimated population growth benefit/cost ratio for the 16 countries of Africa was an impressive 3.7. The largest saving were in primary schooling (with an obvious lag of five years) and in obstetric care, with additional saving in immunization, provision of bed nets for malaria control, and improvements in water supply and sanitation (John Bongarts, John Cleland, John W. Townsend, Jane T. Bertrand and Monica Das Gupta, 2012). That means per capita investment on educational sector is decreases which adverse effect on literacy and education.

Population growth creates more expanses on population for food, shelter and cloths after that very low amount money are there for other purpose. So, population growth rate has inverse impact on literacy rate. In present study shown that the co-relation between population growth and literacy rate is moderate negative ($r=-0.66$) degree relationship.

7.5 Co-Relation between Poption of Children and Female Literacy

Most of the Indian females are engaged in household work. Each and every family, child and old care is duty of these family women in Indian context since long back. When family child population increase that time family all female are more intensively engaged to care of this children. They not have enough time for study, after the care of children. So, female illiteracy is increases where proportion of child is increases.

In present study, co-relate between this two variable, proportion of children and female literacy and outcome is high negative relationship ($r=-0.82$).

7.6 Low Female Literacy Rate and Its Impact on our society

Low literacy rate means an overall sluggish growth of West Bengal, as it impacts every arena of the development. India is struggling hard to stabilize its growing population through family planning programs. But if females are illiterate, then this has a direct and negative impact on these initiatives.

When a girl or a woman is not educated, it is not only she who suffers but the entire family has to bear the consequences of her illiteracy. It has been found out that illiterate women face more hardships in life than literate

ones. They have high levels of fertility as well as mortality; they suffer from malnutrition and all other related health problems. In one of the surveys, it has been found out that infant mortality is inversely related to mother's educational level. In such a scenario not only women but their kids also go through the same conditions. She, who does not know the importance of education in life, does not emphasize the same for her kids. This hampers the family as well as the nation's progress as a whole. Lack of education means lack of awareness. Illiterate women are not aware of their rights. They know nothing about initiatives taken by the government for their welfare. Illiterate women keep on struggling hard and bear harshness of life, family and even their husbands.

7.7 Policy Recommendations

1. Western parts of west Bengal Bankura and Puruliya is undeveloped due to physical barrier and tribes settlement is concentrated in this district, so that why government need to special attention grow the development facility in this area that's help to growing effect on literacy rate in those district they also stimulate the development on the other hand. Literacy differential is very high in those districts, to reduce this women empowerment and village empowerment is need to attention.
2. In Uttard Dinajpur, Malda and Murshidabad is very high population growth rate that engaged in women in child care and reduced per capita income and high dependency ratio that create child labour. So, this district low literacy rate and high differential is occurred in this districts. To short out the problem, health and family planning activity and more accessible school facility is needed.

8. Concluding Observation

It may be conclude that there is an increase in literacy rate in the state since independence, but in present, lower growth rate in literacy in the state than India national average. There are wide gaps between male and female between urban and rural, between rural male and female, between urban male and female, between male rural and urban and female rural and urban literacy rate.

School availability is the main factor for literacy that view support by the most of the eminent scholar in his work. But the present studies show the low moderate correlation between the availability of school and literacy rate. But in the context of female literacy has more effect than the male literacy.

In rural areas parents discriminate the boys to give education than girl's child. Poverty also compels the parents discriminate the girls preferring the boys to give education. Poverty also compels the parents to involve their children to sundry Works, rather than sending them to schools. Therefore in order to achieve the goal of universalization of education, more stress should be given for female literacy that is prove by the co-relation of income index and literacy rate (0.74) .

Urbanization is a logo of developed facility of this area. This help to stimulate student towards education by the facility like near school and good employment after education and other basic amenities. In this study show the moderate positive correlation between urbanization and literacy rate.

Population growth rate and proportion of children acting like the pseudo variables. They are affecting the development especially economic development in negative way. Engage the women in high level to care for children. So they have not found the time for concentration on education. Backward districts like Uttar Dinajpur, Bankura, Puruliya, and Malda has backward in literacy .to solve this district literacy problem need more attention on the development level especially on health, women empowerment and increasing school facility.

Disparities in literacy by sex have to be narrowed down. Financial assistance should be granted to the weaker sections of the society in order to raise their socio-economic conditions especially in the country sides. The local bodies, NGOs and voluntary organizations have to be invited in this regard. It should not be the task of government only but each and every section of the society should be involved in such programmes.

9. Acknowledgement

The author is grateful to Dr. Hemant Patidar, assistant professor of Dr. H.S. Gour University for providing the necessary facilities and motivation to complete this work.

References

- [1] Ali, Alamtar (2009), "Literacy in Uttar Pradesh: Spatial Dimension", *National Geographical Journal of India*, Vol. 55, Pts (I), Pp. 99-110.
- [2] Hassan, M.I. (2005), "Population Geography" *Rawat Publication*, Jaipur.
- [3] Jaglan, M.S. and Sindhu, Rajiv (2008), "Regional Dimensions and Determinations and Determinants of Gender Disparity in Educational Attainment in Rural Haryana", *Population Geography*, Vol.30, No.122, Pp.45-46.
- [4] Khan, A. Q. (2004), "Regional Imbalance and Changing Pattern of Literacy in Jammu And Kashmir State (1961-2001)", *Population Geography*, Vol.26, No.1and 2, Pp.49-60.
- [5] Majumder, Paramita (1999), "Spatial Pattern of Literacy in West Bengal: A District Wise Analysis of 1991 Census", *Geographical Review of India*, Vol. 61, No.2, Pp 165-172.
- [6] Rao, D.P. (2009), "Disparity in Literacy Rate in India: An Urban –Rural Perspective", *Nagarlok*, Vol.Xli, No.2, Pp. 13-23.
- [7] Siddique, Mohammad (1977), "The Geography of Literacy in Uttar Pradesh", *Geographical Review of India*, Vol.39, No.4, Pp. 374-388.
- [8] Adhikari, A. and Kamle. M. (2010), "Spatial Pattern of Education and Development in West Bengal" *Annals of National Association of Geographers*, Vol.-Xxx, No.-2, December-2010, P.55-67.

- [9] Sawant, M.N. And Lewis, C. (2004), "Literacy in Goa: A Spatio-Temporal Review", *The Goa Geographers*, Vol.-2, No.-2, Pp. 32-41.
- [10] Statistical Handbook of West Bengal: 2011, *Bureau of Applied Economics and Statistics*.
- [11] West Bengal- A census View, *Directorate of Census Operation*, 2011.
- [12] Varshney Hemant K. (2002), "Inter State Gender Disparity in Literacy Rates: A Look at Census Data (1991 And 2001)", *Journal of Educational Planning and Administration*, Vol. Xvi, No.4, Pp. 537-549.
- [13] Dholakia, Ravindra H. (2003), "Regional Disparity in Economic and Human Development in India", *Economic and Political Weekly*, Vol. Xxvii, No. 39: 4166-4172.
- [14] Khular K.K (2011), "The Meaning of Education", *Kurukshetra: A Journal on Rural Development*, vol. 59, no. 7, pp. 21-23.
- [15] The general conference of UNSCEO in 1964 quoted on literacy.
- [16] Dubey R.S. and Misra R.P. (1981), "Level of Education: A Versatile Indicator of Regional Development", *Geographical Review of India*, vol. 43, no. 3.

Author Profile



Kalyan Sundar Som is Research Scholar. He did Master Degree in First Class from Dr. H.S. Gour University; Sagar, India His specialization includes Population Geography and Development Studies

R. P. Mishra is Professor and Head, General and Applied Geography, Dr. H.S. Gour University, Sagar, India. He is Director, Population Research Center. He has 34 Research Publications in his name and 6 Books Published. He has supervised 14 Ph.D. Scholars. His area of Specialization includes Population Geography, Food System, Nutrition and Health