

## **SPATIAL PROBLEMS OF SECONDARY EDUCATION IN HUGLI DISTRICT**

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### **ABSTRACT**

Distribution and availability of secondary education act as vital factor in regional as well as human resource development. The present work aimed at assessing spatial dichotomies and problems of secondary education among the blocks of Hugli District, West Bengal, India. Based on secondary data and employing statistical techniques like composite Z score, correlation etc. the paper opted to scrutinize the micro regional variation in attainment of secondary education in Hugli District. The eleven selected variables were grouped into secondary educational facilities and socio-economic development. The study revealed that there was no uniformity in the distribution of socio economic attributes and school attributes among various pockets of the district. It's both the lacunas on the part of socio-economic and school context that hindered the successful running of the secondary schools, with socio-economic conditions predominating

**KEY WORDS:** Human Resource, Secondary Education, Spatial dichotomies and problems.

### **INTRODUCTION**

The secondary education serves as a bridge between primary and higher education. It facilitates occupational mobility and social mobility as well. It is the stage of education that is being considered as a minimum level of attainment for people to survive in modern technological world (Bhatta, 2010). For each generation of individuals, it is a decision making area. In a country like India where more than 75% of its population resides in non-urban areas, a secondary school along with its infrastructural aspects indicates the village status and a proud possession of the village.

Despite its great value in development process, many children in urban and non-urban areas are out of schools. Children who fail to access or complete a basic education cycle, do not constitute a homogenous group. For some children, physical access to school is difficult, others fail to access school due to socio-economic reasons. Some join school, but are silently excluded and rarely participate in the educational process (Govinda & Bandhopadhyay, 2008). Increase in dropout rate, decrease in attainment rate, lack of infrastructural facilities, indifferent attitude of teachers towards students, high pupil-teacher ratio, ineffective curriculum and vague understanding of the benefits of education among the parents of children are some of the major ills plaguing secondary educational scenario in India.

The paper is divided into four parts. The first part embraces the available literatures as to the nature, barriers, effects of school education in urban and non-urban areas; the second part provides a panorama of the objectives, methodology, database along with the regional personalities of the area under scrutiny. The spatial variation regarding the socio-economic and school attributes in various pockets of Hugli and the correlation between the total enrolment and socio-economic and school attributes constitute the third section while the fourth section concludes the paper.

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## **SECTION I- LITERATURE SURVEY**

Naik (1975) in a very frustrating tone argued to show that attempts at equality in education have been handicapped by the large inequalities prevalent in the society; that attempts at qualitative improvements have been nullified by the pull of the existing social power structure, that attempts have also been frustrated by the sub-human conditions under which majority of our people live.

In 1977, Makhija's work was an appeal to undertake areal-locational surveys of education on micro-level to realize the areal problems and locational validity as well. Realizing the problems of location and spacing of educational institutions, the researcher has prepared a map of future location depicting the areas where educational institutions are located and where they can be located in future. This mapping was done keeping the threshold population in mind. The researcher advocates a close relation between connectivity, accessibility and schooling.

Ray (1982) tried to diagnose the spatial dimension of school education, the significance of location maps in spatial organization of schools, block level regional disparity regarding qualitative and quantitative aspects of school education, mapping the exact location of schools –its barriers and advantages etc. Realizing the felt need of incorporating blocks as the basis of regional planning as an areal unit of development, the researcher focused his work on 314 blocks spread in 13 districts of Orissa. The location of schools along with its regional disparity was judged from micro and meso regional level. Spatial mapping technique has been used by the researcher to demarcate the proper locale in order to check drop-out and regional disparity on locational anomaly. The researcher opined in favour of considering aspects of road connectivity in executing spatial mapping of schools.

The study conducted by Raza, Ahmed and Nuna (1984) portrays the inter-regional variation in the population coverage by schools of different levels within the range of distances perceived as walkable. The study computed the weighted mean distances to schools of different levels for each district of the states of Indian Union and analyzed their spatial pattern. While highlighting the role of physical factors in determining the pattern of accessibility, the study reveals that the areas with inhospitable physical conditions are characterized by poor accessibility to schools.

Ganguly (1989) sought to examine the nature of relationship between the determinant and scholastic achievement of students with reference to their socio-cultural and economic background against the rural- urban backdrop of Birbhum district, West Bengal.

Raina (1989) examined and explained the re-shaping of rural people through the process of education. The study was conducted in a rural setting of Nanil village in Anantnag district of Jammu and Kashmir. Researchers urge to link up education with the socio-economic, cultural and ecological requirements of a given community. The researcher opined that higher education is still urban elitist biased. There is a mismatch between the official provision and the local perceived need and utility in respect of schools.

Jena (1990) attempted to capture the structural characteristics of the rural society in the form of village typology and establish its relationship with the distribution of schools in rural areas. The problem was posed in the context of Balasore District, Orissa. The researcher explored the influence of social structure on distribution and utilization of educational facilities as confined to rural areas only.

Mc cracken and Barcinas (1991) found rural schools to be a mechanism for community cohesion and continuity while urban schools were interpreted as vehicles for bringing about societal change. Dichotomy exists with regard to school size, enrolment, curricular and extra-curricular offerings, teaching aids, per-pupil expenditure, school staff, ethnic and cultural background, course contents, socio-economic status of students etc. between the urban and non-urban areas.

Tilak (1991) tried to look into the problems and prospects of educational planning in the rural areas of India. A top-down empirical approach, starting from Hariyana State to the district of Guargaon, from Guargaon to Sohna punhara Blocks and finally to kherla and Purana education clusters have been adapted to highlight the inter-regional disparities of planning at micro level. The study is almost a pioneering effort in India to consider School Cluster as an area of investigation.

Jambhulkar (1996) attempted to diagnose the education related problems in different areas i.e. rural, industrial, slum and urban areas of Bhandara district of Maharashtra. The author urged that popularization of education, educational surveys at the district levels, area-specific time bound approach, caste based projects, and vocationalisation of education, spread of management information system etc. may be instrumental in upgrading education system of our nation.

A combination of families' socio-economic background and distance from home and school disables students in accessing education (James et al., 1999). The study pointed out that the rurality and socio-economic background combine to produce greater educational disadvantages in rural areas. Less parental involvement to schooling, socio-economic condition, less supportive rural communities, substantial school to home distance, huge cost of living away from home, discouraging accessibility, cost of higher education etc. paralyze the rural schooling.

Vaidyanathan and Nair (2001) found that apart from paucity of resources, the social diversity and regional disparities of schooling put a detrimental effect on rural schools. The researchers highlighted the importance of tailoring programmes and policies to location-specific needs and of endowing local bodies with greater authority and flexibility in the management of local school.

Reddy (2004) provided a detail discussion of social context of elementary education in rural India, including the current scenario of primary education, its lacunas, the economic factors favouring and/or disfavouing enrolment, retention; the socio-cultural factors embracing caste, tribe, religion, gender perspective; the socio-demographic factors like the health and nutritional status of the children, early childcare, sex-ratio, seasonal migration etc. The survey chalked out the social inertia of schooling in great detail.

Seetharamu and Devi (2007) advocates that schooling process is very much interlinked with the life process in an area. Data was collected from 1678 drop-out households and 80 primary schools from 62 villages of ten talukas through stratified random sampling techniques. Samples were selected from five different ecological regions, namely, dry, wet, coastal, hilly and industrially concentrated pockets of the state of Karnataka. The study revealed that any attempt to look at education in isolation from its background, context, the life process becomes partial, piece-meal and ineffective.

## **SECTION II—OBJECTIVES, METHODOLOGY AND MATERIALS**

### **OBJECTIVES**

- To scrutinize the micro regional variation in attainment of secondary education in Hugli District.
- To correlate the socio-economic and school related factors with total enrolment that determines the access and success of schooling in various pockets of Hugli district.
- To find out the spatial inequalities so far as socio-economic circumstances are concerned.
- To chalk out the alternatives for future days.

### **AREA IDENTITY**

Hugli district (Lat. 23<sup>o</sup>01'20"N-22<sup>o</sup>39'32"N, Long. 88<sup>o</sup>30'20"E-87<sup>o</sup>30'15"E) is economically and culturally affluent with a strong base of education. It occupies a prominent place in the field of education in the state. The district offers a rich yet diversified cultural heritage. The district has strong foundation of education since long past. In ancient times, numerous tolls

or chatuspathi used to provide education to students. With the advent of well-built school building, the toll system took a backseat slowly but steadily. According to Census 2001, about 2993 primary schools, 548 secondary schools, 139 higher secondary schools and a number of madrasahs are spreading the sweet smell of education all over the district. In addition to Government undertaking schools, some private concerns and religious Institutions have extended their hands of cooperation for the educational upliftment of the district. They have established several convents that have been affiliated directly to the I.C.S.E. and C.B.S.E. At present, the NGO s are actively engaged in spreading the fruits of education among the backward class and communities. Several steps have been initiated to set up school in the villages to eradicate illiteracy from the district. In a nutshell, the educational scenario of the district is undergoing a gradual change with the dynamic economic personalities of the district.

**METHODOLOGY**

Data for the present analysis have been obtained from District Statistical Handbook (2006-07), and District Census Report, 2001. Present study uses block as a smallest unity of analysis.

To achieve the objectives mentioned above, the relevant method of quantitative analysis has been employed. For the identification of block level variation in attainment in secondary education eleven independent variables have been selected under two groups (i) secondary educational facilities and (ii) socio-economic development, first of all, variables have been got standardized by z-score technique, after that z-score values of each variables were aggregated to find out the composite z-score (C.S.) for each block. The model as:

$$C.S. = \frac{\sum z_{ij}}{N}$$

Where,  $\sum z_{ij}$  sum of z-score of indicators j in block i.

N is the number of indicators.

To examine the relationship between attainment in total enrolment with secondary school attributes and socio-economic development calculated based on Karl Pearson’s technique of product moment coefficient of correlation have been estimated and ‘t’ test technique has been adopted to identify the level of significance of their correlation.

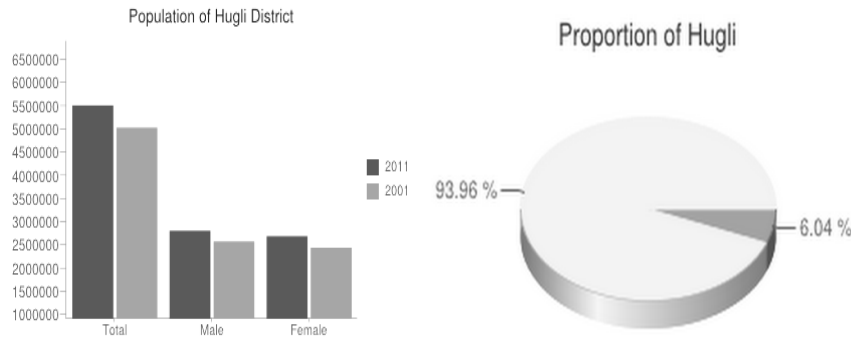
**DATABASE**

- Annual Report, 2007-08, Department of School Education, Govt. of West Bengal, Bikash Bhawan, Bidhan Nagar, Kolkata-700091.
- District Information System for Education (DISE) at the National University of Educational Planning and Administration;
- National Sample Survey (NSS) 50th Round data;
- Census of India, 2001 and 2011.
- “Zilla Profile”, Hugli district Administration;
- District Statistical Handbook, Hugli, 2006-07;

**SECTION III—RESULTS AND DISCUSSION**

**SPATIAL DICHOTOMY**

The present study opts to explore the areal variation of high school education scenario with respect to Hugli district of West Bengal, comprising 6.04% of the state population.



Out of the total population in the study district, 38.62% lives in urban areas. Sex ratio and child sex ratio in the district are to the tune of 946 and 944 respectively. Average literacy rate as per 2011 census is 87.75% of which males are 91.34% as against 83.95% female literates. Child population (0-6 years) in urban regions is 172458, constituting 8.10% of total urban population.

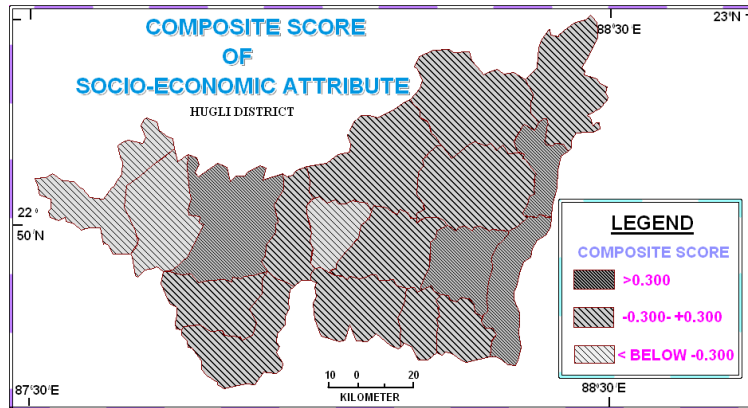
As per Census (2011), 61.38% population of Hugli district lives in rural villages. Interestingly, rural areas outnumber the urban area in so far as the sex ratio and child sex ratio are concerned. Sex ratio is 966 females per 1000 males. The figure is 948 girls per 1000 boys. Gender wise, male and female literacy stood at 85.71 and 72.50 percent respectively. The child population comprises 9.90% of total rural population of Hugli district.

In terms of socio-economic perspectives, the district has been categorized into three zones on the basis of composite z scores, namely, low (below -0.300), moderate ( 0.300 to -0.300), and high (above 0.300). Socio economic conditions were judged through scrutinizing six variables, namely, % SC population % non-worker, % marginal worker, % of female literacy, Household Size/ mouza , Metalled Road(km).

Goghat I register lowest socio economic development followed by Goghat II and Tarakeswar block. These blocks embrace huge share of non-workers and scanty proportion on metalled road in their domain as well. As against these, Chinsurah Magra, Serampore-Uttarpara, Arambag, Singur block possess higher socio-economic status. A substantial proportion of female literacy coupled with higher percentage of urban population may be attributed to the higher SES. It needs mentioning that all these blocks have more than 65% female literacy. Eleven blocks are included in medium category, viz, Balagarh, Dhaniakhali, Pandooah, Polba-Dadpur, Khanakul I, Khanakul II, Pursurah, Chanditala I, Chanditala II, Jangipara, Haripal. These entire blocks are designated as non-urban areas.

**TABLE NO 2. COMPOSITE Z SCORE INDEX ON SOCIO ECONOMIC ATTRIBUTES**

CATEGORY	COMPOSITE Z SCORE INDEX	BLOCK NAME
High	above 0.300	Chinsurah Magra, Serampore- Uttarpara, Arambag, Singur
Medium	0.300 to -0.300	Balagarh, Dhaniakhali, Pandooah, Polba-Dadpur, Khanakul I, Khanakul II, Pursurah, Chanditala I, Chanditala II, Jangipara, Haripal.
Low	below -0.300	Goghat 1, Goghat 2, Tarakeswar

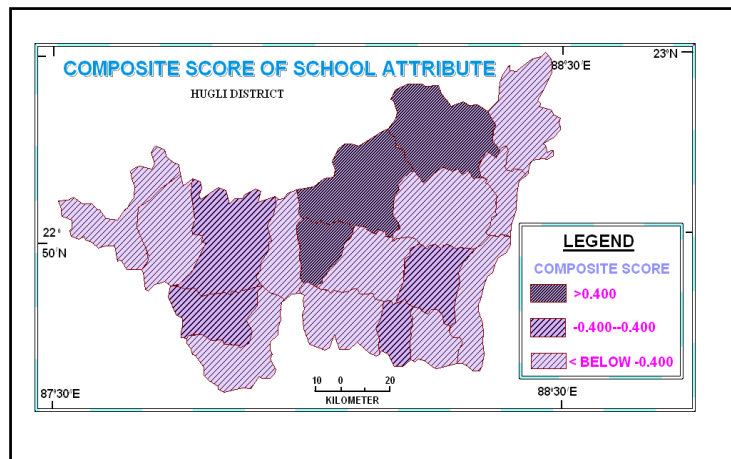


Five aspects of school attributes were taken for composite standard score treatment to reveal the spatial dichotomy within the blocks, namely, teacher-pupil ratio, teacher-school ratio, school- classroom ratio, no of secondary and higher secondary schools, no of non-formal educations.

Three zones like high, (>0.400), medium (-0.400 to 0.400), and low (below -0.400) have been identified. Most of the blocks but a few show unhealthy trends so far as the school attributes are concerned. A bulk of schools in rural areas is the victim of unhealthy teacher-pupil ratio, pupil school ratio and school teacher ratio. Low category blocks on school attributes include Balagarh, Chinsurah- Magra, Polba-Dadpur, Haripal, Jangipara, Chanditala II, Serampur-Uttarpara, Goghat I, Goghat II, Khanakul II, Pursurah blocks. Except Chinsurah-Magra and Serampore- Uttarpara, all low category blocks are rural blocks. In Balagarh, Chinsurah- Magra, Polba-Dadpur, Jangipara, Khanakul II- blocks, a teacher has to teach more than 50 students in a classroom. Only three blocks namely, Dhaniakhali, Panduah, Tarakeswar, show good result to some extent. Medium category blocks are as follows, Chanditala I, Singur and Arambag.

**TABLE NO 3. COMPOSITE Z SCORE INDEX ON SOCIO ECONOMIC ATTRIBUTES**

CATEGORY	COMPOSITE Z SCORE INDEX	BLOCK NAME
High	Above 0.400	Dhaniakhali, Panduah, Tarakeswar,
Medium	-0.400 to 0.400	Chanditala I, Singur and Arambag
Low	below -0.400	Balagarh, Chinsurah- Magra, Polba-Dadpur, Haripal, Jangipara, Chanditala 2, Serampur-Uttarpara, Goghat 1, Goghat 2, Khanakul 2, Pursurah



**LORENZ CURVE AND GINI COEFFICIENT**

An effective tool of measure of inequality is the “Gini Co-efficient”. The G value (Gini’s Co-efficient) varies from 0 to 1. The highest value indicates concentration or localization of functions and lower values towards 0 implies diversification of functions. The G value is found to be 0.49. Thus it can be concluded that population and socio economic status in the blocks of Hugli district are having an uneven distribution in terms of their relationship. There is no uniformity in the distribution of socio economic attributes.

**CORRELATION**

Here relationships between numerous elements of school and socio-economic attributes have been analyzed and tested. Pupil-teacher ratio, school-teacher ratio, pupil-school ratio—all these school attributes are found to be unhealthy in Hugli on an average. All these variables are negatively correlated with enrolment. Total attainment in secondary education is positively correlated with no. of secondary and/or higher secondary schools ( $r = 0.710$ ) at 1 per cent level of significance. This value reveals that with an increase of secondary/H.S. schools, the study area can achieve higher rate of total attainment in secondary education.

As to the relationship between socio economic aspects with the total enrolment is considered it has been found that female literacy, SC population marginal worker percentage and metalled road proportion are found to be positively correlated with the total

enrolment. Physical distance to school is cited as a major barrier to participation for rural children in India (UNICEF, 2006; Ward, 2007). Similarly, in many other developing countries, schools are not easily accessible, thus social scientists and policy makers are interested considerably in whether better access to schools increases students' enrolment (Filmer, 2007; Handa, 2002). An improved access to school by better roads increased School enrolment by 22 percentage. The more the rate of female literacy is, the more the enrolment. Enrolment seems to be low among the non-working people. Their poor economic condition compels children to perform their economic role in the families. Labour is widely recognized as the key asset of the poor and the mobilization of household labour in a variety of paid and unpaid activities are the essence of their livelihood strategies (Kabeer, 2003). As a result enrolment in schools takes a backseat.

**TABLE NO. 4: ANALYSIS OF SCHOOL AND SOCIAL ATTRIBUTES**

School & Social Attributes ( X)	Total enrolment in High Schools (Y)
Pupil-Teacher Ratio (X1)	-0.37616
Pupil School Ratio ( X2)	-0.47953
School Teacher Ratio (X3)	-0.39437
No. of Sec./HS School (X4)	0.871746*
Non formal education (X5)	0.695655
% SC Pop (X6)	0.83705
% Non-worker (X7)	-0.32517
% Marginal worker (X8)	0.35932
% Female literacy (X9)	-0.56668
Household Size/ Mouza ( X10)	-0.52637
Metalled Road (X11)	0.73882

\*1% significant level

**SECTION IV--CONCLUSION**

From the above discussion it is clear that high school education in Hooghly district is at the critical juncture. The areas where school attributes are good; do not necessarily mean that in all cases, these areas will possess good socio-economic attributes. Socio-economic aspects are found to be good in urban areas like Chinsurah-Magra, Serampore-Uttarpara, Arambag or prosperous rural areas, such as, Singur. Regarding socio-economic parameters, these regions fall under the moderate category. Due to rapid and uncontrolled expansion of education school education in India displays heterogeneity in every aspect including the quality of education that is being imparted. As a result of this, two types of schools have been developed- a small number of quality schools and a large bulk of schools imparting education of an inferior quality. The present growth of civilization featured by globalization and modernization brings about significant changes in quantitative and qualitative dimensions of high school education of rural and non-rural areas. Emergence of threat from ZATION syndrome, i.e. Globalization, Liberalization, Modernization, Standardization push down the rural education as many believes towards marginalization. Globalization steadily widens the rural-urban dichotomy in educational realm in general and infrastructural, socio-cultural environment of schools in particular. The mushrooming of English medium schools and sophistication of modern education are found to be ringing the death-knell of rural educational environment. At the same time, urban traditional



education is suffocating. Rapid intrusion of urban cultures into rural areas exerts strong impact upon social environment of schools. Rural educational ethics are being engulfed. The traditional education system is gradually taking a backseat. The slow and steady rise of alternative education system in the form of non-formal education and E-learning magnify the dichotomy further. Rural educational environment and related ethics are engulfed by urban mode of education, with the promotion of English medium school in the rural areas as well as sophistication of modern education. Traditional school educations in the urban areas are suffocating and rural school education is sailing like a boat without rudder.

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