FACTORS AFFECTING ELEMENTARY EDUCATION IN JHARKHAND

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DECLARATION

This is to certify that the dissertation entitled "***FACTORS AFFECTING ELEMENTARY EDUCATION IN JHARKAHND"***, is my bonafide work for the degree of **MASTER OF PHILOSOPHY** and may be placed before the examiners for evaluation.

Date: Priyanka Tiwari

FORWARDED BY

We recommend that the dissertation be placed before the examiners for evaluation.

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CONTENT

CHAPTER-1

INTRODUCTION

1.1: Statement of the Problem

Education is a social occurrence which has wider impact on population in every characteristic or feature. In fact education is considered as an important phenomenon for the development of society at micro and macro level. As the educated population knows the significance of well being and serves as the skilled workforce for the nation on which the growth and development of the country depends. Thus the role of education in facilitating social and economic advancement is well recognized. Education in its broadest sense of development and advancement of youth is considered as the most imperative or essential input for empowering people with skills and knowledge and giving them access to creative and fruitful employment in future. Improvements and enhancement in education are not only anticipated to enhance efficiency but also augment the overall quality of life. For every society, education is the means through which it secures, in the children, the vital conditions of its own subsistence. Indian independence on 15th August 1947 involved the task of national reconstruction. Therefore independence meant the important task in reconstruction of the nation and the education had an important place in this. Even during the pre-independence period the importance of enrolment and attendance was realized. When we discuss about enrolment, at the same time the issue of dropout cannot be ignored. From one side if children were getting into the schooling system, they were withdrawing from the other side due to poverty, discrimination and alienation(abuse from teachers),geographical location of schools- lack of transport facility, school atmosphere is not very conducive, schools atmosphere is not very conducive, schools are poorly maintained and lack basic facilities, has to work in the field, medium of instruction or language, difficulty in comprehension, non-functional school, miscommunication between student and teachers. There was a shortage of teachers in schools. Other issue is related with parents that were lack of interest in investing in education especially in case of daughters.

Therefore in spite of reaching higher levels of education, the children were dropping out in between leading to the failure of various efforts in improving the educational status of

the country. This phenomenon also led to the wastage of resources that were put in this allocation. At this point of time when India is reaching new heights in economy, the performance of the country in terms of education has not been very encouraging. The persistent nature of the problem of poor attendance and dropout need greater attention.

The factors or causes that led to poor performance of education in India have been multiple. The poor accessibility of schools to children staying in different physical condition and habitations, social access, high opportunity cost ,poor quality of teaching imparted in school, unfriendly school environment, poor health of children and several such socio-cultural and economic factors are there which affect the enrolment and educational attainment of the children.

Equality is necessary in the democratic and classless society of the country, quality education is required to fulfill the essentials and basic requirements of education while quantity is relevant as education should not be the preserve of a few, everybody should avail to education. There should not be any discrimination in regard with caste, creed, religion, sect, class, and ethnicity to enable them to climb to privilege. These are the viewpoints presented by Naik.[1] In India, strong regional imbalance, rural and urban disparities and gender & caste inequalities led to main educational problems. There are still immense sections of society who do not have the right of entry to educational amenities. These sections include the poor, girls in rural areas, tribes and some belonging to the scheduled castes[2]. These disparities are found more in private schools, because high share of enrolment belongs to non-scheduled caste and boys in private schools. The availability of good infrastructure is found in private schools, but fee structure is very high in private schools. Generally the large share of population belonging to weaker section of society or scheduled caste does not afford to send their children in private schools due to high fees. Even though there is the availability of good infrastructure in private schools.

[1] J.P.Naik, (1975), '*Equality Quality and Quantity: The Elusive Triangle in Indian Education*' Allied Publication, New Delhi, 1975.
[2] V.K.Ramachandran et.al, (1997), "*Investment Gaps in Primary Education, A Statewise Study*", *Economic and Political weekly*, Vol.32, No. 1&2, January 4-11, 1997, pp 39-40.

When we talk about availability of infrastructure, we cannot ignore the problem of infrastructure in government schools. Since independence, the government made great efforts in opening up new schools. In spite of the novel idea of providing schooling facility to as much population as possible, the pace did not match with the provision of infrastructural facilities in the schools. Dreze and Gazdar have also pointed out that according to local perceptions teaching standards in government schools have significantly deteriorated during the last two three decades.[3] According to People Report on Basic Education, easy access to schools along with the availability of schools and infrastructure facilities has also been as an important factor determining educational performance.

The nature and extent of the phenomena related to education vary according to the diversities found in the Indian society. This diversity is in terms of religion, caste, class, sex, language and region which result in the emergence of different causes influencing the various aspects of the basic education. The changing nature of the society full of diversities has also given these educational aspects a regional dimension. These regional variations further provide a tool to study inherent problems and their suitable remedies that can improve the educational status of lagging regions.

This dissertation aims to discover trends in educational admission and to describe various groups which are susceptible to segregation from educational opportunities at the elementary stage. This paper tries to review on different themes, including regional disparity in education, social equity and gender equity in education, the problem of drop out, inequity in educational opportunities.

India has made a Constitutional commitment through 86th amendment act(2002) inserting article 21A to provide free and compulsory education to all children up to the age of 14. Though we are still far away from achieving universalisation of education, through Sarva Siksha Abhiyan (SSA) Yet, one has to admit that developments in recent years have had significant impacts on the situation, raising the hope that universal basic education would

[3] Kiran Bhatty, (1998), "*Educational Deprevation in India. A survey of Dield Investigations", Economic and Political Weekly,* Vol.33, No.27, 1998, p-1738

be a reality within a reasonable period of time. The factors which seems to make a distinct difference in the growth of elementary education in the country are as follows :-

The first factor is the increased participation in direct manner of the central government in intensification of infrastructure and delivery of elementary education by allocating resources in this fields. This is very much significant as previously the state governments have had almost entire duty for producing and delivering community elementary education as education is a state subject. State governments, of course, carry to offer a share of persistent financial spending, but the proactive conscious method in which the Government of India has acted following the approval of the National Policy on Education 1986 stands out as landmark path breaking advancement in educational policy. This changed centre-state structure of action in which centre has come in forefront in providing universal elementary education, has made the central government the chief role player in providing of education and in designing agencies for implementing progress or development initiatives in elementary education in many states, although the circumstances is not consistent across the country as there is a big lag behind for some states compare to other states. This linkages between these associations has resulted further reshaping as external aid from foreign players has also claimed an imperative space in the partnership framework because of public-private partnership, concerning the central as well as state governments. Coupled with this improved and enhanced plan from the central government is the implementation of the district level as the base for planning development inputs for elementary education, and the concurrent move to disperse and spread out governance by empowering local self-governance mechanisms through *panchayati raj* (local self-government) institutions. This factor has added a new dimension to the multi-layered planning and implementation framework and created a new dynamic at the grassroots level.

Social mobilization drive act as the other factor that has begun to significantly reshape the elementary education scene in India in recent years enormously. This has been encouraged over the last 10-15 years within the elementary education sector, under the auspicious launch of the National Literacy Mission. This has resulted in increased demand for elementary education, on the one hand, while substantially enhancing the role

of non-state actors in the provision of enhancing the elementary education and support services in the country, on the other.

1.2: Elementary Education in India:

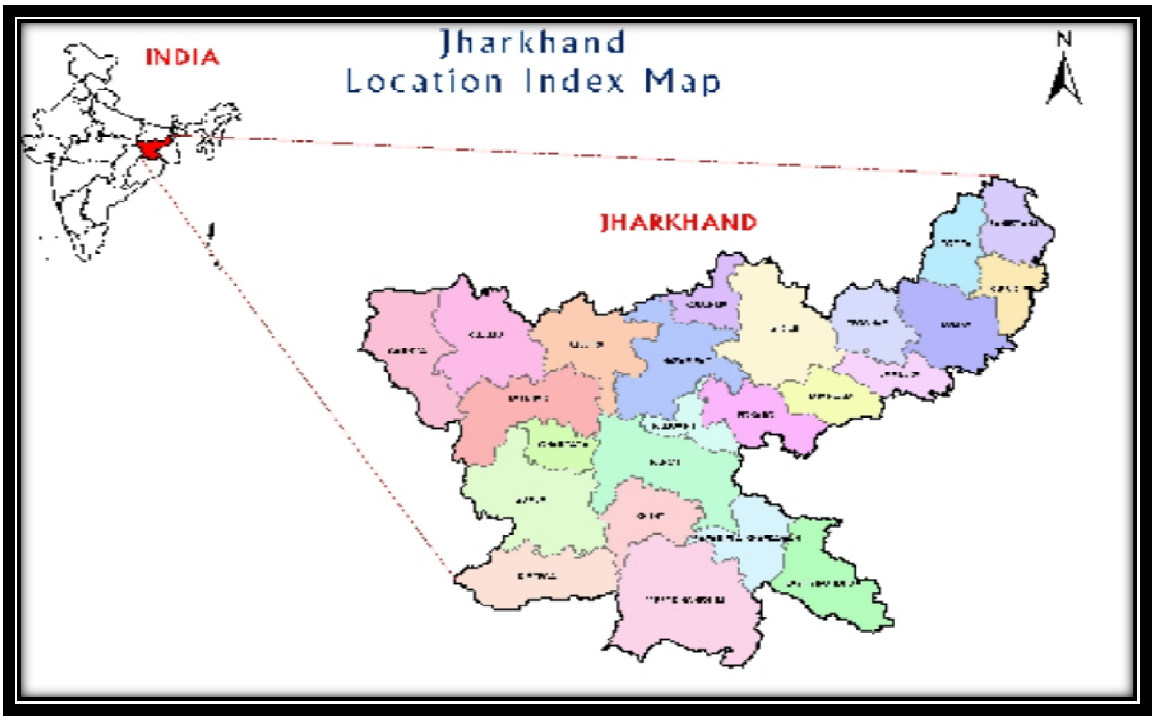
The educational system of India is divided into two branches, formal and non formal education. The formal system is further divided into various stages such as pre-primary, primary, upper primary, secondary, senior secondary. For the purpose of present work only two stages namely, primary and upper-primary of the formal system have been taken into account.

The present study focuses on Jharkhand elementary education system. Therefore, the study focuses on the elementary education system. The recognized state of Jharkhand has undergone a large number of changes in various dimensions of education which are directly linked with the development of the state.

The study has been done for various districts of Jharkhand. Jharkhand is also known as Vananchal (meaning land of woods). The state of Jharkhand was carved out from the state of Bihar on November 15, 2000. The capital of Jharkhand is Ranchi, which is one the industrial city of the state. Jharkhand shares its border with the states of Bihar to the north, Uttar Pradesh and Chhattisgarh to the west, Orissa to the south, and West Bengal to the east.

FIGURE-1.1

LOCATION OF JHARKHAND IN INDIA



Source-jharkhand.gov.in

TABLE: 1.1

LITERACY RATE, (1971-2011)

Years	TOTAL JHARKHAND	TOTAL INDIA
1971	23.87	34.45
1981	35.03	43.57
1991	41.39	52.21
2001	53.56	64.84
2011	67.63	74.04

Source: Census of India

TABLE: 1.2

DISTRICT WISE LITEARCY RATE IN JHARKHAND 2001

	TOTAL		
DISTRCITS	**TOTAL**	**MEN**	**WOMEN**
BOKARO	62.1	76.04	46.33
CHATRA	43.24	55.64	30.24
DEOGHAR	50.09	66.38	31.99
DHANBAD	67	79.54	52.43
DUMKA	47.94	62.86	32.35
GIRIDIH	44.5	62.09	26.62
GODDA	43.13	57.52	27.39
GUMLA	51.74	63.5	39.95
HAZARIBAGH	57.74	71.81	42.87
KODARMA	57.74	71.81	42.87
LOHARDAGA	53.58	67.28	39.64
PAKAUR	30.65	40.23	20.61
PALAMU	44.95	58.91	29.88
PASHIMI SINGHBHUM	50.17	65.6	34.37
PURBA SINGHBHUM	68.79	79.44	57.32
RANCHI	64.57	76.56	51.72
SAHIBGANJ	37.61	47.93	26.56

SOURCE (CENSUS 2001)

TABLE: 1.3

DISTRICT WISE RURAL LITERACY

	RURAL		
DISTRCITS	**TOTAL**	**MEN**	**WOMEN**
BOKARO	47.7	65.06	28.79
CHATRA	41.25	53.9	28.06
DEOGHAR	44.55	62.22	25.18
DHANBAD	58.22	74.5	40.08
DUMKA	45.52	60.87	29.6
GIRIDIH	41.99	60.28	23.53
GODDA	41.62	56.26	25.65
GUMLA	49.83	61.9	37.77
HAZARIBAGH	50.92	66.55	35.17
KODARMA	50.92	66.65	35.17
LOHARDAGA	49.04	63.85	34.09
PAKAUR	28.25	37.95	18.14
PALAMU	42.72	57.09	27.28
PASHIMI SINGHBHUM	44.17	60.77	27.49
PURBA SINGHBHUM	51.79	66.95	36.08
RANCHI	53.99	68.67	38.9
SAHIBGANJ	33.41	43.84	22.35

SOURCE (CENSUS 2001)

TABLE: 1.4

DISTRICT WISE URBAN LITERACY RATE

	URBAN		
DISTRCITS	**TOTAL**	**MEN**	**WOMEN**
BOKARO	78.57	88.12	67.28
CHATRA	77.16	83.82	69.47
DEOGHAR	82.33	89.62	73.59
DHANBAD	74.7	83.79	63.74
DUMKA	80.89	88.68	71.98
GIRIDIH	78.57	85.53	70.81
GODDA	82.35	89	74.46
GUMLA	83.55	89.08	77.59
HAZARIBAGH	78.85	86.69	69.27
KODARMA	78.85	86.69	69.27
LOHARDAGA	82.9	88.76	76.62
PAKAUR	72.18	78.19	65.37
PALAMU	77.63	84.97	69.27
PASHIMI SINGHBHUM	78.16	86.89	68.35
PURBA SINGHBHUM	82.16	88.93	74.64
RANCHI	83.09	89.66	75.53
SAHIBGANJ	71.23	79.28	61.9

SOURCE (CENSUS 2001)

1.3: Efforts Made by the Government in Order to Improve the Status of Elementary Education:

The report of the Education Commission by Ministry of Education, Government of India, came out with a detail analysis of the problems present in the education system of India. It dealt with issues such as universalization of elementary education, woman education, teachers, infrastructural facility, curriculum improvement and use of language in the schools.[4]The report presents the variety of information on the above mentioned issues. It further goes on to presenting a voluminous recommendation for improving the standard of the education system which includes these aspects making it systematic and easily understandable.

[4] D.S Kothari,(1966),"education and national development " report of the education commission 1964-66, ministry of education, government of India,1966.

The work mentions that the national policy on education (NPE) launched in 1986 were one of the major efforts done by the government to universalisalize education.

The three major concerns of Indian education namely, equity, quality and quantity is the main focus of one of the famous books by Naik[5]. The book deals with a brief history of Indian education and the prevailing societal condition at various time periods. While explaining the three main issues in education, the author has provided the knowledge of various efforts made by the government for the improving of the state of education in terms of quantity and quality considering equality. The work explains the idea behind the efforts then by the British in introducing the western education in India as well as the benefits and disadvantage of this education. It also deals with the root causes of the failure of the various efforts been to improve the education condition.

Defining target of achieving a particular level of educational development is not enough in achieving universal elementary education. This is because the population dynamics has a direct bearing on education development. The book by Mehta presents an in depth analysis of status of education for all in general and universalisation of elementary education in particular.[6] By taking the district level data the author has critically examined status of demographic and educational scenario in the country. Estimates of overage and underage children at the school level have been presented which is otherwise not available. The books also deals with the indicators of efficiency of school education system such as enrollment, repetition rate and drop out at both state and national levels. The enrolment projection exercise which has been undertaken to examine the goals of EFA, UEE shows that the goals cannot be achieved till 2001 as per the official target[7]. Simultaneously the projection indicates that it cannot be achieved by 2007 which holds quite true.

Various handbooks published by NIEPA (NUEPA) deal with several dimension of elementary education in India. The introductory paper presents a general picture of education system , its achievement regarding enrollment , availability of infrastructure,

[5] J.P.Naik, (1975), equity quality and quantity:The Elusive Triangle in Indian Education, Allied publication, New Delhi

[6] Arun C Mehta(1995)"Education for all in India myth and reality".kanishka publishers distributors, Delhi,1995

[7] Ibid, p-141

quality improvement and gender issue.[8] The paper also talks about different programs such as, operation blackboard,OB, education for all. Mid day meal and Sarva Siksha Abhiyan (SSA), Launched to improve the educational indicators funded by both government of INDA and other agencies, realizing the appauling condition of education in Indian government, has taken various steps in order to improve it. Some of which have been mentioned here. The national policy on education 1968 acted as a measure breakthrough in the post independent era which provided the required framework for an overall development of educational standard at all stages. It talked about educational development of various section of the society and gave a lot of importance to the common school system.[9] This policy was revised in1986, with greater emphasis on the earlier strategies and more focus was given on universalisation of elementary education UEE. The overall approach of the NPE of 1986 was child centered.[10]The revised policy was different on the following line-[11]

1) Concern for the working children in terms of providing food and nutrition, rest and time for getting educated.

2) Involvement of local committees and the parents in implementation of UEE.

3) Establishing schools and/or non-formal education centers of satisfactory quality within an easy reach of all children.

4) Creating necessary machinery for implementation of the acts, emphasizing the facilitating aspects rather than the primitive ones.

Following the recommendation of NPE, a national program called 'operation blackboard 'was launched around 1990 in order to equip every school with some of the basic infrastructural facilities and human resources. The idea behind this was that by improving availability of physical and human resources the enrolment and attendance in the schools.

[8] NIEPA & MHRD,(2000). "The context education for all:2000 assesment, N.DELHI, April 2000.
[9] Education Commission, GOI,(1986), National policy on education, N.delhi, 1986
[10] Ibid p-iii
[11] Opcit, p-15

Recently in the year of 2001 the Sarva Shiksha Abhiyan (SSA) was launched under the NDA government. It is an effort to universalization elementary education by community ownership of the school system and an attempt to provide an opportunity for improving human capabilities to all children through provision of community-owned quality education in a mission mode. The programme aims to provide useful and relevant education for all children in the 6-10 age-groups by 2010. All these policies and programmes along with others have certainly done progress in the improvement of educational status of India but, still a lot has to be done to achieve the targets.

Research questions:

1. What is the gender, sector(rural-urban)and caste disparity in terms of enrolment in various districts?

2. What are the effects of accessibility, availability, quantity, quality, performance and equity on elementary enrolment?

1.4: Objectives:

Following are the objectives of the work:

1. To study the pattern of school enrolment for primary, upper primary stages across socio-demographic elements in various districts of Jharkhand
2. To determine the effect of quantity and quality of teachers on elementary education of children.
3. To identify the role of physical infrastructure in elementary schools and its effect on students performance.
4. To see the impact of development parameter, social parameter and economic parameter on Gross Enrolment ratio, Net Enrolment Ratio, Scheduled Caste/ Scheduled Tribe enrolment.
5. To give the policy implication of schools for the improvement of education system in Jharkhand.

1.5: Data Base:

In order to understand the above mentioned questions, the main database used is the following:

Secondary Sources:

1. Districts Information System for Education (DISE),2008-09,published by NIEPA
2. Census of India-1991,2001
3. Sarva Shiksha Abhiyan (SSA) , 2008-09 Jharkhand
4. Jharkhand Statistical Abstract, 2004-05

The study used the school report cards data (DISE) to collect the information of school for block. Census data used to estimate population for the period 2008-09. District level data collected from DISE.

1.6: Methodology:

This study involves some of the important issues of the education at the schools which incorporates enrolment and drop-out in schools as well as availability and accessibility of schools. Enrolment is expressed in percentage or ratio and there are several indicators representing enrolment. These indicators are the following:

1. Gross Enrolment Ratio(GER) = Total Enrolment in Grade I-V/VI-VIII

   …….*100

   Population in the corresponding age group

2. Gender Parity Index (GPI) = Total Girls/Total Boys
3. Percentage share of SC/General/OBC= Total share of enrolment of SC/General/OBC

   ……...*100

   Total enrolled Population

4. Percentage share of Boys/Girls = Total share of enrolment of Boys/Girls

   ……..*100

   Total enrolled Population

5. Teacher-Pupil Ratio= Total Number of Students/Total number of Teachers
6. Student-Class room Ratio= Total number of Students/Total number of Class rooms
7. Ratio of Primary to Upper Primary= Total number of Primary Schools/Total number of Upper Primary Schools
8. Number of Blackboard/Computers/Common toilet/Girls toilet/Electricity/Playground in per school = Total number of Blackboard/Computers/Common toilet/Girls toilet/Electricity/Playground / Total number of Schools

   The study has been estimated across the districts of Jharkhand and one block & cluster is also selected from each district of Jharkhand.

9. composite Index:

   Step-1 choose the Indicators

   1. Number of Blackboard in Per School
   2. Number of Common toilet facility in Per School
   3. Number of girls toilet Facility in Per School
   4. Number of Electricity Facility in Per School
   5. Number of Playground in Per School

The entire variables are positive so there is no need to convert into positive variables.

Step-2 converts raw data into standardize value and find out the Principal Component:

10. Educational development index.(EDI)- referred in chapter 6

The objective of Principal Component analysis is to reduce the dimensionality (number of indicators) of the data set but retain most of the original variability in the data. The first PRINCIPAL COMPONENT accounts for as much of the variability in the data as possible, and each succeeding component accounts for as much of the remaining variability as possible. PCA can be performed by using a statistical package having provision for PCA. The illustrations, procedures and steps required for undertaking PCA have been demonstrated by using one such software, namely SPSS.

11. Sopher's disparity index has been calculated to see disparity among gender and sector across the districts using the formula

Disparity Index (D) = log (X2/X1) +log (Q-X1)/(Q-X2), where Q=100 and X2>X1

12. I n order to know the effects of gross enrolment ratio (GER) and dropout at elementary schools multiple linear regression equations have been used and the data is represented by regressing these dependent variables on the independent variables in the following way:

Model-1

$$Y_{1i} = \beta_o + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + u_{ti}$$

Model-2

$$Y_{2i} = \beta_o + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + u_{ti}$$

Where,

Y_{1i} = Gross Enrolment ratio (GER)

Y_{2i} = Dropout as a percentage of total enrolment

X_{1i} = Percentage of total government teachers

X_{2i} = Percentage of total female teachers.

X_{3i} = Percentage of school population ratio

X_{4i} = percentage of teacher per school

X_{5i} = Percentage of playground facility

X_{6i} = Percentage of common toilet

X_{7i} = Percentage of common toilet

X_{8i} = Percentage of girls toilet

X_{9i} = Percentage of electricity

X_{10i} = school classroom ratio

1.7: The Organization of Study:

In the present study, an effort has been made to find out the determinants affecting the elementary education affecting quality and quantity of education.. For this purpose, we have used the district level data of Jharkhand state

This study is divided into various chapters. Present chapter is introductory which includes statement of problem, objective, hypothesis, research questions, data base and methodology, plan of the study. The second chapter includes the review of literature. Third chapter deals with the enrolment pattern of schools at primary and upper primary level of education across different districts in Jharkhand. It focuses on the percentage share of enrolment in terms of gender and caste. Third chapter also shows the distribution of enrolment with respect to type of schools and management. Fourth and fifth chapter deals with the quality of education with the help of teacher related variables and physical infrastructure in government and private schools. Chapter sixth correlates the qualitative and quantitative variables of schools Chapter seventh gives a brief summary of the main findings of our study and some suggestions.

CHAPTER-2

Literature Review:

2.1: Introduction:

Education plays an integral part in the overall development of the personality. Elementary education implies eight years of compulsory education that begins from the age of eight. Government ensures to make elementary education free and compulsory. With DPEP (District primary Education Programme) coming into existence in 1994, the government came up with SSA (Sarva Siksha Abhiyan) in 2001 to bring improvement in elementary education system. A wide range of works have been done regarding different issues of elementary education in India. Elementary education system depends on the quantity and quality of education and there are various indicators to judge the quantity and quality of education like, GER, TPR, SCR, Ratio of primary to upper primary, physical infrastructure facility etc. Therefore the main objective of this literature is to review the empirical studies regarding the various aspects of elementary education and identify major issues regarding elementary education. There are different subdivisions depending on the problem they have addressed. There are various studies related with school education but it was not possible to read all the studies. Therefore, we focused on some important studies from 1975 to 2010 such as: Govinda, Kingdon, Raza, Ahmad and Nuna, Ramchandran, Bhatty, Shrivatsva, Srivastva, Sen, Gupta and Guha, Aggarwal, Das, Duriasmay, Reddy and Rao etc. There are various issues related with education system, but the study focuses on the issue related with equality and inequality related to gender, caste etc, type of management, availability of infrastructural facilities and expenditure on education system.

2.2: Educational equality and inequality:

Scholars have tried to focus on educational inequalities in India and the role played by social origins, both caste background and social class, across gender. They focus on the trends in inequality with regard to government initiatives aimed at providing equal educational opportunities across communities for both women and men. They have

worked and found out that the inequalities in educational attainment according to class origins have declined, and that gender inequalities began to decline somewhat earlier. Inequalities by caste seem to have remained largely unchanged.[12]

There are two type of education system in India. One is formal education system and another is non-formal education system. The study focuses on the formal education system which includes elementary education (primary and upper primary education), secondary education, higher education, graduate and post graduate education and diplomas etc. The study focuses on the elementary school education. School education depends upon the quantity and quality of schools. As mentioned above, quality is not possible without quantity. The various studies are used to review the empirical literature regarding the various aspects of elementary education. The first and foremost important variable is enrolment in schools. Enrolment can be measured through GER, NER, and percentage of boys/girls in enrolment and percentage of SC/ST/OBC. The various studies found the inequality in education in terms of caste, gender and region.

There exist inequality in educational transitions in India. The inequality exist at that extant that not only do girls lag behind, but also some communities and classes do also lag behind. it was found that individual and social returns from women's education are high especially where the lowering of fertility and infant and child mortality rate are concerned.

As Raza, Ahmed and Nuna, estimated the enrolment ratio of primary, middle, secondary and higher secondary level of education across the states in India. The GER was high for primary level of education but it started to decline at middle level and it was very low in secondary and higher secondary level of education. The share of girl's enrolment started to increase but this share of girls enrolment declined at secondary level of education. There was low enrolment ratio of girls in rural area as compared to urban areas. The study used the methodology of frequency distribution at the different level of education. The share of girl's enrolment was very low in case of SC category. It had been observed that the districts of Jharkhand, the coastal areas of south India and north-east have high

[12] Richard Breen and Divya Vaid, (2008)." *Inequlity in education attainment in India*", *Economic and political weekly*, vol. 110, no. 5, June 5-12,2008,pp 12-28

share of girls in enrolment. There were huge disparities between rural and urban education system.[13]

While talking about the inequality, Ramachandran[14]also explains that there are still vast sections of society who do not have the access to educational facilities. These sections include the poor, particularly in rural areas, and the scheduled castes. And hence they are the most deprived section of society as most of them are illiterate and can't get access to education due to various reasons like school being far away from home and other reasons.

Bhatty[15] also focuses on the social prejudices and infrastructural bottlenecks that have impact on parental motivation with regard to education, she further points out that parents tried to favour education of male children while ignoring the education needs of girls. She also points out that female girl child is ignored of education. And even if she is given education, she is denied of good schools as compared to male child. Hence this biastness in gender creates wide disparity in attainment of education among males and females. This unequal favor from the parents' side leads to greater inequality in attainment of education among girls and boys. The author has included economic and social considerations in explaining gender biasness seen in the educational system in India. Factors such as, low economic and low social returns, tradition to early marriage and presence of higher levels of schools at a distance from the household etc force the parents to take out their girl children from schools or make them learn partially less than their male child. The author, while enumeration the role of the above mentioned factors, attempts to establish that low parental motivation is not main cause of poor enrolment and high drop out of children in elementary classes.

[13] Raza Moonis,Ahmad A. and Nuna Schell C., (1990). School Education in India (The Regional Dimension),NIEPA, New Delhi,1990

[14] V.K.Ramachandran et.al, (1997), "*Investment Gaps in Primary Education, A Statewise Study*", *Economic and Political weekly*, Vol.32, No. 1&2, January 4-11, 1997, pp 39-40.

[15] Kiran Bhatty, (1998), "*Educational Deprevation in India. A survey of Dield Investigations", Economic and Political Weekly,* Vol.33, No.27, 1998, p-1738

Since past Indian society had suffered many inequalities in education, employment, and income based on caste and ethnicity. Positive discrimination policies have led to reserve seats upto 15% of them for scheduled caste in institutions of higher education and state and central government jobs; and 7.5% of the seats are reserved for the Scheduled Tribe. These programs have been strengthened by improving enforcement and increased funding since 1990s. Here scholars have tried to anslyse the changes in educational attainment between various social groups for a period of around 20 years to see the condition of educational inequalities over time. They found the results which show a declining gap between dalits, adivasis, of completing primary school. Such advancement was not found in case of Muslims, a minority group that does not benefit from affirmative action. [16]

Govinda observes that there exist wide inter- state disparities in enrolment in India. He found that in Madhya Pradesh (M.P), net enrolment ratio was high, which was 79.2%. But it was low in Bihar, Jammu and Kashmir (J & K), Nagaland, Rajasthan, Utter Pradesh (U.P) and West Bengal (W.B). However female enrolment ratio had shown a significant increase during the last few years. But there were gender disparities in some of the states like U.P., Rajasthan, J & K, and Bihar. The positive feature was reduction in dropout rate which was relatively sharper than that for the boys. The significant increase in enrolment ratio in girls and decline of dropout among girls is good to know. In coming years there will be better condition of girls in attainment of education as now parents are understanding the value of girls attainment of knowledge. This was the case due to the special attention paid to the girl's education over the recent years.[17]

Sen Gupta and Guha, estimated the enrolment, dropout and grade completion of girl children in West Bengal. The study takes into consideration the girl children of age group 7 to 18 years. The author chose to focus on girls education as women in India tend to lag

[16] Sonalde Desai and veena kulkarni, "*Changing educational inequlities in India in the context of affirmative action*" Demography. 2008 May; 45(2): 245–270

[17] Govinda. R, *"India education report" national institute of educational planning and administration"*, oxford university press, 2002.

behind significantly both in comparison to male counterparts as well as women residing elsewhere in the world, as women's conditions and status prior to independence and after independence was very poor. So it is very important to know that the status of women is improving or not and that can be improved with education. The parent's educational level also affects child's education, as literate parents know the value of education and impart best of education to their children. The study also observed, that working women, membership of Muslim comments, scheduled caste and scheduled tribe and rural residence has negative impact on education of children.

The high income of household and father's occupation in white color jobs was found to be positively associated with child's educational attainments. The study observed that while scheduled caste, scheduled tribe population was negatively associated with education, however if the mother of the child was educated then the social stigma of exclusion from education of the scheduled caste or scheduled tribe was minimized. Gender differentials as well as differences across religious group were observed to be minimal for urban areas. The study attempts to advance certain suggestions such as, improving the economic condition of agricultural labourers, proper implementation of law for free and compulsory education, improving the educational quality, child- care facilities.[18]

Rao's[19] study of Andhra Pradesh finds huge regional disparity in the state of Andhra Pradesh. In coastal region literacy rate was 62.5% whereas in Rayalseema and Telangana region it was 58%. The study calculated the disparity index for rural, urban, gender and social groups. They found that rural-urban disparity was highest in Telengana region (during 1971, 1981, 1991, 2001) whereas it was lower in Rayalseema region. On the other hand, gender disparities had declined faster in Rayalseema and Telengana compared to coastal Andhra. Social disparities were also shrinking. According to the estimate of educational department enrolment ratio was 90% in 2000 compared to 73% in

[18] Sengupta Piyali and Guha Jaba (2002), *"Enrolment, Dropout and Grade Completion of Girl Children in West Bengal."Economic and Political Weekly* , Vol.37,No.17,April 27,2002,pp 1621-1637.

[19] Rao, M.Govinda (1997), *"Investment gaps in Primary Education"*, *Economic and Political Weekly* , Vol. 32, No. 17 (Apr. 26 - May 2, 1997), p. 913.

1991-92. The linear regression shows that the work participation rate did not had any impact on enrolment and adult literacy rates and access to school have a positive impact on enrolment ratios of male and female.

Shrivastva[20] points out that the enrolment rates were increased in rural area but this increase was higher in urban areas. The enrolment ratio had not only improved relatively for all the states but this increase was higher in lower performing states (especially in Bihar, Rajasthan and UP) in the mid 1990s. She found that there was huge gender biastness, rural-urban and social disparities across the states and regions. Through the comparison of rural-urban, difference in overall GER, she also estimated the over and under age enrolment across the states at primary and upper primary level. The GER at upper primary stage were lower than the primary level and gender difference at upper primary stage was higher than the primary stage. According to author the high GER were not necessary indication of high access to education, because over and under age enrolment increased the figure. About one fourth to one fifth of the children at primary stage and one quarter of urban girls at upper- primary stage were found to be over aged. She estimated the gender representation/equity index for 6-13 age groups and found that the gender gaps were highest among the rural ST children as compared to the other caste groups.

Kingdon [21]examines that primary school participation rate improved in the early 1990's (ASER 2006) Assessment Survey Evaluation Research. But there was no change in secondary enrolment ratio. According to author, school participation depends on both the extent of demand for and the availability of supply of schooling, but there are only 1/5th as many secondary schools as the number of the primary schools. There was a great inter-

[20] *Mehrotra Santosh, Srivastava Ravi, Panchamukhi P.R, Shrivastava Ranjana, "Universalizing Elementary Education in India" Uncaging the Tiger Economy, Oxford University Press, 2005.*

[21] Kingdon G.G(2007), "The Progress of School Education In India", Global Poverty Research Group Website: http://www.gprg.org/ the work was part of the programme of the ESRC Global Poverty Research Group.

state variation in gender disparity in case of secondary school enrolment rates. Using the gender parity index for secondary school enrolment. The author found that higher gender inequality were in the States such as Bihar, Rajasthan than the other states while states like Kerala, Tamil Nadu, had attained gender parity. The major reason for this gender inequality in secondary enrolment was intra-household bias against women and household educational expenditure.

According to a survey (ASER) by Pratham[22] enrolment in elementary stage of education was found to be 93.4% for the relevant age-group during 2006.

Mehar,Dhillon and Sarkaria examines the performance differentials between male and female students in single sex and co-education schools of districts Dhanbad and Bokaro of Jharkhand during academic sessions 1995-96 to 2001-02. To carry out this study a sample of nineteen schools was taken from rural, urban and semi-urban areas. The analysis based on 34095 observations revealed that female students outperformed their male counterpart in 11^{th} and 12^{th} classes of the three streams of study. They attributed differentials between male and female students in academic achievement to the socio-cultural variations of different type of habitations. In urban and semi-urban areas most of the parents are educated and daughters are less prone to gender disparity. Comparatively Girls in rural areas have to devote more time to various domestic chores like cleaning, cooking and looking after their younger siblings. Further education of girls is not given as much importance as is given in urban and semi urban areas.[23]

2.3: Type of school management:

There are different types of school managements that is Government and private schools form the two major ones. Local bodies also contribute significantly in elementary education. There are huge disparities in terms of quality and quantity of schools in different type of management. Various studies have observed that the gender and caste

[22] Pratham (2006), "ASER 2005 - Annual Status of Education Report., Pratham", New Delhi, February 2006.
[23] R.Mehar,B.S.Dhillon and M.S.Sarkaria (2007),"Performance Differentials of Male and Female Students in Relation to Habitation, Type of Schools and Subject Combinations at the 12^{th} Stage in Districts Dhanbad and Bokaro" Recent Researches in Education and Psychology Oct.-Dec.

disparities are found in private schools and good quality of school infrastructure also indicate that private schools were better than public government schools. Dreze and Gazdar, covers the 16 villages of Uttar Pradesh – Moradabad, Rae Bareli, Pratapgarh and Banda, indicated that school attendance was about 50% in the sample schools. They noted 50% attendance in schools which were taken as sample. During the peak season of agriculture, high level of absenteeism was found and female enrolment & attendance was one-third of all children in government school. But the position was totally opposite in private schools. There was high attendance and low dropout rates in private schools. The male children were more than female children in private schools[24].

Mehrotra[25] found that families prefer private schools as student perform better in private schools than government schools counterparts. He also found that facilities and attendance are quite good in private schools, and students also perform better in government schools, though private schools do little to address caste and gender differences precisely in poorer areas.

Duraisamy[26]finds that education level of Private Unaided schools teacher's were not very different from those private aided schools. But the number of experience years was less in Private Unaided schools as compared to government and aided schools. On the outer side; the government and Private Aided schools spend less on school infrastructure as compared to Private Unaided schools because teacher's salaries were less in Private Unaided schools as compared to govt. and Private Unaided schools.

Singh estimates the comparative analysis of government & private schools in Gorakhpur and Saharanpur districts in U.P. The author analyzed that the enrolment ratio was higher in government schools then private schools. The regular homework were given to the

[24] *Deze, Jean and Haris Gazdar (1996): "Uttar Pradesh; the Burden of Inertia" in Jeen Dreze and Amartya Sen (eds) Indian development: Selected Regional perspectives, The United Nations University, Helsinpi Finlend.*

[25] Santosh Mehrotra and P. R. Panchamukhi, (2007) "Universalising Elementary Education in India: is the Private School the Answer?" in P. Srivastava & G Walford (Eds) *Private Schooling in Less Economically Developed Countries:Asian and African Perspectives*, 67-87. (Oxford: Symposium Books

[26] Duraisamy Malathy (1996): "Demand for & access to child school in T.N", UNDP studies on Development.

students in private school that was found to be absent in government schools. The teachers give more attention to the students in private schools.[27]

Aggarwal study based on Delhi finds that teachers in private unaided schools (PUA) were younger and more qualified. It was easy for PUA to appoint a teacher. But teacher appointment was a long procedure in govt. school. Because PUA were not obliged to follow guidelines such as SC/ST reservation or seniority. He also estimated that govt. schools did not have good infrastructure but even 14 of the 40 PUA did not have the toilets for girls.[28]

Duraismay[29] studied cost, quality and outcomes of primary schooling in rural Tamil Nadu and came to the conclusion that the institutional cost of schooling was highest in the aided schools. The teachers in government schools were more educated and experienced. Students of private schools performed far better than students of government and government aided schools. Teachers' qualification, literacy of the pupils', father, student-teacher ratio in the class and type of school management exerted significant influence on the achievement of students.

Singh and Sridhar's study of namely two districts, Deoria & Firozabad in U.P. This study covered 54 government and 48 private schools. They found the decline in Govt. School's enrolment and a commensurate increase of enrolment in private recognized school. The author focused on two time period i.e. 1997-98 to 1998-99 and 1998-99 to 1999-2000. In the case of gender, the higher number of girls were enrolled in government schools then the private schools, whereas is case of drop out; it was high in govt. school then private schools. In case of school infrastructure, the 94 government schools have their own

[27] Singh Y.P. (1998): Parishad vs Private Schools: A Compartive Analysis, Giri Institute of Development Studies,Lucknow.

[28] Aggarwal, Yash (1998) "Primary education in Delhi: How much do the children learn. National Institute of educational recently & Administration , New Delhi.

[29] Duraismay, Malathy (1999), *"Cost, Quality and Outcomes of Primary Schooling in Rural Tamil Nadu: Does School Management Matter?"* Indian Educational Review, Vol. XXX, No. 2.

buildings, own hand pumps, good classrooms, but this position was totally different in private schools. The Private schools have better health facility and electricity facility in schools. The teacher pupil ratio had increased over the period of time in private schools and their teachers were having better qualification. But in private schools, teachers are not trained because there are no training facilities for private school teachers. The study analyzed that comparative study between two districts through estimation of out of school children in private schools, enrolment rates using primary data.[30]

De, Majumdar, Samson, and Noronha estimated that the growth in enrolments was higher in private unaided schools, then the govt. and aided schools. The enrolment was higher in PUA schools in U.P and Haryana. Jharkhand presented a different picture; there was increase in privatization in rural area then in the urban area. PUA have more boys than girls and non scheduled caste tribe, and other backward classes. Because many of teachers were not on the regular basis which could lead the higher teacher accountability. Private aided(PA) schools were more cost effective then the PUA schools. Increase privatization leads to increase gender biasness, social disparities as well as rural- urban disparities.[31]

2.4: Availability of infrastructural facilities and availability of Schools:

In the recent decade the study on availability of various infrastructural facilities has emerged as an important issue in the educational research. It includes the physical infrastructure, availability of teachers, their qualification etc. Das[32] conducted a survey to examine impact of school facility on primary education. It was reported that there was a significant positive relationship between the efficiency in education and physical facilities in the school. The author finds that better physical facilities enhanced the attractiveness of the school as well as provided environment conductive for effective learning and hence better education of children.

[30] Singh Shailendra and Sridhar K. Seetharsm: (2002),"Govt. and Private School: Trends in Enrolment and Retention" Economic and Political Weekly, Vol.37,No.41,pp.4229-4231-4233-4238
[31] R.Govinda book
[32] Das, R.C. (1974), "Impact of School Conditions on Primary Education", SIE, Buch Vol. II, p.1263.

Devi[33] in a study on barriers in the primary education of scheduled caste students found that there was no significant difference in the achievement levels of the scheduled caste and upper caste pupils. He reported that conditions in the school were far from satisfactory and there was a shortage of teachers in primary schools. The teachers possessed just minimum qualifications and had poor training. Method of teaching was found to be very defective and they were not suited to scheduled caste pupils. Further, the teachers were not sincere in discharging their duties.

Raza, Ahmad, and Nune [34]estimated the quality of schools through availability of teachers and physical infrastructure in schools. It had been observed that there was large part of country had low teacher-pupil ratio and large untrained teachers were seen in schools. A large number of teaching posts remained vacant in some parts of the country. Teacher- pupil ratio was unfavorable in Jammu and Kashmir, Orissa and Maleva. A large number of schools did not have buildings. About 40% primary schools did not have blackboards, 70% did not have library and 62% did not have draping water facilities. A large number of schools did not have electricity facilities. The situation was very poor in case of rural area but it moderated in urban areas. It has been analyzed that education without quality had no meaning because it could not respond to the social demands.

Raza, Ahmad Nuna, further observed variations in the availability of schools in rural and urban areas across the states of India. The study concluded that the availability of school was high in urban areas as compared to the rural areas. The availability of secondary schools was higher in urban area. There was shortage of girl's schools in rural areas. There were significant regional variations. The availability of school was high in areas where the population density was low and the availability was low in areas where the population density was high. But According to author, the density of population was not the only variable to determine the variations. The availability of school was high in Maharashtra, M.P. and Orissa whereas the availability was moderate in Jharkhand, Haryana and Rajasthan etc.

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[33] Devi, R. (1985), "Barriers in Primary Education of Scheduled Caste Students", Buch Vol, IV, p.1268.

[34] Raza Moonis,Ahmad A. and Nuna Schell C., (1990). School Education in India (The Regional Dimension),NIEPA, New Delhi,1990

PROBE, the report gives a recent picture of education system in India. It is the people's report which means that it puts forward the viewpoints of the common people regarding various issues related with education. The issue includes how important education is for boys and girls, the condition of schools, availability of teachers and school environment. The study area chosen here is Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh. How much importance parents give to education in life, what they felt about sending their children to school, what is the cause behind withdrawing their children are some such questions the report has successful tried to capture. All these issues have been taken up by the report. Broadly, the report includes issues like, accessibility of schools both physical and social along with economic accessibility, quality of infrastructure present in various government and private schools, school environment, cause of dropout, facts about teacher's involvement and community participation. It was found that maximum percentage of people felt that even the factors like, poor condition of schools, inadequate infrastructural facilities, unhealthy school environment and lack of teacher's commitment are responsible for the poor attendance and high dropout rates.[35]

Shrivastva[36] examines the teacher availability at elementary level of education. She found that there were more than three teachers in urban areas in all school but there was single teacher's school in rural areas. The proportion of single teacher school was low with the help of operation blackboard scheme. But still there was problem of the low availability of teachers. She estimated the percentage of filled and vacant teacher posts and reported that proportion of sanctioned teacher positions have remained unfilled. There was gender biasness for teacher appointments in rural area. She found the share of males & female teachers in school and more than two-third of teachers in rural primary schools were males and same situation seen in upper primary stage.

In some states this factor is responsible for low enrolment in case of girl's children. This study also analyses that the appointment of the temporary teachers in most states was higher than the appointment of the permanent teachers. On the budgetary point of view,

[35] PROBE Team, Public Report on Basic Education,(1999),Oxford University Press, New Delhi,1999.
[36] *Mehrotra Santosh, Srivastava Ravi, Panchamukhi P.R, Shrivastava Ranjana, "Universalizing Elementary Education in India" Uncaging the Tiger Economy, Oxford University Press, 2005.*

permanent teachers were more expensive on account of higher salaries and annual increment. She found that most of the teachers were engaged in multi grade teaching (MGT) at primary and upper primary level of education. She found that the eight states (AP, Assam, Bihar, MP, Rajasthan, TN, UP, WB) had been face the problem of single teacher school and this problem was more in rural areas.

Shrivastva[37] estimates that non-availability of school in eight states (AP, Assam, Bihar, availability of schools at elementary stage. The demand of schools increased but there was the problem from supply side. This problem was found more in case of rural areas and in the case of girl's children. In states such as MP and Rajasthan, about 50% of rural parents did not send their children to school because there were no schools near their houses. The problem from primary to upper primary school hence increased day by day. In W.B. there was one upper primary school available for 18 primary schools and in other states; there was one upper primary school available for 4-6 primary schools.

2.5: **Expenditure on education:**

Inequality in the availability of educational facilities and poor quality of education can be seen as the poor status of education in India. The inequality as well as quality can further be seen as effects of poor expenditure on education. It has been observed that the expenditure done by the Indian government in educational front has been inadequate. Shariff and Ghosh have pointed out that this may be credited partly to the colonial neglect and partly the neglect in post-colonial period. Their paper attempts to analyze state and national level patterns of public expenditure on various heads of accounts in education in India. The paper deals with various features of state expenditure on education, growth of expenditure on education, intra-sectoral and inter-sectoral allocations, per student expenditure and recommendations. Temporal analysis revels that the annual rate of growth of expenditure on education has been declining since 1990-91.

[37] *Mehrotra Santosh, Srivastava Ravi, Panchamukhi P.R, Shrivastava Ranjana, "Universalizing Elementary Education in India" Uncaging the Tiger Economy, Oxford University Press, 2005.*

This decline has been particularly obvious after the structural adjustment programme which has resulted in quantitative as well as qualitative impact on education.[38]

Reddy and Rao[39] estimates the expenditure on education in Andhra Pradesh. At all India level, there was a sharp decline in public expenditure on education between 1985-86 and 1995-96. Budget allocation was low even when compared to southern states. The share of primary education had declined from 44.1% to 41.7% compared to the all other states (from 48% to 49.6%). There was no significant relationship between per pupil expenditure and level of literacy across the districts of Andhra Pradesh.

Srivastava finds that the expenditure by the central and state govt. on education and show the pattern of expenditure in different states. This study focused on the pattern of central expenditure on various schemes and programmes across the selected states. In the case of secondary, higher and technical education, the share of centre increased but it had been gradually decline in 1987-88. The share of plan spending has declined in secondary, higher and technical education since1987-88 but there has been rapid increase in elementary education since 1995-96. He estimated that the total public expenditure on education as a percentage of GDP has tended to be decline in 1990s.

The total share of central and state spending on education in GDP rose to 3.4% in 1990-91 but it declined to 3.1% in 1997-98. There had been decline in total expenditure on education with the contribution of states. He analyzed that there had been significant variations among the states in the financing of elementary education. Assam and Bihar devoted, the highest proportion of State Domestic Product (SDP) and revenue expenditure to elementary education, but W.B., T.N. and A.P. devoted the lowest proportion of SDP and revenue expenditure to elementary education. The highest growth in real expenditure on elementary education was given by Assam, M.P, Rajasthan, U.P. but the lowest was given to AP, WB clarity the period 1975-2000. AP, WB, Assam, TN showed the significant lower growth rates in case of real expenditure on elementary

[38] Shariff Abusaleh and Ghosh P.K.,(2000), *"Indian Education Scene and thePublic Gap" ,Economic and Political Weekly,* Vol. 35,No.16,April 15-21,2000,pp 1396-1406.
[39] Reddy V.Ratna, Rao R.Nageswara, (2003), *"Primary Education: Progress and Constraints",Economic and Political Weekly,* Vol.35, No.12-13, March 22-29,2003, pp 1242-1251.

education compared with earlier period. But Rajasthan was the only state which have higher growth rate in case of real expenditure during the post structural adjustment. According to author, public spending was not the only determinant of the quality of education infrastructure available and of issue of access and educational quality, but the efficiency of this specialty was also infrastructure.[40]

Kingdon estimates that expenditure per student in private unaided schools was Rs.999, in private aided schools Rs.1827 and in government schools Rs.2000. the learning achievement was however in the direction exactly opposite to the amount of spending. The government spends more than twice that of private unaided schools and provides half as much education.[41]

We reviewed the empirical studies regarding the various aspects of elementary education. This research is related with elementary education in Jharkhand. The various studies have been reviewed and these studies provide me clarity about different issues, data sources and methodology etc. But it is very difficult to find studies related with particular area in case of Jharkhand. We never found a work which will be similar with this topic. In general, there is increase in privatization of schools, everybody want to change education system in Jharkhand. Government took various initiatives but state did not succeed to achieve the goal of universalization of education.

[40] *Mehrotra Santosh, Srivastava Ravi, Panchamukhi P.R, Shrivastava Ranjana, "Universalizing Elementary Education in India" Uncaging the Tiger Economy, Oxford University Press, 2005.*

[41] Kingdon G.G. (2006): "Teachers Pay and Student Performance: A Pupil Fixed Effects Approach", *Oxford University Press.*

CHAPTER-3

Pattern of Enrolment in Elementary Schools

3.1: Introduction

Development of education in a country is the most powerful factor in its economic development. With new education policy coming into existence, India has set a major goal to achieve universalization of elementary education. The right to education bill 2005 is the latest effort by Government of India and education experts to bring free and compulsory elementary education to all. There are few good ideas in the bill, but the basic approach represents outdated thinking and is completely disconnected from the ground reality of today's India.[42] In terms of educational development, India's performance was poor before independence. During the decades 1991-2001, the literacy rate of India has improved by 13.2%. At the national level, male literacy rate increased from 64.1% in 1991 to 75.8% in 2001 and in 2011 it is 82.14% whereas female literacy rate increased from 39.3% to 54.2% from 1991 to 2001 and in 2011 it is 65.46%. But it varies from one state to another state. According to ASER (Annual Status of Education Report) survey, 93.4% of Indian elementary school age children were enrolled in school in 2006.

3.2: Pattern of Enrolment in Elementary Education:

This study is focused on elementary education in Jharkhand. School education plays a significant role for the development of an individual, so there is a need to pay more attention on school education. Education does not only mean literacy and ability to read or write but much more. Literacy is the best indicator of the level of educational awakening in a state. In Jharkhand, the literacy rate has been rising consistently (see chapter 1).

[42] Shah, Parth J. And Braun, Munzinger Corrina, (2006), "Education Vouchers: Global Experience and India's Promise", Policy Review, New Delhi: Centre for Civil Society.

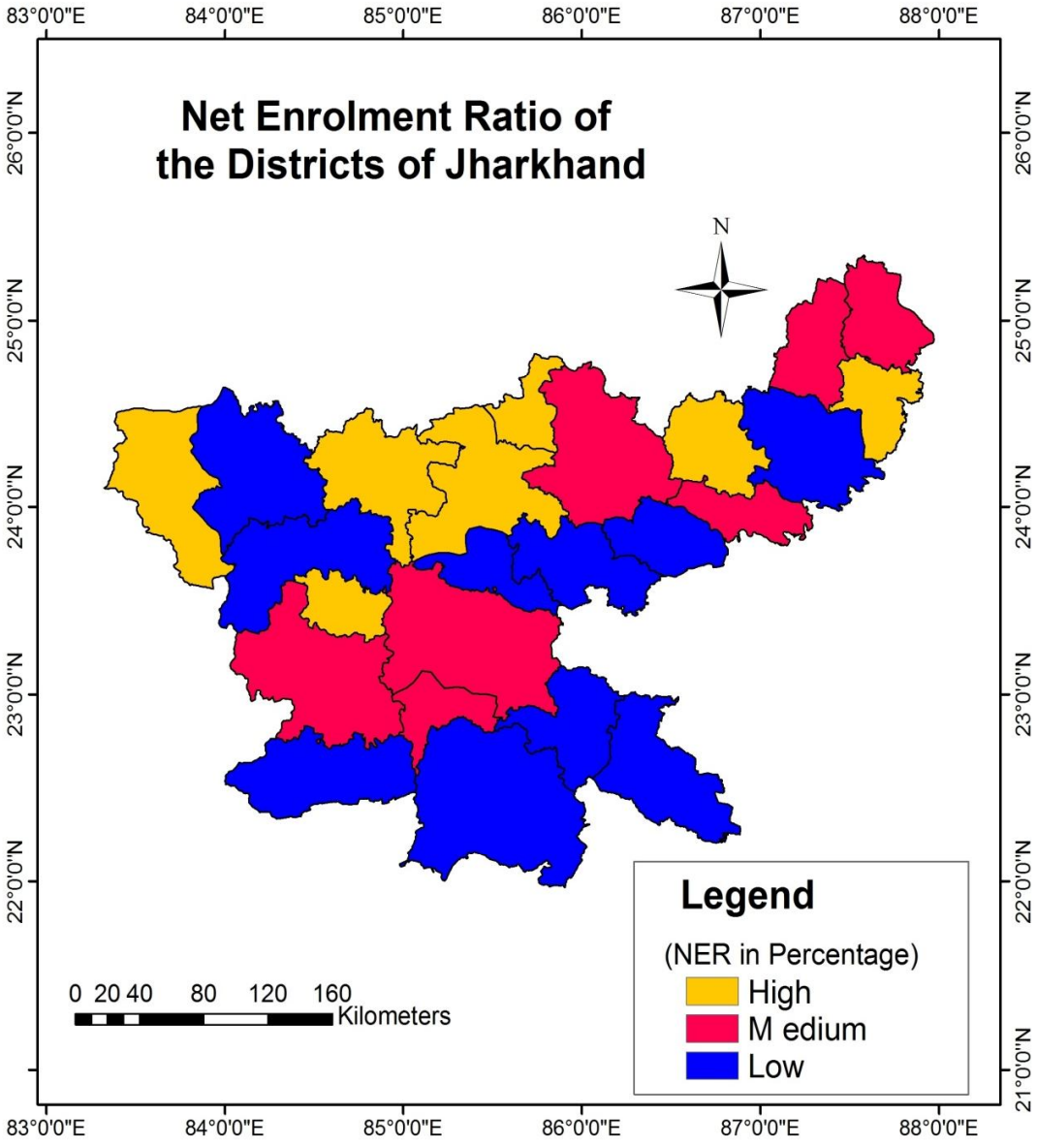
To measure the literacy rate, one factor is very important that is enrolment. When a child is going to school, then he/she is enrolled in a school. A child can be enrolled either in government school or in a private school.

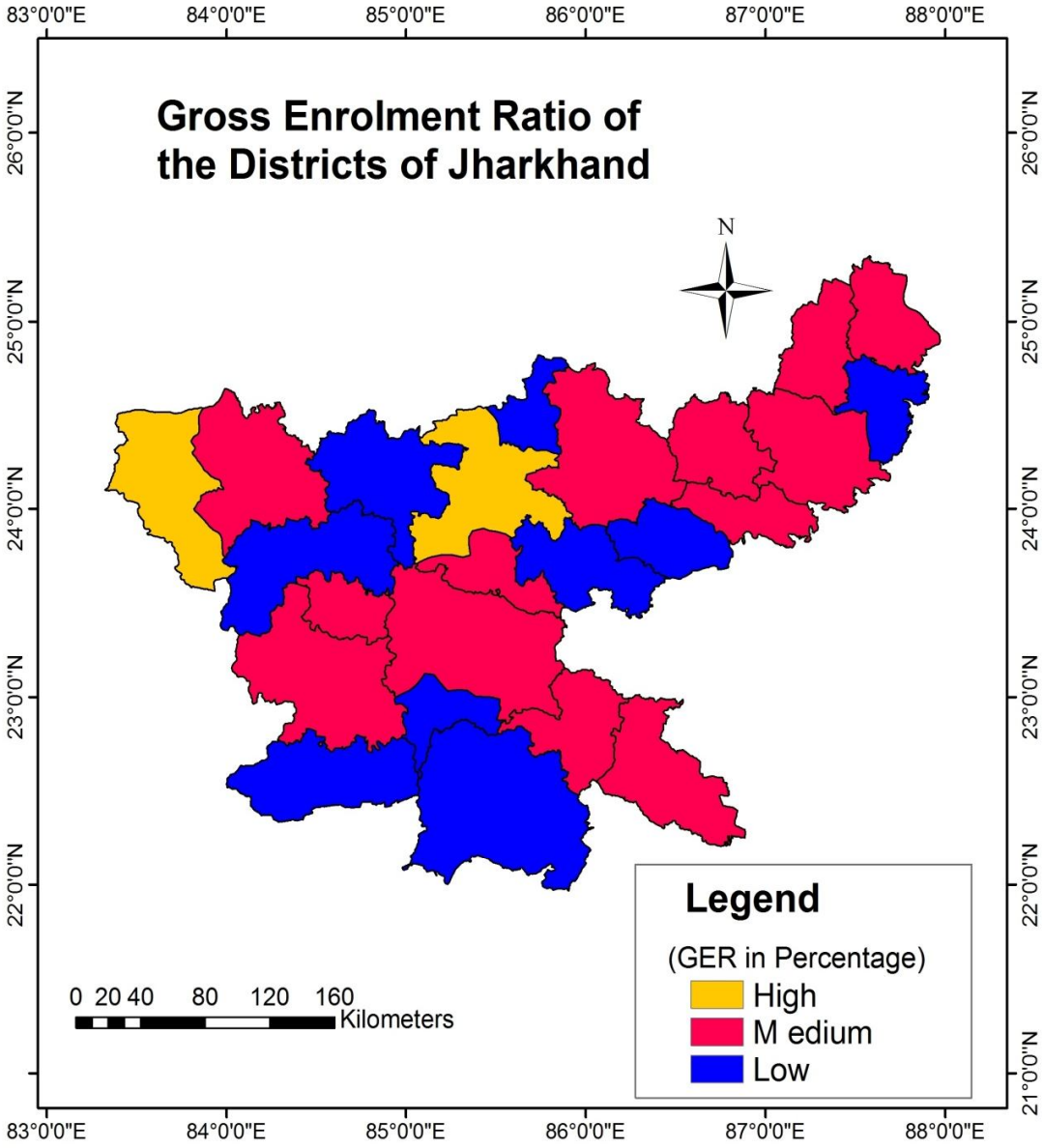
Therefore this chapter deals with the pattern of enrolment by gender and caste in schools under different managements. This chapter focuses on the pattern of enrolment across the districts of Jharkhand. District wise study shows the total picture of rural and urban enrolment.

TABLE: 3.1

DISTRICT WISE NER AND GER

DISTRICT	NER	GER
BOKARO	27.80	77.7
CHATRA	60.90	76.5
DEOGHAR	50.20	81
DHANBAD	35.45	73.4
DUMKA	31.70	89.3
GARHWA	54.85	98.4
GIRIDIH	44.10	85.1
GODDA	44.55	81.2
GUMLA	40.25	87.8
HAZARIBAG	54.05	92.1
JAMTARA	44.00	84.3
KHUNTI	48.75	72
KODARMA	55.95	78.1
LATEHAR	37.70	75
LOHARDAGA	57.95	88.5
PAKAUR	51.95	71.7
PALAMU	35.85	84.1
PASHCHIMI SINGHBHUM	28.85	71.6
PURBI SINGHBHUM	33.15	84.8
RAMGARH	32.05	84.8
RANCHI	39.25	83.8
SAHIBGANJ	39.05	83.7
SARAIKELA-KHARSAWAN	35.38	87.4
SIMDEGA	38.10	71.6


Net Enrolment Ratio of
the Districts of Jharkhand
N
83°0'0"E
84°0'0"E
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
26°0'0"N
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
21°0'0"N
0 20 40 80 120 160
Kilometers
Legend
(NER in Percentage)
High
M edium
Low


Gross Enrolment Ratio of
the Districts of Jharkhand
N
83°0'0"E
84°0'0"E
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
26°0'0"N
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
21°0'0"N
0 20 40 80 120 160
Kilometers
Legend
(GER in Percentage)
High
M edium
Low

The difference between GER and NER is that

The net enrollment ratio (NER) in elementary education is one of the indicators for the Millennium Development Goal of universal primary education. The Elementary NER is the share of children of elementary school age that are enrolled in elementary school.

If all children of primary school age are enrolled in Elementary school, the Elementary NER is 100 percent. Elementary NER below 100 percent means that all of the children of Elementary school age are not in primary school; some may be out of school these are mostly engaged as child labourers, or they don't go to school due to other reasons also like taking care of siblings, the environment of school is not condusive so they dont feel like going to school. some may be in preschool, in secondary school or in other forms of education. By definition, the NER cannot exceed 100 percent.

The gross enrollment ratio (GER) is a related indicator. The elementary GER indicates how many children, regardless of their age, are enrolled in elementary school, relative to the population of elementary school age.

The value of the GER can exceed 100 percent. Values above 100 percent mean that some children above or below primary school age are in primary school. A GER above 100 percent is usually an indicator of overage enrollment, for example due to repetition or late entry.

In Jharkhand we see very low NER that shows us that many children are out of school and not attending school. So steps should be taken to bring them to school. Literature suggests that either these children work on fields with their parents or take care of their siblings. So in various districts of Jharkhand low NER suggests that number of children of elementary age enrolled at elementary school are very low in case of Jharkhand.

TABLE-3.2

DISTRICT WISE THE GER AT PRIMARY AND UPPER PRIMARY STAGES OF EDUCATION JHARKHAND

2008-09

GER for Boys & Girls for Primary & Upper Primary Stages of School Education, 2008-09									
District	I-V			VI-VIII			All Elementary		
	B	G	T	B	G	T	B	G	T
Bokaro	83.7	78.3	81.2	75.4	68.1	72	80.6	74.4	77.7
Chatra	82.3	75.9	79.4	76.4	66.4	71.7	80.1	72.3	76.5
Deoghar	87.8	79.7	84.1	82.8	68.4	76	85.9	75.4	81
Dhanbad	77.3	69.5	73.7	76.9	68.3	72.9	77.2	69.1	73.4
Dumka	99.9	86.1	93.6	89.3	74.2	82.2	96	81.6	89.3
Garhwa	105.1	92.7	99.4	104.8	87.5	96.7	105	90.7	98.4
Giridih	90.6	84.3	87.7	86	74.7	80.7	88.9	80.7	85.1
Godda	87.9	75.9	82.4	86.3	71.4	79.3	87.3	74.2	81.2
Gumla	94.3	86.6	90.8	87.9	77.2	82.9	92	83	87.8
Hazaribagh	100.6	87.7	94.7	94.1	81.1	88	98.2	85.2	92.1
Jamtara	88.8	79.4	84.5	91	76	84	89.6	78.1	84.3
Khunti	71.6	66.1	69.1	80.4	72.9	76.8	74.9	68.7	72
Kodarma	81.8	73.2	77.8	83.2	73.4	78.6	82.3	73.3	78.1
Latehar	80	74	77.2	74.5	67.5	71.2	78	71.5	75
Lohardaga	90.3	81.9	86.5	96.3	86.9	91.9	92.5	83.8	88.5
Pakaru	72.7	68.2	70.6	76.8	69.9	73.5	74.2	68.9	71.7
Palamau	85.3	77.3	81.6	95	80.7	88.3	88.9	78.6	84.1
Paschim Singhbhum	71.4	66.8	69.3	78.5	71.8	75.3	74	68.7	71.6
Purbi Singhbhum	85.1	77.3	81.5	95.4	80.2	88.6	88.7	78.9	84.8
Ramgarh	84.2	84.7	84.8	84.8	84.5	84.6	84.2	84.7	84.8
Ranchi	83.2	83.1	83.9	83.6	83	83.6	83.5	83.8	83.8
Sahibganj	86.4	86.3	83.6	83.6	83.7	83.5	83.8	83.7	83.7
Saraikela-kharsawan	87.3	87.5	87.5	87.3	87.2	87.4	87.9	87.5	87.4
Simdega	71.4	66.8	69.3	78.5	71.8	75.3	74	68.7	71.6
Jharkhand	85.38	78.72	82.26	85.37	76.12	81.04	85.32	77.73	81.83

Source: DISE, 2008-09

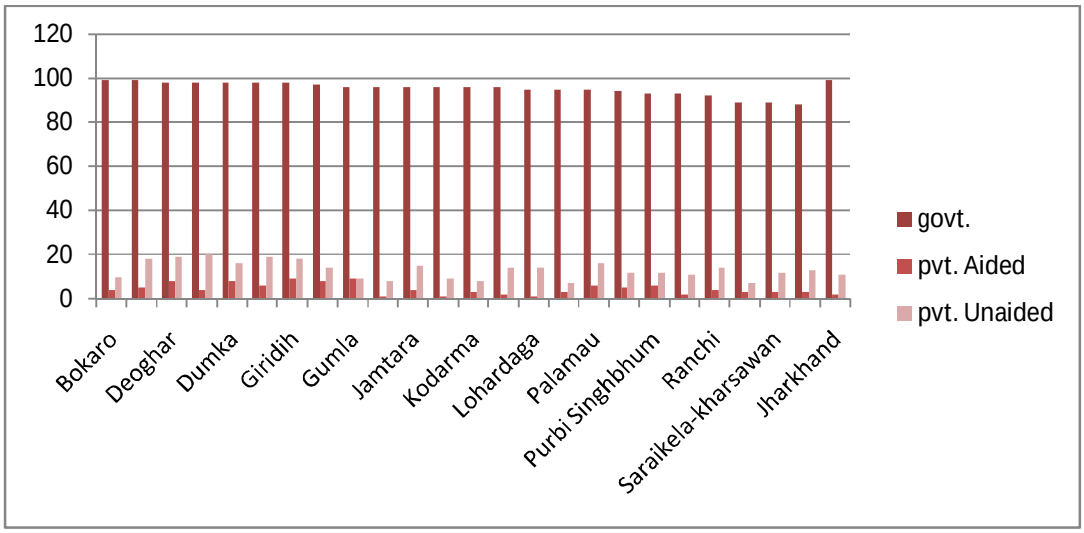
As shown in table-3.2, the Gross Enrolment Ratio is 81.83 at elementary stage of education in Jharkhand. The high share of enrolment is in Bokaro (98.4), Chatra (92.1), Deoghar(89.3), Dhanbad (88.5), due to better accessibility and good infrastucture and lowest in Simdega (71.6), Saraikela Kharsawan (71.6), Sahibganj (71.7). The low GER suggests that lack of infrastructure, lack of teachers in school, and low willingless of children to go to school.

The condition is such that Gross Enrolment Ratio (GER) declined from Primary to Upper Primary stage of education across the districts of Jharkhand. In case of Jharkhand, Total Gross Enrolment Ratio (GER) is 82.26 at Primary stage of education and 81.04 at Upper Primary stage of education, there is decline in GER from primary to Upper primary level almost in every district of Jharkhand except Khunti, Kodarma, Lohardaga, Pakaru, Palamu, Paschim singhbhum, Purbi Singhbhum, Simdega . Srivastva (2005) also found that the GER at upper primary stage were lower than the primary level and high GER were not necessary indication of high access to education, because over and under age enrolment increased at elementary stage. Gender is an important aspect in Indian society. It can not only be seen between rural and urban areas but can be seen even within rural or within urban areas. GER are lower in girls as compared to boys and there is more decline in girls than boys at primary to upper primary stage of education. As shown in Table-3.2, GER is more for boys (85.32) than girls (77.73) at elementary stage of education in Jharkhand, GER is low in girls (78.72) than boys (85.38) at primary level in Jharkhand. At Upper primary level also GER has declined in case of boys and girls and this decline is more in case of girls (76.12) than boys (85.37). Thus GER is low in case of female child as compared to male child. The situation is same across the districts of Jharkhand. Sen Gupta and Guha also analyzed that parental schooling, income and occupation had the strongest impact on girls schooling opportunities and attainments. They found that girls of the agricultural labour had the lowest school participation, the girl's responsibility for sibling care is also cause of low enrolment and high dropout[43].

[43] Sengupta Piyali and Guha Jaba (2002), *"Enrolment, Dropout and Grade Completion of Girl Children in West Bengal."Economic and Political Weekly* , Vol.37,No.17,April 27,2002,pp 1621-1637.

FIGURE-3.1

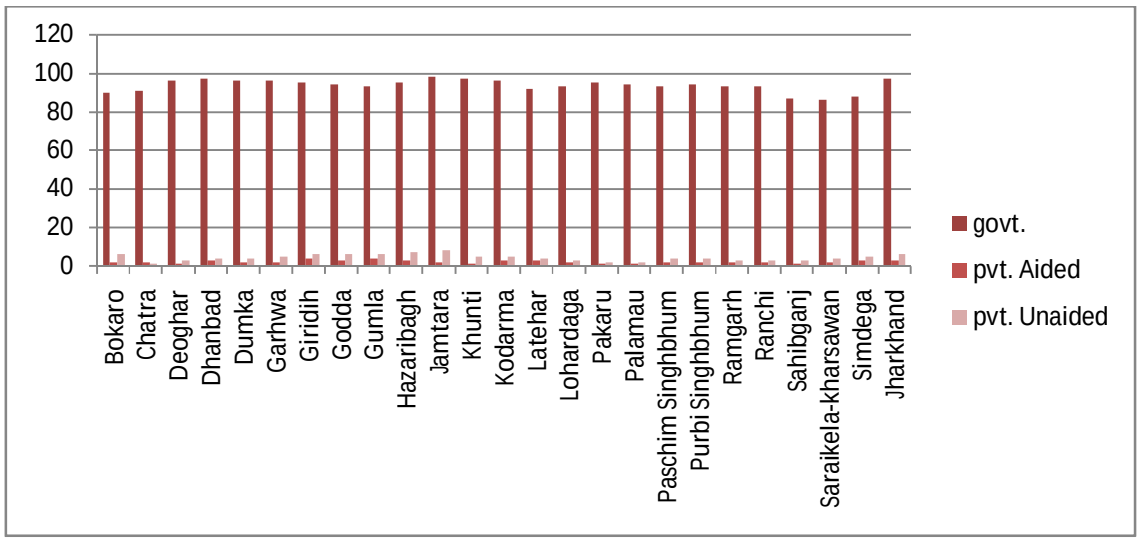
PERCENTAGE OF BOYS IN ENROLMENT AT ELEMENTARY STAGE OF EDUCATION IN GOVERNMENT SCHOOLS, 2008-09



Source: DISE,Ranchi, 2008-09

FIGURE-3.2

PERCENTAGE OF GIRLS IN ENROLMENT AT ELEMENTARY STAGE OF EDUCATION IN GOVERNMENT SCHOOLS, 2008-09



Source: DISE, 2008-09

Figure-3.1 shows the trend representing the change in percentage of boys in different management i.e. government, private aided and private unaided elementary schools during the period of 2008-09 and figure-3.2 shows the change in percentage of girls in different management i.e. government, private aided and private unaided elementary schools during the period of 2008-09. On the one hand, the enrolment is high in government schools in almost all states but on the other hand the share of enrolment is less in private schools in districts in case of boys (figure-3.1). The same situation is found in case of girls (figure-3.2). In Jharkhand, the share of enrolment is high in government schools in case of boys and girls (as shown in figure-3.1 and 3.2).

The figure also shows that the share of girls is slightly more in government schools and share of boys is more in private schools. It is difficult to measure gender and caste disparities in government schools at elementary stage of education.

As shown in figure-3.1 and 3.2, the trends of boys and girls in enrolment are varying in same districts. The percentage of boys in enrolment is high in Lohardaga,Purbi Singhbhum, Bokaro, Chatra and Sahibganj in private schools but the share of private schools are less than the share of government schools in same districts.

TABLE-3.3

DISTRICT WISE PERCENTAGE OF ENROLMENT BY GENDER AND CASTE IN GOVERNMENT PRIMARY SCHOOLS, 2008-09

		Non-SC/OBC			SCEHEDULED CASTES AND TRIBES			OBC		
District	Block	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Dhanbad	Topchachi	17.34	16.55	16.96	71.93	73.67	72.76	10.73	9.78	10.27
Hazaribagh	Barhi	44.84	20.38	33.55	43.52	67.71	54.68	11.64	11.92	11.77
Sahibganj	Sahibganj	23.22	24.94	23.99	69.18	66.54	68.00	7.60	8.52	8.01
Deoghar	Mohapur	13.13	12.74	12.94	78.67	79.47	79.06	8.20	7.80	8.00
Lohardaga	Lohardaga	6.45	6.30	6.38	83.98	85.11	84.53	9.56	8.59	9.10
Bokaro	Bokaro	16.29	15.02	15.68	51.92	53.94	52.88	31.79	31.05	31.44
Giridih	Bengabad	19.99	18.07	19.10	59.94	61.08	60.47	20.07	20.85	20.43
Kodarma	Kodarma	15.71	14.07	14.94	73.00	76.16	74.49	11.29	9.76	10.57

Paschim Singhbhum	Bandgaon	10.97	9.84	10.48	72.15	74.25	73.07	16.88	15.90	16.45
Chatra	Chattar	17.04	16.69	16.87	76.13	75.27	75.73	6.83	8.03	7.40
Ranchi	Kanke	27.59	27.43	27.52	61.00	60.79	60.91	11.41	11.78	11.58
Purbi Singhbhum	Patamda	16.63	16.67	16.65	73.30	73.27	73.29	10.07	10.05	10.06
Pakaru	Maheshpur	7.14	6.74	6.94	81.73	84.27	83.02	11.13	8.99	10.04
Garhwa	Ramkanda	21.13	22.13	21.58	71.15	69.38	70.35	7.72	8.50	8.07
Gumla	Bishunpur	15.47	16.35	15.89	66.57	64.86	65.75	17.96	18.79	18.36
Simdega	Kurdeg	18.93	21.99	20.38	69.36	65.20	67.39	11.70	12.81	12.23
Jamtara	Jamtara	7.98	6.78	6.67	81.56	84.98	83.78	11.89	8.90	10.98
Latehar	Latahar	21.34	22.67	21.00	71.98	69.78	70.98	7.67	8.78	8.89
Ramgarh	Ramgarh	15.9	16.5	15.89	66.58	64.96	65.45	17.76	18.89	18.76
Khunti	Khunti	18.93	21.99	20.38	69.36	65.20	67.39	11.70	12.81	12.23
Godda	Mahagama	7.98	6.78	6.67	81.56	84.98	83.78	11.89	8.90	10.98
Palamu	Daltonganj	21.34	22.67	21.00	71.98	69.78	70.98	7.67	8.78	8.89
Saraikela-Kharsawan	Bandgaon	15.67	16.89	15.76	66.59	64.89	65.68	17.09	18.88	18.99
Dumka	Dumka	16.89	32.18	24.01	74.67	58.14	66.97	8.44	9.69	9.02

Source: DISE 2008-09

Percentage by enrolment of caste and gender shows that general or non sc/OBC are highest in Hazaribagh (33.55), Ranchi (27.52), Dumka (24.01), Sahibganj (23.99) and lowest in Lohardaga (6.38), Godda (6.67), Jamtara (6.67), Pakaru (6.94) in government elementary schools of Jharkhand.

When we talk about the Scheduled caste and Scheduled tribe Lohardaga has highest of 84.53% followed by Jamtara (83.78), Godda (83.78) and pakaru(83.04) showing highest percentage of SC's and ST's in these regions while lowest in Bokaro (52.88), Hazaribagh (54.68), Giridih(60.47) and Ranchi (60.91)

When we analyse OBC's it is highest in Chatra (31.44) followed by Kodarma (20.43), Hazaribagh (18.99), Saraikela Kharsawan (18.76) and lowest in Dhanbad (7.4), Pakaru (8), Godda (8.01) and Sahibganj (8.07)

Overall we see that in government schools Scheduled caste/tribe population are enrolled in larger extent compare to non Sc/ST's and OBC's population. This is due to accessibility in

due respect of fees as private institutions charges high fees and is not affordable to many SC/ST's population.

As shown in Table-3.3, the scheduled castes boys and girls are more enrolled than non SC/OBC or OBC in government schools. The share of non SC/OBC is very less in government schools. The share of girls in enrolment is lower than the boys. The gender disparities are wider among the scheduled caste. the situation is similar for blocks as it I for districts.

TABLE-3.4

BLOCK WISE PERCENTAGE OF ENROLMENT BY GENDER AND CASTE IN PRIVATE PRIMARY SCHOOLS, 2008-09

		Non-SC/OBC			SCEHEDULE CASTE			OBC		
District	Block	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
Dhanbad	Topchachi	72.65	75.43	73.79	14.14	13.25	13.78	13.21	11.32	12.44
Hazaribagh	Barhi	38.40	44.76	41.02	22.45	20.82	21.77	39.16	34.42	37.21
Sahibganj	Sahibganj	89.66	89.58	89.63	4.35	3.97	4.22	5.99	6.45	6.15
Deoghar	Mohapur	74.20	74.44	74.30	15.53	14.19	15.00	10.27	11.37	10.71
Lohardaga	Lohardaga	38.43	39.69	38.86	6.27	6.87	6.48	55.29	53.44	54.66
Bokaro	Bokaro	52.65	56.95	54.37	23.57	19.91	22.11	23.77	23.13	23.52
Giridih	Bengabad	38.40	44.76	41.02	22.45	20.82	21.77	39.16	34.42	37.21
Kodarma	Kodarma	74.20	74.44	74.30	15.53	14.19	15.00	10.27	11.37	10.71
Paschim Singhbhum	Bandgaon	38.43	39.69	38.86	6.27	6.87	6.48	55.29	53.44	54.66
Chatra	Chattar	80.37	81.13	80.68	13.67	13.81	13.73	5.95	5.07	5.60
Ranchi	Kanke	90.58	92.17	91.13	4.13	3.99	4.08	5.29	3.84	4.78
Purbi Singhbhum	Patamda	93.71	93.32	93.56	2.64	3.97	3.14	3.66	2.71	3.30
Pakaru	Maheshpur	68.79	70.95	69.59	19.44	17.14	18.59	11.77	11.91	11.82
Garhwa	Ramkanda	38.40	44.76	41.02	22.45	20.82	21.77	39.16	34.42	37.21
Gumla	Bishunpur	52.65	56.95	54.37	23.57	19.91	22.11	23.77	23.13	23.52
Latehar	Kurdeg	68.76	70.95	69.43	19.76	17.57	18.87	11.78	11.78	11.88
Jamtara	Jamtara	38.34	44.57	41.67	22.98	20.89	21.99	39.87	34.67	37.99

Ramgarh	Latahar	38.43	39.69	38.86	6.27	6.87	6.48	55.29	53.44	54.66
Khunti	Ramgarh	52.65	56.95	54.37	23.57	19.91	22.11	23.77	23.13	23.52
Godda	Khunti	38.40	44.76	41.02	22.45	20.82	21.77	39.16	34.42	37.21
Palamu	Mahagama	74.20	74.44	74.30	15.53	14.19	15.00	10.27	11.37	10.71
Saraikela-Kharsawan	Daltonganj	52.77	56.88	54.98	23.67	19.89	22.87	23.88	23.89	23.99
Simdega	Bandgaon	38.40	44.76	41.02	22.45	20.82	21.77	39.16	34.42	37.21
Dumka	Dumka	95.55	95.33	95.47	2.31	2.17	2.26	2.14	2.50	2.26

Source: DISE, New Delhi 2008-09

In the private elementary schools Dumka has highest share of non-SC's and ST's with 95.47% followed by Purbi Singhbhum(93.56), Ranchi(91.13), Sahibganj (89.63) and lowest in Ramgarh (38.86), PaschimSinghbhum(38.86), Lohardaga (38.82) and Simdega (41.02)

SC/ST's population is highest in private schools of various districts Saraikela (22.87), Bokaro(22.11), Gumla (22.10), Khunti (22.09) and lowest in Dumka (2.26), Purbi Singhbhum(3.14), Ranchi (4.080, Sahibganj (4.22)

When we talk about OBC population in private schools it is highest in Lohardaga (54.66), Paschim Singhbhum (54.64), Ramgarh (54.32), Jamtara (37.99) and lowest in Dumka 92.26), Purbi Singhbhum(3.3), Ranchi (4.78), Chatra(5.6)

As shown in Table-3.4, there is the wide range of disparities in terms of caste and gender at primary stage of education in private schools. The share of the scheduled castes is lower than non –scheduled/OBC. The situation is entirely different from table-3.3. There are two main findings. First the share of girls in enrolment is lower than boys in case of the scheduled castes which means that problem of gender disparities is more prominent among scheduled castes. Second is the share of enrolment is lower in case of the scheduled castes as compared to non scheduled/OBC in private schools. The share of non scheduled/OBC is more in private schools than the government schools and there is less gender disparities in case of non scheduled/OBC.

Thus while comparing the government and private institutions we see that non sc/st population are more in private institutions. whereas sc/st population and while talking about gender, female are enrolled in government schools.

TABLE-3.5

BLOCK WISE PERCENTAGE OF ENROLMENT IN TERMS OF GENDER AND CASTE IN LOCAL BODIES PRIMARY SCHOOLS, 2008-09

		Non-SC/OBC			SCEHEDULED CASTES			OBC		
District	Block	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
Dhanbad	Topchachi	23.88	24.67	24.28	64.96	63.00	63.97	11.16	12.33	11.75
Hazaribagh	Barhi	21.58	23.71	22.54	66.67	66.90	66.77	11.75	9.39	10.69
Sahibganj	Sahibganj	22.25	17.94	20.20	67.83	71.84	69.74	9.92	10.22	10.06
Deoghar	Mohapur	20.27	19.82	20.06	72.81	72.48	72.66	6.92	7.70	7.28
Lohardaga	Lohardaga	4.16	5.16	4.62	89.58	89.27	89.44	6.26	5.56	5.94
Bokaro	Bokaro	16.09	21.27	18.55	56.03	60.63	58.22	27.87	18.10	23.23
Giridih	Bengabad	23.64	23.65	23.65	53.31	60.59	56.23	23.04	15.77	20.13
Kodarma	Kodarma	13.16	14.96	13.99	77.16	74.98	76.15	9.67	10.06	9.85
Paschim Singhbhum	Bandgaon	15.41	16.69	16.00	69.35	71.57	70.38	15.24	11.74	13.62
Chatra	Chattar	12.39	14.74	13.45	73.57	71.67	72.71	14.04	13.59	13.84
Ranchi	Kanke	28.52	27.85	28.21	59.16	59.28	59.22	12.32	12.87	12.58

Purbi Singhbhum	Patamda	16.41	15.89	16.17	74.32	76.11	75.16	9.27	8.00	8.67
Pakaru	Maheshpur	9.24	10.02	9.59	81.19	81.04	81.12	9.58	8.93	9.28
Garhwa	ımkanda	15.17	15.89	15.50	78.53	78.69	78.61	6.30	5.42	5.90
Gumla	Bishunpur	17.09	16.45	16.79	59.07	59.76	59.39	23.84	23.80	23.82
Jamatara	Kurdeg	36.08	34.85	35.48	23.35	23.77	23.56	40.57	41.38	40.97
Latehar	Jamtara	9.28	10.08	9.89	81.89	81.08	81.18	9.59	8.99	9.29
Ramgarh	Latahar	13.34	14.24	13.9	77.16	74.48	76.35	9.67	10.76	9.45
Khunti	Ramgarh	15.41	16.69	16.00	69.35	71.57	70.38	15.24	11.74	13.62
Godda	Khunti	12.29	14.24	13.25	73.27	71.27	72.21	14.24	13.29	13.24
Palamu	Mahagama	28.7	27.83	28.21	59.26	59.18	59.52	12.62	12.77	12.38
Saraikela kharsawan	Daltonganj	13.98	15.81	15.51	78.51	78.61	78.61	6.10	5.22	5.20
Simdega	Bandgaon	18.65	16.38	17.72	70.24	70.62	70.40	11.11	12.99	11.89
Dumka	Dumka	20.79	33.42	27.23	71.63	58.47	64.92	7.58	8.12	7.85

Source: DISE, New Delhi 2008-09

The share of scheduled caste students are more than the share of non scheduled caste and share of girls is high in local bodies schools as compared to private schools as shown in table-3.5. The same situation has been seen in table-3.3 in case of government schools.

TABLE-3.6

BLOCK WISE PERCENTAGE OF ENROLMENT BY GENDER AND CASTE IN GOVERNMENT UPPER-PRIMARY SCHOOLS, 2008-09

		Non-SC/OBC			SCEHEDULE CASTE			OBC		
District	**Block**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
Dhanbad	Topchachi	21.65	22.18	21.91	64.21	62.84	63.55	14.14	14.98	14.54
Hazaribagh	Barhi	35.90	34.90	35.43	53.01	51.25	52.20	11.09	13.86	12.37
Sahibganj	Sahibganj	41.70	41.63	41.67	44.91	47.23	45.98	13.38	11.14	12.35
Latehar	Mohapur	31.50	30.68	31.14	52.61	53.17	52.86	15.88	16.15	16.00
Deoghar	Lohardaga	25.21	21.22	23.39	63.65	65.17	64.34	11.13	13.61	12.27
Lohardaga	Bokaro	6.76	8.57	7.61	78.73	72.31	75.72	14.51	19.12	16.67
Bokaro	Bengabad	21.05	23.33	22.17	47.30	46.62	46.97	31.65	30.04	30.87
Giridih	Kodarma	19.52	18.72	19.15	55.35	56.58	55.93	25.12	24.70	24.92
Kodarma	Bandgaon	20.45	16.85	18.69	65.23	69.06	67.10	14.32	14.09	14.21
Paschim Singhbhum	Chattar	18.41	18.20	18.32	54.47	56.02	55.14	27.12	25.78	26.54
Chatra	Kanke	24.13	22.15	23.27	69.17	70.82	69.89	6.70	7.03	6.84
Ranchi	Patamda	42.73	46.00	44.22	45.06	42.46	43.88	12.21	11.54	11.90
Purbi Singhbhum	Maheshpur	29.93	31.00	30.42	56.64	54.68	55.74	13.43	14.32	13.84
Palamu	Ramkanda	29.42	29.23	29.33	47.93	48.19	48.06	22.65	22.58	22.62
Pakaru	Bishunpur	21.42	21.84	21.61	60.71	59.37	60.10	17.87	18.79	18.29
Garhwa	Kurdeg	20.87	21.33	21.10	73.09	72.90	72.99	6.04	5.77	5.91
Gumla	Jamtara	25.85	23.37	24.76	51.78	53.36	52.48	22.37	23.27	22.76
Jamtara	Latahar	36.51	38.42	37.43	26.51	26.85	26.67	36.98	34.74	35.89
Simdega	Ramgarh	38.65	43.15	40.73	55.29	51.81	53.68	6.07	5.04	5.59
Khunti	Khunti	21.11	21.12	21.31	60.21	59.23	60.11	17.12	18.12	18.11
Ramgarh	Mahagama	20.12	21.11	21.12	73.11	72.12	72.13	6.13	5.13	5.12
Godda	Daltonganj	25.21	23.12	24.41	51.23	53.22	52.21	22.11	23.12	22.12
Saraikela-Kharsawan	Bandgaon	22.09	22.98	22.89	22.90	22.78	22.67	22.67	22.76	22.89
Dumka	Dumka	35.58	41.85	38.16	50.92	42.94	47.63	13.50	15.21	14.20

Table-3.6 provides the share of enrolment in terms of caste and gender at upper primary level of education in government schools. The main findings are that share of enrolment is declining in case of scheduled caste students from primary to upper primary stage of education but share of enrolment is increasing in case of general category from primary to upper primary. Second is that share of girls in enrolment declined from primary to upper primary for the scheduled castes.

TABLE-3.7

BLOCK WISE PERCENTAGE OF ENROLMENT BY GENDER AND CASTE IN PRIVATE UPPER-PRIMARY SCHOOLS, 2008-09

		Non-SC/OBC			SCEHEDULED CASTES/TRIBES			OBC		
Distrct	**Block**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
Dhanbad	Topchachi	72.66	75.80	73.94	13.77	12.70	13.33	13.58	11.50	12.73
Hazaribagh	Barhi	50.88	50.00	50.20	10.00	10.00	10.00	12.00	13.00	12.50
Sahibganj	Sahibganj	91.46	91.48	91.47	2.77	3.05	2.86	5.77	5.47	5.67
Deoghar	Mohapur	75.29	75.45	75.35	14.77	13.49	14.27	9.94	11.06	10.38
Lohardaga	Lohardaga	37.98	36.67	37.57	0.00	0.00	0.00	62.02	63.33	62.43
Bokaro	Bokaro	60.37	63.67	61.69	24.74	20.13	22.90	14.89	16.20	15.41
Giridih	Bengabad	55.33	53.72	54.66	19.00	20.82	19.76	25.67	25.46	25.58
Kodarma	Kodarma	40.00	40.00	40.00	24.74	20.13	22.90	14.89	16.20	15.41
Paschim Singhbhum	Bandgaon	62.60	63.43	62.89	16.80	23.13	19.01	20.60	13.43	18.10
Chatra	Chattar	81.68	82.82	82.14	12.76	12.63	12.71	5.56	4.54	5.15
Ranchi	Kanke	90.58	92.17	91.13	4.13	3.99	4.08	5.29	3.84	4.78
Purbi Singhbhum	Patamda	93.65	93.29	93.51	2.64	3.97	3.15	3.71	2.75	3.34

Pakaru	Maheshpur	70.10	71.87	70.75	17.79	15.84	17.08	12.10	12.29	12.17
Garhwa	Ramkanda	60.37	63.67	61.69	24.74	20.13	22.90	14.89	16.20	15.41
Gumla	Bishunpur	55.33	53.72	54.66	19.00	20.82	19.76	25.67	25.46	25.58
Jamtara	Kurdeg	62.60	63.43	62.89	16.80	23.13	19.01	20.60	13.43	18.10
Simdega	Jamtara	60.37	63.67	61.69	24.74	20.13	22.90	14.89	16.20	15.41
Latehar	Latahar	57.99	56.76	59.76	59.70	54.08	53.65	59.99	59.76	59.65
Khunti	Ramgarh	70.11	71.12	70.13	17.14	15.21	17.22	12.12	12.54	12.23
Ramgarh	Khunti	60.11	63.23	61.44	24.32	20.44	22.54	14.23	16.66	15.21
Godda	Mahagama	55.22	53.34	54.12	19.32	20.23	19.45	25.23	25.55	25.33
Palamu	Daltonganj	62.22	63.22	62.43	16.23	23.43	19.35	20.23	13.65	18.24
Saraikela-Kharsawan	Bandgaon	58.00	57.32	51.23	54.89	54.98	56.89	59.87	59.07	59.89
Dumka	Dumka	95.47	95.25	95.40	2.35	2.21	2.30	2.17	2.54	2.30

Source: DISE, New Delhi 2008-09

Table-3.7 presents the share of enrolment in terms caste and gender at upper primary level of education in private schools.

3.3: Gender Parity Index:

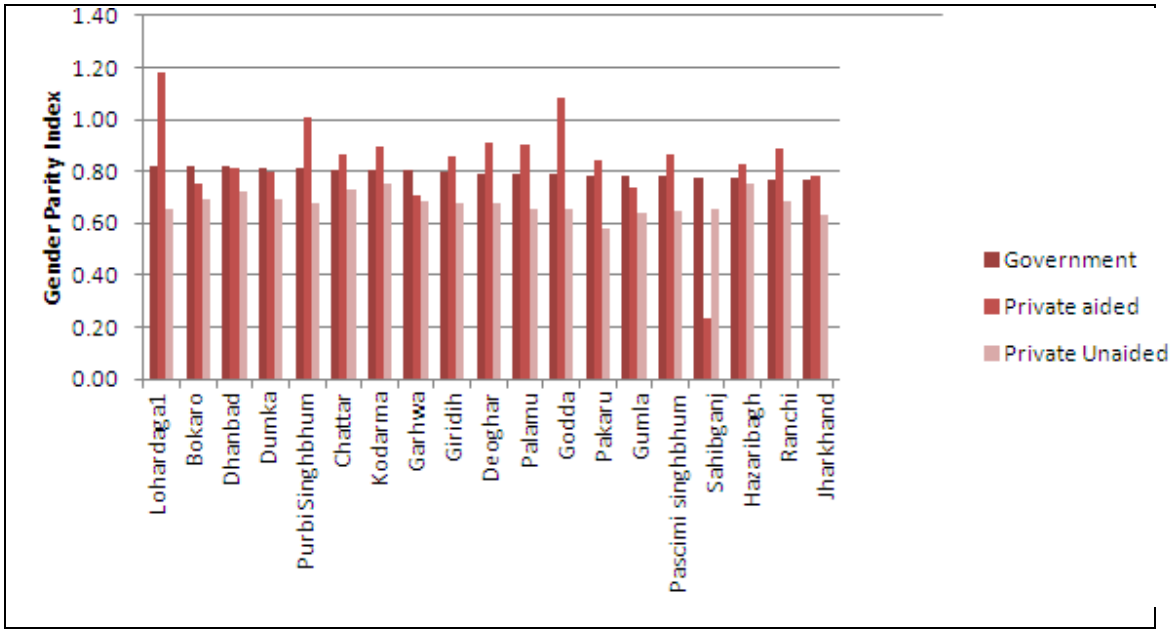
The study also calculated the gender parity. Gender Parity Index is the ratio of total number of girls and total number of boys. Gender disparities are more in Private Unaided Schools than Government and Private Aided Schools at primary stage of education (as shown in figure-3.3). Gender parity index is high in government schools across the districts of Jharkhand but G.P.I is less in government schools as compared to private aided schools. It means that gender disparities are more in government schools than

private aided schools. Kingdon also estimated gender parity index and found that the major reason for this gender inequality was the story within the households.[44]

G.P.I varies from 0.60 to 0.80 almost in every district. Nevertheless, in case of private aided schools, G.P.I is very high which means that girls in enrolment are more than boys in enrolment i.e. Lohardaga (1.18), Jamtara (1.08) and Ranchi (1.06). In case of Private unaided schools, the G.P.I is very less and it is less than 0.80 in entire districts. Similar results are found in upper primary stage of education (see figure-3.4). In case of government schools, gross parity index is 0.80 in Jharkhand. However, in case of private aided schools, G.P.I is less in, Kodarma, Garhwa, Gumla, and Simdega.

FIGURE-3.3

GENDER PARITY AT PRIMARY STAGE OF EDUCATION IN GOVERNMENT, PRIVATE AIDED AND PRIVATE UNAIDED SCHOOLS ACROSS THE DISTRICTS OF JHARKHAND, 2008-09

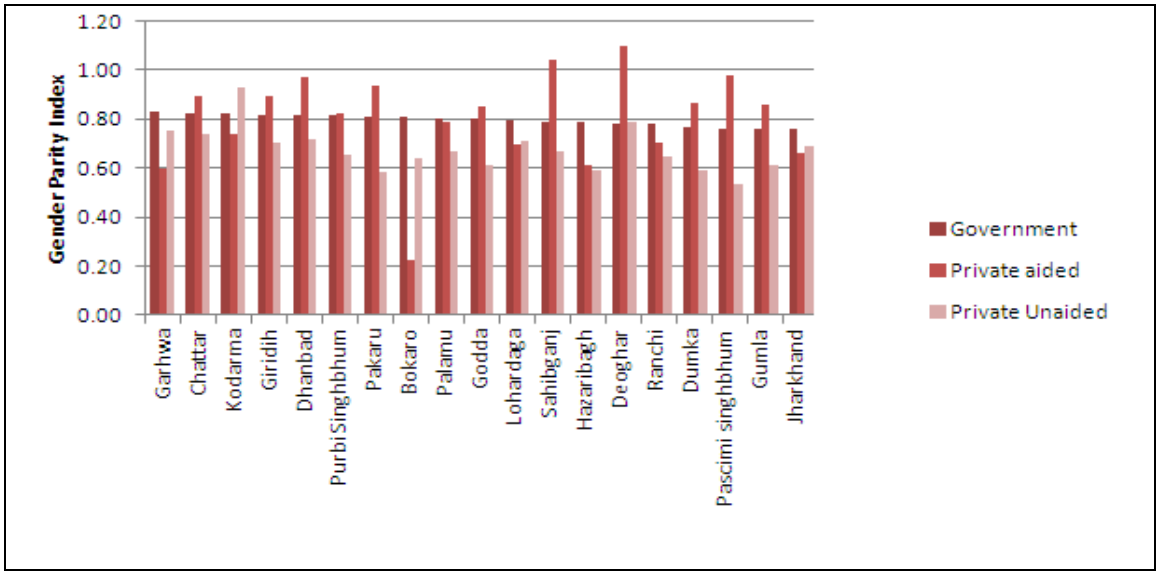


Source: DISE Jharkhand and DISE, New Delhi, 2008-09

[44] Kingdon, G. (2005): "Where has all the Bias Gone? Detecting Gender Bias in the Intra-household Allocation of Educational Expenditure in Rural India"., *Economic Development and Cultural Change*, 53, No. 2: 409-452

FIGURE: 3.4

GENDER PARITY AT UPPER-PRIMARY STAGE OF EDUCATION IN GOVERNMENT, PRIVATE AIDED AND PRIVATE UNAIDED SCHOOLS ACROSS THE DISTRICTS OF JHARKHAND, 2008-09



Source: DISE Jharkhand and DISE, New Delhi, 2008-09

There are various reason about low gender parity index in private unaided schools because the fee structure is very high and uniform is necessary in private unaided schools and poor parents cannot afford to send their children in private unaided schools. Therefore, they prefer to send male child as compared to female child in private unaided school. Sometimes private unaided school is not near the residence and they do not want to send their daughters by cycle or van. Therefore the share of boys in enrolment in private unaided schools is high.

District wise figure-3.3 and 3.4 focused on total (rural and urban) areas of Jharkhand. Gender disparities are found in rural as well as urban area (as shown in figure-3.3 and 3.4), but the gap between males and females is more in rural areas than urban areas.

The gender disparities are less in government schools and local bodies schools than the private schools at primary stage of education (see table-3.4). The gender parity index is highest in (Pakaru) that is 1.03.It means that girls are enrolled more than boys in (Pakaru) in government school. Same situation is found in case of upper primary schools as shown

in table-3.8. Gender parity index is more at upper primary stage of education than primary stage of education.

The gender parity index is again high in government and local bodies schools and low in private schools. At this level, the gender parity index is high in upper primary schools as compared to primary. The share of girls in enrolment is high in government schools because private schools are much costlier than government schools. In rural areas, the large number of population engages with agriculture and they pay greater attention to their occupation rather than education of the children. They cannot afford to send their children in private schools. Still there is inequality between boys and girls. The gender disparities are less at upper primary stage as compared to primary stage of education. The gender disparities are found more in private unaided schools than government and private aided schools across the districts of Jharkhand.

TABLE-3.8

DISTRICT WISE GENDER PARITY INDEX AT PRIMARY AND UPPER PRIMARY STAGE OF EDUCATION IN GOVERNMENT, PRIVATE AND LOCAL BODIES SCHOOLS, 2008-09

	Gender Parity Index at Primary level of Schools			Gender Parity Index at Upper-Primary level of Schools	
District	**Government**	**Private aided**	**Local bodies**	**Government**	**Private aided**
Dhanbad	0.92	0.70	0.60	0.93	0.69
Hazaribagh	0.86	0.7	0.82	0.86	0.2
Sahibganj	0.81	0.53	0.91	0.85	0.49
Jamtara	0.85	0.54	0.9	0.79	0.2
Deoghar	0.93	0.65	0.88	0.84	0.65
Lohardaga	0.93	0.51	0.86	0.88	0.47
Bokaro	0.91	0.66	0.56	0.95	0.67
Giridih	0.86	0.70	0.67	0.88	0.71
Kodarma	0.89	0.57	0.86	0.95	0.59
Paschim Singhbhum	0.78	0.59	0.87	0.77	0.65
Chatra	0.90	0.67	0.82	0.77	0.67
Ranchi	0.85	0.54	0.54	0.83	0.54

Purbi Singhbhum	0.86	0.62	0.89	0.85	0.62
Palamu	0.90	0.6	0.93	0.96	0.61
Pakaru	1.03	0.58	0.83	0.84	0.58
Garhwa	0.82	0.1	0.84	0.96	0.5
Gumla	0.93	0.3	0.87	0.79	0.6
Khunti	0.70	0.68	0.81	0.71	0.68
Godda	0.90	0.67	0.82	0.77	0.67
Latehar	0.71	0.78	0.79	0.75	0.73
Ramgarh	0.85	0.54	0.69	0.83	0.54
Simdega	0.90	0.81	0.54	0.86	0.65
Saraikela-Kharsawan	0.89	0.87	0.88	0.86	0.89
Dumka	0.87	0.55	1.04	0.7	0.55

Source: DISE,Jharkhand and DISE 2008-09,New Delhi.

The main findings of this chapter are: The Gross Enrolment ratio is high in case of boys than girls. GER is declined from primary to upper primary stage of education and this decline is more in case of girls. The share of enrolment is more in government schools than private schools and this share is varying in terms of gender. The boys are more in private schools than girls and girls are slightly more in government schools than boys. This decline of girls in enrolment is more in case of scheduled caste. The share of boys and non-scheduled castes are more enrolled in private schools and the share of scheduled castes and girls are more enrolled in government schools, therefore, this kind of situation is responsible for creating a gap in school education.

CHAPTER - 4

Quantity and Quality of Teachers in Elementary Education

4.1: Introduction

While there has been a continuous increase in the number of schools established at the primary level, thus escalating physical access to schools, the low quality of education provided in these schools remains the critical issue in India's educational system. Low quality of education implies that even those children who had completed five years of primary schooling may not be able to read and write properly because of lack of understanding and ignorance of teachers to teach them.

Educational deprivation in India has two critical dimensions: lack of schools in the region and the low quality of teaching. The latter is the outcome of a combination of factors like lack of school supplies, such as insufficient salaries and incentives for the teachers to teach adequately and weak links between the school system and society due to less availability and scarcity of schools.

In India, there has been a greater emphasis on the terms of more schools or availability of more schools (quantity) than on activities that actually take place inside classroom (quality) such as availability of teachers in adequate number, teachers with good qualification.

Between 1950-51 and 2001-02, the number of primary schools increased nearly three-fold in India (Ministry of Education, GOI), from 209,671 schools to 664,041 schools respectively. Eighty four percent of habitations in India now have a primary school located within a distance of one kilometer hence removing the barrier of covering huge distance to go to schools which also led to dropout of children or absenteeism from school. Of the total schools in 2001-2002, nearly 90% were managed by the government or local bodies. Setting up more schools is critical, especially in those areas that have a greater concentration of tribal's and other backward castes, groups because for them not only physical access but social access is also problematic. Despite this increase in availability of schools, the educational system in India is characterized by inadequacy of

school facilities. Many habitations, around a 100,000, still do not have primary school located within a distance of one kilometer.

High teacher salaries do not seem to provide adequate incentives for better teacher performance according to some analysis such as (Grover and Singh, 2002; World Bank, 1997). Moreover, politically strong teacher unions further weakens accountability of teachers, as they go for strike when their demands are not fulfilled. And the sufferers are the students. Another lacuna in the education system is teacher qualifications.

In rural areas, opening and closing times of schools may differ from the administratively fixed times, depending on the whim and wishes of teachers. Schools may also close down unofficially during certain times of the year – for example during rainy season or excessive summer, or during the agricultural harvesting period (rabi, kharif) when families may use every individual for help. There is other reason like cultural reasons such as the onset of the wedding season or religious periods. This also leads to low and irregular attendance by students who are enrolled.

The caste system also plays a significant role in the quality of teaching imparted to students. Especially in areas where children belong to lower castes in the social hierarchy and teachers belong to upper castes, the social attitudes towards the students are reflected inside schools. This further discourages students to come to schools, and hence compounding further the problem of non-enrolment, low attendance and dropping out of those who are enrolled.

The school system is also surrounded by ‘corruption’. Misuse of school funds is one of the most common forms of corruption, the other form goes with the recruitment of relatives and friends as teacher. There is a market for public employment in India, where positions and designation can be bought by means of social connections and bribes. Even states which are better off in terms of physical infrastructure and other inputs of teaching/learning, weak accountability affects the system, negatively influencing learning outcomes, the ultimate aim of education. Steps for improving the management of the system of various schools have been taken in some states via administrative decentralization that is by giving control of local schools or schools at lower hierarchy to village level bodies such as the gram panchayats and also leading to the formation of

village education committees. Thus these reforms have increased physical access to schools; but quality-wise this new system does not depart much from the old system and is characterized by the same set of practices that account for malfunctioning of the public educational system. Moreover, these educational reforms, helps in focusing on 'alternative schools' that create a second track school system which can lead to increased enrolment in the short run.

Quantity and quality are important aspects of education and it is also considered as important attribute of education. In fact it is said that education system depends upon the quantity and quality of schools. There is no contradiction between the demands for quantity and those for the quality. In general, the Quality of education is an umbrella concept[45], which includes availability of teachers in school, pupil- teacher ratio, teachers per school, trained teachers etc. and availability of infrastructure such as building, drinking water facility, electricity facility, number of class room, number of blackboard and books, number of computers and toilet facility etc. in rural areas the scarcity of teachers are to greater limit than urban areas. There are cases where schools function without teachers and trained teacher are scarce. These types of problems are found in rural areas. There are huge disparities in rural and urban areas. In the 3rd chapter, it was observed that the share of enrolment in private schools was growing substantially. A large percentage of children attended private schools in comparison to the government schools. The quality of education is good in private schools because they have large number of teachers and better availability of physical infrastructure, and hence the quality and quantity both are in good conditions and that affect the enrolment in private schools

Duraisamy[46] found that the government and Private Aided schools spent less on school infrastructure as compared to Private Unaided schools. The problem of the single teacher schools among the government schools, there is high ratio of temporary and untrained teachers in private schools. The salaries of teachers are high in govt. schools, but the absenteeism is also high in government school. The numbers of working days are much lower in government schools.

[45] Raza Moonis,Ahmad A. and Nuna Schell C., (1990). School Education in India (The Regional Dimension),NIEPA, New Delhi,1990

[46]Duraisamy Malathy (1996): "Demand for & access to child school in T.N", UNDP studies on Development.

This chapter examines the following teacher-related indicators:

1. Number of Male/Female Teachers by School Management.
2. Number of Teachers by number of Schools according to different Management at elementary level of education across the districts of Jharkhand.
3. Number of teachers per school in primary and upper primary stages of education.
4. District wise, - pupil teacher ratio in government and private schools at primary and upper primary stage of education.
5. Percentage of Teachers by Academic Qualification in government schools across the districts of Jharkhand.
6. Percentage of Teachers by Professional Qualification in government schools across the districts of Jharkhand.

TABLE-4.1

NUMBER OF MALE/FEMALE TEACHERS BY SCHOOL MANAGEMENT

NUMBER OF MALE/FEMALE TEACHERS BY SCHOOL MANAGEMENT						
	Number of Teachers in Government Schools		Number of Teachers in Private Aided Schools		Number of Teachers in Private Unaided Schools	
Districts	Male	Female	Male	Female	Male	Female
Dhanbad	1817	3363	98	264	233	1485
Hazaribagh	580	749	7	21	1	4
Sahibganj	1474	2273	41	133	332	1405
Deoghar	1010	1432	15	79	196	562
Lohardaga	2720	2654	21	140	398	1290
Bokaro	2798	3772	117	225	484	1694
Giridih	2960	3623	149	234	251	814
Kodarma	1846	3703	158	317	20	178
Paschim Singhbhu	1046	1736	36	123	2	37

m						
Chatra	2390	4650	140	470	530	2905
Ranchi	1231	1201	14	40	124	294
Purbi Singhbhum	1344	1765	24	101	193	723
Pakaur	1410	1524	12	21	119	712
Garhwa	1032	1178	64	57	3	6
Gumla	1930	3450	50	180	5	20
Godda	1922	2190	55	125	205	680
Dumka	1248	1570	15	57	170	533
Jamtara	1040	1730	30	113	2	17
simdega	2397	4659	149	475	535	3300
Ramgarh	1239	1248	12	50	134	394
Khunti	1340	1760	20	91	190	713
Latehar	1430	1544	10	29	209	752
Palamu	1938	3457	53	189	1	27
Seraikela - Kharsawn	1929	2197	61	130	213	691
Jharkhand	40071	57388	1351	3664	4550	19236

Source: DISE 2008-09, New Delhi

As shown in Table-4.1, the number of female teachers is more than the number of male teachers. In case of Jharkhand, same situation is found in school under different types of managements. In government schools, the number of female teachers is more than the

number of male teachers with exceptions of Lohardaga and Ranchi. In case of private aided and private unaided schools, number of female teachers is more than number of male teachers in each district. It also represents that there is no gender bias in terms of number of teachers in government, private aided and private unaided schools across the districts of Jharkhand. There the number of female teachers in primary and upper primary schools was much larger than that of male teachers.

TABLE-4.2

NUMBER OF TEACHERS BY NUMBER OF SCHOOLS:

Districts	Number of Teachers					Total Government Schools
	0	1	2	3	>3	
Dhanbad	9	90	283	186	642	1210
Hazaribagh	20	13	60	39	172	304
Sahibganj	2	16	80	104	436	638
Deoghar	14	6	76	55	259	410
Lohardaga	88	118	536	209	577	1528
Bokaro	35	234	781	306	670	2026
Giridih	79	152	679	211	593	1714
Kodarma	47	72	418	235	643	1415
Paschim Singhbhum	61	33	244	125	329	792
Chatra	41	81	379	219	818	1538
Ranchi	3	8	63	99	295	468
Purbi Singhbhum	18	28	119	78	371	616
Pakaur	15	21	77	87	345	541
Garhwa	35	47	225	119	254	655
Gumla	92	123	415	227	509	1359
Palamu	39	76	311	110	229	775
Godda	28	45	216	210	515	1054
Ramgarh	28	25	117	73	368	611
Khunti	16	23	71	81	347	538
Latehar	31	37	227	108	244	647

Simdega	89	138	411	225	503	1366
Jamtara	30	68	304	103	255	760
Seraikela-Kharsawn	39	58	245	188	493	1023
Dumka	47	52	165	132	370	766
Jharkhand	906	1564	6502	3529	10237	22754

Source: DISE, 2008-09 New Delhi

Number of teachers is an important factor in deciding human infrastructure in school and is one of the factor or determinant on which GER and dropout depends. The relationship is shown in later chapter. There are 906 schools in Jharkhand which does not have even a single teacher, 1564 schools have only single teachers, 6502 schools have two teachers and 3529 schools have three teachers. and 10237 schools have more than three teachers. There are some districts in which large number of schools does not have single teachers also, like Gumla (92 schools), Lohardaga (88 schools), Giridih (79 schools), Paschim Singhbhum (61 schools), Kodarma and Dumka (47 schools). There are some districts which have less number of schools having no teacher, like Sahibganj (2 schools), Ranchi(3 schools), Dhanbad (9 schools), Deoghar (14 schools), Pakaur (15 schools), Hazaribagh (20 schools), Purbi Singhbhum (18 schools), Bokaro(35 schools), Chatra (41 schools) etc. schools with more than three teachers, the situation is different. There are huge variations found across the districts having more than 3 teachers such as Dhanbad (642 schools),Lohardaga (577 schools), Bokaro (670 schools),Kodarma (643), Chatra (818 schools), Gumla (503 schools), Sahibganj (436 schools) have more than three teachers. The situation is different in other districts such as Hazaribagh (172 schools), Deoghar (259 schools),

TABLE 4.3

BLOCK WISE THE NUMBER OF TEACHERS BY NUMBER OF SCHOOLS AT PRIMARY STAGE OF EDUCATION IN GOVERNMENT SCHOOLS, 2008-09

Primary Government School							
			Number of Teachers				
District	Block	0	1	2	3	>3	Total Schools
Dhanbad	Topchachi	0	2	19	6	22	49
Hazaribagh	Barhi	0	0	0	18	11	29
Sahibganj	Sahibganj	0	0	5	3	11	19
Seraikela-kharsawan	Bandgaon	0	0	14	17	8	39
Deoghar	Mohapur	3	11	17	11	35	77
Lohardaga	Lohardaga	1	3	41	8	10	63
Bokaro	Bokaro	12	20	43	33	40	148
Giridih	Bengabad	1	5	27	21	21	75
Kodarma	Kodarma	10	5	4	15	10	44
Pashim Singhbhum	Bandgaon	2	2	15	15	24	58
Chattar	Chattar	1	6	9	17	23	56
Ranchi	Kanke	1	1	6	5	42	55
Purbi Singhbhum	Patamda	4	1	5	6	25	41
Palamu	Daltonganj	0	7	37	32	36	112
Pakaur	Maheshpur	3	5	3	6	17	34
Garhwa	Ramkanda	5	8	23	13	16	65
Gumla	Bishunpur	0	0	6	7	11	24
Simdega	Kurdeg	3	2	5	6	9	21
Jamtara	Jamtara	6	4	8	9	5	15
Latehar	Latahar	7	9	9	11	9	12
Khunti	Khunti	6	8	7	12	8	11
Ramgarh	Ramgarh	0	0	13	12	9	34
Godda	Mahagama	1	1	2	1	2	7
Dumka	Dumka	2	1	8	3	12	26

Table 4.3 shows Block wise the number of teachers by number of schools at Primary stage of education in government schools,

TABLE-4.4

BLOCK WISE THE NUMBER OF TEACHERS BY NUMBER OF SCHOOLS AT UPPER PRIMARY STAGE OF EDUCATION IN GOVERNMENT SCHOOLS, 2008-09

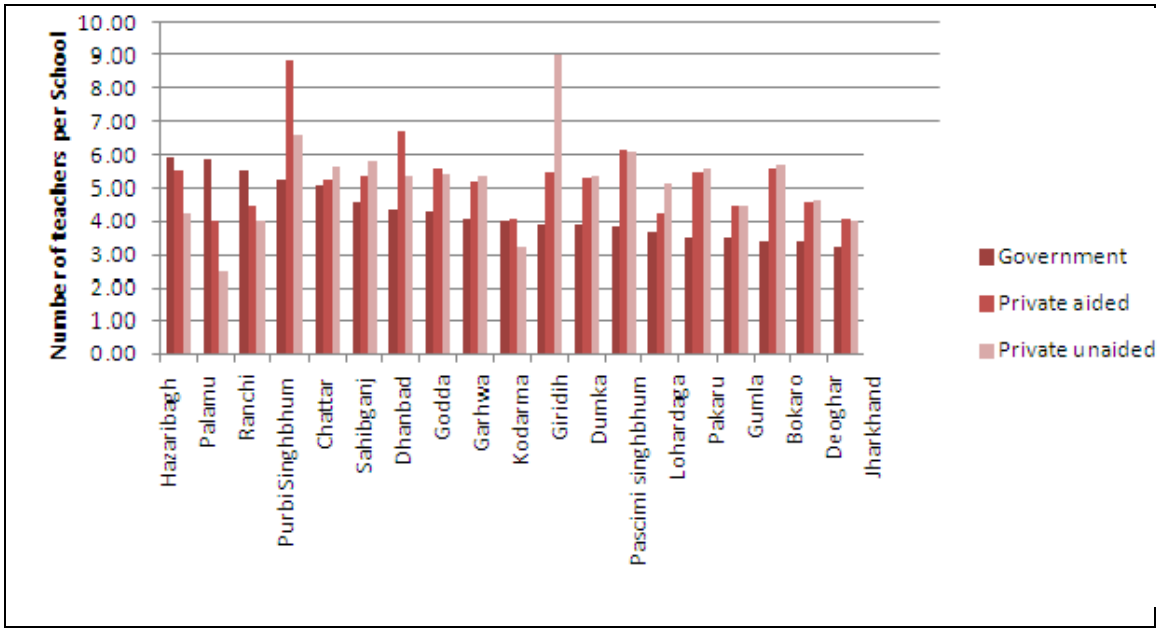
Upper Primary Government School							
		Number of Teachers					
District	Block	0	1	2	3	>3	Total Schools
Dhanbad	Topchachi	0	1	5	3	20	29
Hazaribagh	Barhi	0	0	0	3	25	28
Sahibganj	Sahibganj	0	0	0	3	23	26
Seraikela kharsawan	Bandgaon	8	0	0	1	21	30
Deoghar	Mohapur	3	7	9	9	43	76
Lohardaga	Lohardaga	2	0	0	3	29	34
Bokaro	Bokaro	0	0	0	0	35	35
Giridih	Bengabad	1	1	2	1	37	42
Kodarma	Kodarma	2	1	10	9	7	29
Pashim Singhbhum	Bandgaon	6	1	9	8	22	46
Chattar	Chattar	7	5	6	15	44	77
Ranchi	Kanke	4	10	14	10	18	56
Purbi Singhbhum	Patamda	2	2	0	2	40	46
Palamu	Daltonganj	1	0	0	0	22	56
Pakaur	Maheshpur	0	0	0	2	36	38
Garhwa	Ramkanda	0	2	7	4	38	51
Gumla	Bishunpur	3	6	1	1	25	36
Simdega	Kurdeg	3	5	2	3	16	25
Jamtara	Jamtara	2	6	2	5	15	27
Latehar	Latahar	4	7	3	8	14	24
Khunti	Khunti	2	5	3	6	12	28
Ramgarh	Ramgarh	3	0	0	1	41	45
Godda	Mahagama	0	0	0	2	3	5
Dumka	Dumka	2	2	4	4	11	23

Teachers per School:

As noted above a large number of schools are having single teacher in government schools. The study also describes the comparative analysis between government and private schools at primary and upper primary stage of education in 2008-09. Therefore, the study estimated the number of teachers per school at primary and upper primary stage of education in different type of management.

FIGURE-4.1

NUMBER OF TEACHERS IN PER SCHOOL AT ELEMENTARY LEVEL OF EDUCATION IN GOVERNMENT, PRIVATE AIDED AND PRIVATE UNAIDED



The number of teachers per schools is high in private aided and private unaided schools than government schools as shown in figure-4.1.This situation has been seen at elementary level of education. In Hazaribagh and Palamu the number of teachers per school is higher in case of government schools. The number of schools increased in Jharkhand but number of teachers are not increasing as fast as number of schools. In case of private aided and unaided schools, number of teachers is increasing as fast as number of school. In case of private aided schools, the number of teachers is more in Deoghar, Kodarma, Chatra, Paschim Singhbhum, Purbi Singhbhum, Garhwa, Gumla and Godda. In

case of private unaided schools, there are more teachers in Dhanbad, Sahibganj, Giridih, Ranchi and Dumka. There are nine teachers per school in private unaided schools and this is highest ratio in case of private unaided schools. There are 8.9 teachers per school in case of private aided schools. But the highest ratio of government schools is 6.0 that is far less than private aided or unaided schools.

Table-4.5 shows the district wise number of teachers having per school at primary and upper primary stage of education. This table estimates the variation from primary to upper primary schools at primary and upper primary stage of education.

In table-4.5, in private schools has large number of teachers per school as compared to government and local bodies schools. The results are same as observed for the districts. District wise analysis was only at elementary level of education but district wise shows the variations from primary to upper primary schools. The number of teachers is more in upper primary stage of education as compared to primary stage of education. The highest ratio is 10.11 in case of private schools, 5.18 in case of government schools and 4.00 in case of local bodies schools at primary level. The highest ratio is 16.00 in private schools and 9.43 in government schools at upper primary stage of education. There are huge disparities at primary stage of education in government, private and local bodies schools.

In government schools, the number of teachers per schools increased from primary to upper primary stage of education. The same situation is found in private schools. The number of teachers is more in upper-primary schools than primary schools. Number of teachers are having in per school more in private schools and there huge disparities in government and private schools. But these disparities have begun to decline at upper primary stage of education.

TABLE-4.5

NUMBER OF TEACHERS PER SCHOOL IN PRIMARY AND UPPER PRIMARY STAGES OF EDUCATION, 2008-09

	Number of Teachers in Per School (Primary)			Number of Teachers in Per School (Upper Primary)	
District	Govt.	Private	Local bodies	Govt.	Private
Dhanbad	3.29	10.21	2.7	6.14	6.67
Hazaribagh	3.34	1.2	4	6.32	1.4
Sahibganj	3.79	20.13	3.71	8.92	29
Deoghar	5.18	10.95	3.32	9.43	10.11
Lohardaga	2.6	4.5	2.45	5.65	10
Bokaro	2.28	6.04	2.29	7.43	8
Giridih	3.09	7.4	1.93	7.2	15
Kodarma	2.53	1.3	2.33	4.32	1.3
Paschim Singhbhum	3.26	1.4	2.25	3.61	1.2
Chatra	3.25	10.66	2.81	3.61	6.62
Ranchi	5.04	17.67	3.83	6.11	1.5
Purbi Singhbhum	3.83	5.1	2.33	7.65	1.6
Pakaur	3.15	3.91	3.8	8.13	10
Garhwa	2.62	1.2	2.16	4.84	1.2
Gumla	4.67	1.2	2.84	6.03	1.3
Godda	2.56	1.7	3.66	5.6	1.6
Jamtara	2.18	6.02	2.21	7.41	7.8
Khunti	3.12	7.8	1.97	7.4	10
Simdega	2.59	1.9	2.39	4.39	1.9
Latehar	3.21	1.2	2.23	3.64	1.4
Seraikela-kharsawn	3.27	10.67	2.83	3.64	6.67
Ramgarh	3.11	7.1	1.91	7.1	11
Palamu	2.57	1.6	2.38	4.38	1.8
Dumka	1.54	6.25	3.09	3.61	10

PUPIL TEACHER RATIO:

Primary school pupil-teacher ratio is the number of pupils enrolled in primary school divided by the number of primary school teachers.

Pupil teacher ratio at primary and upper primary schools has been a vital aspect that affects performance of teachers.PTR is calculated on the basis of number of students divided by number of teacher. The high PTR shows that there is less number of teachers as compared to number of students and low PTR shows that there is sufficient number of teachers as compared to number of students. Figure - 4.2 shows the PTR at elementary stage of education in government and private schools across the district of Jharkhand in 2008-09.

The results shows that pupil teacher is lower in private unaided schools than private aided and government schools except Pachim Singhbhum, Garhwa and Gumla.PTR is very high in private aided schools in Hazaribagh and Dumka. The pupil teacher ratio is high in government schools and it is very high in Sahibganj, Gumla and Godda.

There are inter-district variations in case of PTR. In some district PTR is high in government schools and others have high PTR in private aided or unaided schools. Overall situation of Jharkhand is that PTR is low in private unaided schools and high in government and private aided schools in elementary schools. There are various reasons for low PTR in private unaided schools at elementary level of education across the district of Jharkhand. There is large number of teachers in private unaided schools. De, Majumdar, Samson, Nornoha also estimated that PTR is low in private schools because many of teachers were on the temporary basis which could lead the higher teacher accountably.[47]

[47] De Anuradha, Majumdar Manabi, Noronha and Sansom, (2002) "Private Schools and Universal Elementary Education" in Govinda (ed) "*India Education Report*" Oxford Publications.

In case of Jharkhand, Pupil teacher is lower in private unaided schools (29.08) than the government schools (42.35) and private aided schools (42.00). Therefore, the number shows that the shortage of teachers is found in government and private aided schools.

FIGURE-4.2

PTR AT ELEMENTARY LEVEL OF EDUCATION IN GOVERNMENT, PRIVATE AIDED AND PRIVATE UNAIDED SCHOOLS, 2008-09.

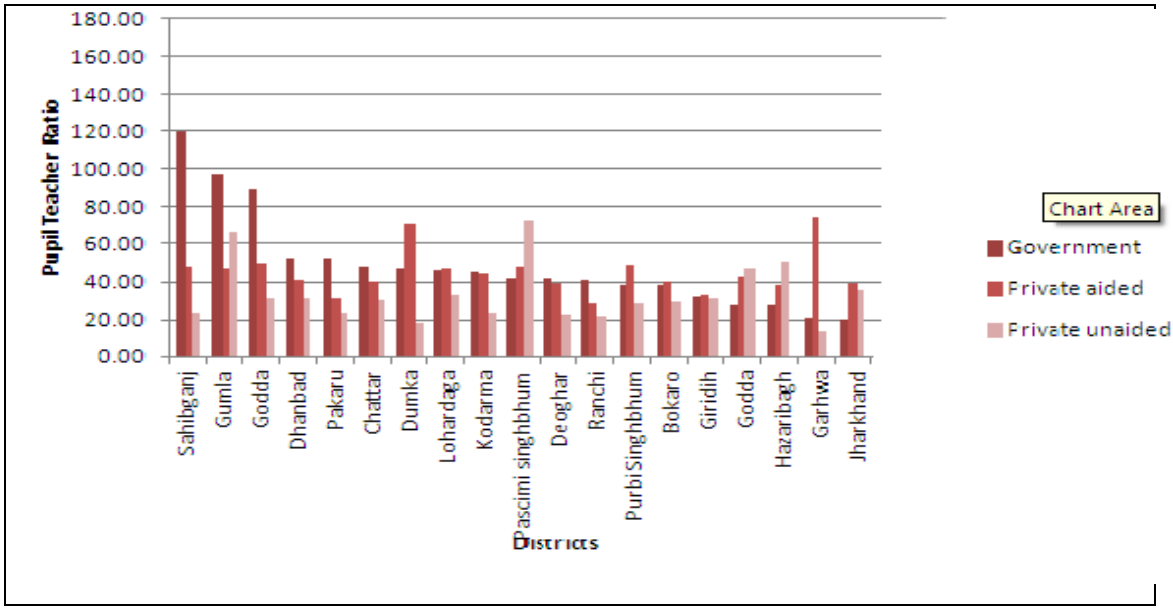


Table-4.4 shows that district wise pupil teacher ratio at primary stage of education in government, private and local bodies schools in 2008-09. In some districts,. District wise study shows that pupil teacher ratio is almost constant and nearly equal in almost all districts in local bodies schools and it is low in private schools in some districts but it is high in government schools almost in entire districts except (Bokaro), (Giridih) and (Saraikela-Kharsawan).There are inter district variations but situation is almost same. PTR is very high in government schools as shown in table-4.5

The pupil teacher ratio is high in case of private schools except in Hazaribagh, Latehar, Kodarma, Paschim Singhbhum, Garhwa, Godda, Gumla and Saraikela Kharsawan.

TABLE-4.6

DISTRICT WISE PTR AT PRIMARY AND UPPER PRIMARY STAGE OF EDUCATION IN GOVERNMENT, PRIVATE AND LOCAL BODIES SCHOOLS, 2008-09.

	PTR at Primary Schools			PTR at Upper Primary Schools	
District	Govt.	Private	Local bodies	Govt.	Private
Dhanbad	32.4	27.31	23.95	29.31	29.09
Hazaribagh	52.3	2.1	29.53	28.66	2.1
Sahibganj	40.93	14.43	41.49	12.7	26.58
Latehar	20.66	1.3	19.45	18.1	1.2
Deoghar	36.1	23.29	30.27	20.09	23.53
Lohardaga	34.79	21.44	28.31	29.72	18.9
Bokaro	24.5	29.73	20.72	31.76	35.44
Giridih	21.9	22.85	15.61	16.48	32.82
Kodarma	32.81	1.4	21.91	29.2	1.5
Paschim Singhbhum	25.5	1.6	22.38	29.04	1.3
Chatra	36.92	31.65	26.66	24.13	27.29
Ranchi	40.6	11.7	32.61	32.89	12.16
Purbi Singhbhum	37.99	102.25	30.68	16.94	114.38
Mohali	24.48	4.58	15.32	19.12	4.45
Pakaur	46.63	47.93	42.52	16.15	56.75
Garhwa	32.3	1.2	21.72	22.23	1.2
Gumla	37.36	1.7	25.71	19.28	1.9
Palamu	27.78	34.41	23.76	8.99	26.48
Godda	61.33	1.5	39	38.07	1.6
Dumka	88.1	104.24	33.37	42.46	128.15
Ramgarh	36.21	31.33	26.43	24.25	27.54
Simdega	40.23	11.23	32.21	32.43	12.23
Jamtara	37.12	23.54	30.54	16.54	114.54
Seraikela-Kharsawn	24.44	4.34	15.34	19.34	4.44
Source:DISE Jharkhand, DISE New Delhi-2008-09					

Qualification of Teachers:

It is very difficult to identify specific teacher characteristics that predict effectiveness, particularly in terms of improved student achievement. This is a fundamental and essential issue about the policy discussions which would suggest the essential qualities

and qualifications required to promote aspiring teachers, and to distribute teachers across different types of schools and classrooms to achieve equity and adequacy in educational outcomes and student's performance. A teacher quality is a powerful predictor of student performance. The effects of well prepared teachers on student achievement can overshadow student background factors like poverty, language background, and minority status. Further, the measures of teacher quality are more strongly related to student achievement than other kinds of investments, including reduced class sizes, overall spending on education, and teacher salaries[48]

It is very important variable. But we have data only for government schools across the districts of Jharkhand. Therefore, table-4.7 and 4.8 estimates the percentage of teacher's qualification in terms of academic and professional qualification.

TABLE-4.7

PERCENTAGE OF TEACHERS BY ACADEMIC QUALIFICATION IN GOVERNMENT SCHOOLS ACROSS THE DISTRICTS OF JHARKHAND, 2008-09

	Academic Qualification							
District	Below Secondary	Secondary	H.Secondary	Graduate	Post Graduate	M.Phil or Ph.d.	Others	Total Teachers
Dhanbad	13.96	14.59	11.93	31.76	26.68	0.69	0.39	5180
Hazaribagh	11.36	11.44	5.49	31.08	38.75	1.13	0.75	1329
Sahibganj	4.99	10.22	7.85	37.55	37.87	1.09	0.43	3747
Latehar	6.95	8.93	6.65	34.94	41.14	0.99	0.4	2015
Deoghar	7.25	11.06	9.17	32.39	37.96	0.86	1.31	2442
Lohardaga	7.07	9.53	10.89	38.15	33.38	0.54	0.45	5374
Bokaro	3.7	20.24	16.1	34.96	23.52	0.5	0.97	6570
Giridih	4.33	17.24	11.06	36.31	30.15	0.52	0.39	6583
Kodarma	6.49	11.3	9.21	35.72	36.31	0.63	0.34	5549
Paschim Singhbhum	8.88	13.12	11.39	37.56	27.93	0.72	0.4	2782

[48] James.H Strong (2002)- "Qualities of effective teachers" Association for Supervision & Curriculum Deve.

Chatra	11.56	8.3	7.23	32.95	38.75	0.81	0.4	7056
Ranchi	4.78	10.79	10.26	33.39	39.84	0.69	0.25	2447
Purbi Singhbhum	5.92	15.09	9.84	37.73	29.91	0.61	0.9	3109
Mohali	9.23	9.31	8.88	33.19	37.82	1.18	0.39	2287
Pakaur	1.28	13.28	8.24	38.4	37.22	0.87	0.17	2974
Garhwa	1.72	15.22	9.01	39.71	33.34	0.56	0.02	2216
Gumla	2.12	10.05	8.17	31.12	46.02	1.67	0.23	5375
Palamu	5.2	13.72	11.82	32.82	34.92	0.62	0.52	2632
Godda	3.08	12.24	9.43	31.92	41.47	1.28	0.58	4126
Dumka	12.03	12.92	15.19	34.1	25.05	0.46	0.25	2818
Jamtara	1.22	13.23	8.22	38.2	37.21	0.65	0.19	2986
Ramgarh	1.95	15.29	9.05	39.73	33.39	0.54	0.05	2210
Simdega	2.26	10.01	8.27	31.18	46.08	1.87	0.33	5395
Seraikela-Kharsawr	5.3	13.76	11.85	32.89	34.98	0.69	0.53	2624
Jharkhand	5.97	12.54	9.81	34.92	35.41	0.86	0.45	37423

As shown in table-4.7, the government school teachers are well qualified and the more percentage of teachers is found under the categories of graduate and post graduate teachers. In case of M.phil degree, there are very less percentage of teachers. In Jharkhand, 5.97 percent teachers are below secondary level of education,12.54 teachers are secondary level of education, 9.81 percent of teachers are higher secondary level of education, 34.92 percent teachers are graduate level of education, 35.81 percent teachers are post graduate level of education and 0.86 percent teachers M.Phil or PH.D level of education. With other type of qualifications 0.45% of teachers exist. There is not much variation found across the districts of Jharkhand.

TABLE-4.8

PERCENTAGE OF TEACHERS BY PROFESSIONAL QUALIFICATION IN GOVERNMENT SCHOOLS ACROSS THE DISTRICTS OF JHARKHAND, 2008-09

	Professional Qualification						
District	JV,JBT or Equivalent	SV,CTSBT OR Equivalent	LT,BT,B.Ed or Equivalent	M.Ed. Or Equivalent	Others	None	Total Teachers
Dhanbad	42.22	5.5	40	2.55	5.93	3.8	5180
Hazaribagh	28.97	6.7	53.35	3.76	3.67	5.04	1329
Sahibganj	28.21	5.28	55.3	4.67	4.67	3.84	3747
Latehar	29.73	3.92	51.02	4.37	4.37	5.01	2015
Deoghar	38.08	3.44	47.75	3.77	3.77	4.87	2442
Lohardaga	37.16	4.67	49.44	3.48	3.48	3.35	5374
Bokaro	43.76	5.37	41	1.86	1.86	5.62	6570
Giridih	32.66	6.17	51.42	2.26	2.26	4.33	6583
Kodarma	26.83	5.64	54.08	3.96	3.96	4.9	5549
Paschim Singhbhum	37.49	5.39	45	3.52	3.52	5.07	2782
Chatra	26.98	4.31	55.9	4.58	4.58	5.67	7056
Ranchi	35.72	4.62	47	4.05	4.05	5.84	2447
Purbi Singhbhum	33.29	5.37	49.79	3.02	3.02	5.15	3109
Mohali	34.28	4.94	47.92	5.47	5.47	4.68	2287
Pakaur	26.8	4.71	59.41	3.26	3.26	3.93	2974
Garhwa	26.88	6.11	55.2	3.08	3.08	3.89	2210
Gumla	27.34	3.93	55.98	6.06	6.06	4.3	5395
Palamu	36.36	7.85	45.2	4.23	4.23	3.77	2624
Godda	28.77	6.11	52.13	4.75	4.7	5.9	4126

					5	1	
Jamtara	34.11	4.23	47.22	5.12	5.23	4.32	2293
Ramgarh	26.21	4.21	59.12	3.12	3.33	3.43	2979
Simdega	26.65	6.45	55.45	3.54	3.54	3.45	2244
Seraikela-Kharsawn	27.45	3.45	55.54	6.45	6.59	4.56	5356
Dumka	41.63	5.07	37.51	2.34	2.34	5.25	2818
Jharkhand	32.40	5.14	50.49	3.89	4.04	4.58	3729

As shown in table-4.8, the government schools have teachers with professional qualification such as JBT/SV/CTSBT/B.ED/M.ED. More number of teachers has JBT/B.ED degree. In Jharkhand, 32.4% teachers have JBT/JV, 5.14% teachers have SV/CTSBT, 50.49% teachers have B.ED, and 3.89% teachers have M.ED.

Duraismay [49]studied cost, quality and outcomes of primary schooling in rural Tamil Nadu and came to the conclusion that the institutional cost of schooling was highest in the aided schools. The teachers in government schools were more educated and experienced. But students of private schools performed far better than students of government and government aided schools.

4.2: Conclusion:

The main findings of this chapter are: numbers of female teachers are high than number of male teachers in government schools. The number of female teachers is more than the number of male teachers (Table-4.1). In case of Jharkhand, same situation is found in different type of management. In government schools, the number of female teachers is more than the number of male teachers except Lohardaga and Ranchi. In case of Private aided and Private Unaided schools, number of female teachers is more than number of

[49] Duraisamy Malathy (1996): "Demand for & access to child school in T.N", UNDP studies on Development.

male teachers in each district. The study estimate the number of male/female teachers in government schools through the field survey as shown in Table-4.2 and found that there is more female teachers than male teachers.

The number of teachers in per schools is more in private aided and private unaided schools and then government schools (figure-4.1).This situation has been seen at elementary level of education. The number of schools increased in Jharkhand but number of teachers are not increasing as fast as number of schools. In case of private aided and unaided schools, number of teachers is increasing as fast as number of school.
The number of teachers are more in private schools than the government schools (Table-4.5). District wise analysis was only at elementary level of education but district wise shows the variations from primary to upper primary schools. The number of teachers is more in upper primary stage of education as compared to primary stage of education. The highest ratio is 10.11 in case of private schools, 5.18 in case of government schools and 4.00 in case of local bodies schools at primary level. The highest ratio is 16.00 in private schools and 9.43 in government schools at upper primary stage of education. There are huge disparities at primary stage of education in government, private and local bodies schools. In government schools, the number of teachers is having in per schools increased from primary to upper primary stage of education.

The same situation is found in private schools. The results shows that pupil teacher is lower in private unaided schools than private aided and government schools except Paschim Singhbhm, Garhwa and Gumla.PTR is very high in private aided schools in Hazaribagh and Dumka. The pupil teacher ratio is high in government schools and it is very high in Sahibganj, Gumla and Godda. There are inter-district variations in case of PTR. In some district PTR is high in government schools and others have high PTR in private aided or unaided schools. Overall situation of Jharkhand is that PTR is low in private unaided schools and high in government and private aided schools in elementary schools. There are various reasons for low PTR in private unaided schools at elementary level of education across the district of Jharkhand. There is large number of teachers in private unaided schools. District wise study shows that pupil teacher ratio is low in local bodies schools and it is also low in private schools in some districts Table-4.6 shows that the situation is different in case of upper primary schools. Teachers of the government schools are well qualified (table-4.7 and 4.8) in terms to qualification and professional qualification.

CHAPTER-5

PHYSICAL INFRASTRUCTURE IN ELEMENTARY SCHOOLS AND STUDENTS PERFORMANCE

5.1: Introduction

Availability of various infrastructural facilities has emerged as an important issue in the educational field. As discussed in last chapter that quality of education includes the number of teachers in school, pupil teacher ratio, per school teacher, trained teachers were the important aspect in assessing elementary education because they impact directly the type of education which an institution would be providing. It was also found out that the private institutions have better physical and human infrastructure. In this chapter we would try to analyse the availability of infrastructure such as building, drinking water facility, electricity facility, number of class room, number of blackboard and books, number of computers, toilet facility and course syllabi etc. Though they are indirect factors and not directly related to education but they play a crucial role in determining the quality of education which a school would be providing and also influencing the parents to send their children on the basis of the availability of these facilities.

In this chapter, an attempt has been made to the physical infrastructure (building, drinking water facility, electricity facility, number of class room, number of blackboard and books, number of computers and toilet facility). A huge disparity has been seen in availability of this service in rural and urban areas. Through the analysis it was found that there existed large number of schools without toilet facility, no electricity and no drinking water facility. it was also found that There were schools which do not had their own building, going to the extent that classroom had leaking roof. The scenario was also such that the harsh weather conditions made teaching very tough task. Thus it implies that good quality of educational infrastructure is the first and foremost and significant condition to improve the quality of education.

Duraisamy[50] found that the government and Private Aided schools spend less on school infrastructure as compared to Private Un-aided schools.

When we talk about physical infrastructure, the drinking water facility and electricity facility are not available in govt. school. The problem of one class room school is generally found in govt. schools. Das found that there was a significant relationship between education efficiency and physical facilities in schools. He estimated that better physical facilities enhanced the attractiveness of the schools gaining well as provided conducive environment for effective learning and hence contributed more of population towards better education of children of that school. The government took various initiatives to improve the physical infrastructure of schools in many states including Jharkhand.[51]

There are various indicators of physical infrastructure which help us to identify whether the school has all the facility which are important in providing favourable and encouraging environment. In physical infrastructure includes:

a) Student class- room ratio
b) Ratio of primary to upper primary schools
c) Percentage distribution schools having blackboard facility
d) Percentage distribution of schools having computers
e) Percentage distribution of schools having electricity
f) Percentage distribution of schools having playground
g) Percentage distribution of schools having drinking water facility

[50] Duraisamy Malathy (1996): "Demand for & access to child school in T.N", UNDP studies on Development.

[51] Das, R.C. (1974), Impact of School Conditions on Primary Education, SIE, Buch Vol. II, p.1263.

h) Percentage distribution of schools having common toilet
i) Percentage distribution of schools having girls toilet facility
j) Percentage distribution of students having books

District Wise Study: The study estimate the comparative analysis of government, private aided and private unaided schools on the basis of physical infrastructure across the districts of Jharkhand.

5.2: School Population Ratio:

School population ratio is an important indicator to measure the physical infrastructure of schools. As shown in Table-5.1, the school population ratio is 5.99 at primary schools and 7.97 at upper primary schools in Jharkhand. The school population ratio is 4.84 in government primary schools and 1.14 in private (aided and unaided) primary schools in Jharkhand. In Jharkhand, school population ratio is 3.47 and 4.53 respectively in government and private aided & unaided schools for upper primary schools.

TABLE-5.1

SCHOOL- POPULATION RATIO FOR PRIMARY & UPPER PRIMARY PER '000 POP. IN RELEVANT AGE-GROUP

School- Population Ratio for Primary & Upper Primary per '000 pop. In relevant age-group							
Districts	Primary			Upper Primary			
	Govt.	Total Private (aided + unaided)	Total	Govt.	Total Private (aided + unaided)	Total	Number of Upper Pr to Primary Schools
Dhanbad	2.2	0.8	3	1.5	2.3	3.8	0.8
Sahibganj	2.7	2.3	5	2.9	3.4	6.3	0.7
Deoghar	3.7	0.6	4.3	3.9	3.6	7.4	1
Lohardaga	5	0.9	5.8	2.8	3.7	6.4	0.7
Bokaro	6	1.5	7.6	3	3.2	6.2	0.5
Giridih	7.5	1.3	8.8	4	4.8	8.8	0.6
Kodarma	4.5	1.7	6.2	3.1	5.4	8.5	0.9
Paschim Singhbhum	6.1	1	7.2	4.2	5.8	10.1	0.8
Chatra	2.4	0.6	3.6	2.8	3.6	5.4	1.6
Ranchi	3.7	1.9	4.8	3.8	4.4	8.2	1.4
Purbi Singhbhum	3.8	0.6	4.7	3.9	2.7	6.8	1.9
Pakaur	3.5	1.6	5	3.6	4.3	7.9	0.9
Garhwa	6.6	1	7.6	4.5	4.6	9.1	0.8
Gumla	4.6	0.6	5.2	2.5	6.4	8.9	1
Palamu	7.6	1.2	8.8	4	5.9	9.9	0.7
Latehar	3.4	0.6	4.4	3.4	2.4	6.4	0.5
Simdega	3.3	1.4	5.3	3.2	4.1	7.2	0.4
Jamtara	6.8	1.9	7.9	4.6	4.8	9.5	0.6
Seraikela-kharsawan	4.8	0.6	5.8	2.9	6.9	8.8	1.8
Ramgarh	7.2	1.2	8.2	4.2	5.3	9.6	0.4
Godda	6.2	1.3	7.2	4.2	4.3	9.2	0.9
Hazaribagh	4.2	0.4	5.1	2.3	6.2	8.4	1.4
Khunti	7.4	1.5	8.8	4.8	5.2	9.8	0.9
Dumka	2.9	0.9	3.4	3.1	5.5	8.6	1.5
JHARKHAND	4.84	1.14	5.99	3.47	4.53	7.97	0.95

Source: DISE, Jharkhand, 2008-09

The school population ratio is high in Palamau (7.6), Giridih (7.5), Khunti (7.4), Ramgarh (7.2) Garhwa (6.6), Paschim Singhbhum (6.1), and Bokaro (6.0) and low in Dhanbad (2.2), Sahibganj (2.7), Chatra (2.9), Godda (2.9), Ranchi (3.3), Purbi Singhbhum (3.8), Pakaur (3.5), Deoghar (3.7), Kodarma (4.5) and Gumla (4.6) at government primary schools. In case of private primary schools, school population ratio is highest in Sahibganj (2.3) and lowest in Deoghar (0.6), Gumla (0.6), Purbi Singhbhum (0.8), Ranchi (0.8) etc. In case of total (private and government) primary school, school population ratio is highest in Giridih (8.8), Bokaro and Garhwa (7.6), Paschim Singhbhum (7.2) and lowest in Godda (3.4),Chatra (3.8) and Dhanbad (3.0). In case of government upper primary schools, school population ratio is high in Giridih (4.0), Paschim Singhbhum (4.2),Garhwa (4.5) and Palamau (4.0) and low in Dhanbad (1.5),Sahibganj (2.9),Lohardaga (2.8), Chatra (2.5) and Gumla (2.5) etc. In case of private upper primary schools, the school population ratio is high in Gumla (6.4),Palamau (5.9), Godda (5.5), Paschim Singhbhum (5.8) and Kodarma (5.4) and low in Dhanbad (2.3),Purbi Singhbhum (2.9) , Deoghar (3.4) and Sahibganj(3.6). As shown in Table-5.1, the school population ratio is increasing from primary to upper primary stage of education in private schools but it is decreasing from primary to upper primary stage of education for government schools except Ranchi, Godda, Sahibganj and Deoghar districts.

5.3 Ratio of primary to upper-primary:

This indicator plays a very important role in checking the number of primary schools across the districts of Jharkhand. Srivastava[52] estimated that a large proportion of population faces the problem of non availability of schools at elementary stage and this is huge problem as it leads to major section of society deprived of schooling. The demand of schools increased but there was the problem from supply side. This problem was found more in case of rural areas and in the case of girl's children. In states such as MP and Rajasthan, about 50% of rural parents did not send their children to school because there were no schools near their houses and 50% of population comprise of a big number of population would be disadvantaged and underprivileged. Hence this was the major

[52] *Mehrotra Santosh, Srivastava Ravi, Panchamukhi P.R, Shrivastava Ranjana, "Universalizing Elementary Education in India" Uncaging the Tiger Economy, Oxford University Press, 2005.*

problem which population faced due to lack of schools or due to greater distance between school and people's residences. In W.B. it was found that there was one upper primary school available for 18 primary schools and in other states; there was one upper primary school available for 4-6 primary schools.

5.4: Number of blackboards per schools:

Blackboard is very important element in physical infrastructure. Every class room should be equipped with a blackboard as it is considered as important element for teaching students in the classroom. But there are various studies which have informed us that there are very less number of blackboards is in government schools, while the private schools are better off in this regard. This study tried to found the percentage distribution of black boards per school at elementary stage of education in government, private aided and private unaided schools, 2008-09.

Table-5.2 shows that percentage of blackboard per school at elementary level of education in different management types across the districts of Jharkhand, during 2008-09. As shown in the table, there is no problem in case of blackboard facility. The situation is almost same in different types of management. Almost every school has blackboard facility. The study finds little variation across the districts and similar results have been found in government, private aided and private unaided schools. so it can be concluded by saying that black board as physical infrastructure is present uniformly in all types of schools.

TABLE-5.2

PERCENTAGE OF BLACKBOARDS PER SCHOOL ACROSS THE DISTRICTS OF JHARKHAND

Districts	Govt.	Private Aided	Private Unaided
Dhanbad	100	100	100
Hazaribagh	95.07	100	66.67
Sahibganj	100	100	100
Deoghar	100	100	100
Lohardaga	91.62	95.83	93.42
Bokaro	100	100	100
Giridih	99.23	100	100
Kodarma	100	100	100
Paschim Singhbhum	97.88	100	100
Chatra	100	100	100
Ranchi	100	75	94.55
Purbi Singhbhum	94.27	92.31	96.46
Palamu	89.7	92.86	77.78
Pakaur	100	100	100
Garhwa	96.29	100	100
Gumla	98	100	93.65
Godda	100	100	94.23
Jamtara	99.23	100	100
Ramgarh	100	100	100
Khunti	97.88	100	100
Latehar	100	100	100
Simdega	100	75	94.55
Seraikela-Kharsawan	97.88	100	100
Dumka	88.12	75	91.76
Jharkhand	97.27	97.59	97.8

Source: DISE, 2008-09, Jharkhand

In case of private aided schools, Ranchi, Purbi Singhbhum,, Dumka have less blackboard as compared to private unaided and government schools. In Hazaribagh, Ranchi, Purbi Singhbhum, Dumka have less number of blackboard in private unaided schools.

5.5: Availability of Toilet Facilities:

It is a very important variable. it is even found that In some cases, the parents are not ready to send their daughters in schools because of no toilet facility in school. At district wise, we have only data of common toilet facility and separate girl's toilet facility at elementary level of education.

The table-5.3 shows that there is no problem found in case of toilet facility at district level in case of government school, private aided schools, private unaided schools, 2008-09. Almost every school is having toilet facility. There is little variation across districts but no variation found in case of school management. More than 60 percentage school having toilet facility in each district but in some district, 100% having toilet facility.

Kapoor, Dhingra and Tyagi also found that broader area development programme had aimed at construction of school building, increasing number of teachers in schools i.e change of single teacher school into double teacher school besides providing other facilities such as common toilet facility, girls toilet facility, drinking water facility and laboratories. Therefore the physical infrastructure improved with the help of government schemes in Jharkhand.[53]

In case of Jharkhand, there is more percentage of schools with common toilet facility in Private unaided schools (94.93%) than government (88.36%) and private aided (90.95%) schools. In Jharkhand, there is more percentage of girls separate toilet facility in private unaided schools (94.21%) than government (81.61%) and private aided (91.15%) schools. This shows that the private unaided schools have more infrastructural facilities than government and private aided schools in respect of girls toilet. Even private aided schools have more facility than government schools.

But there are huge variations across the districts of Jharkhand. In Hazaribagh and Gumla, a large number of government schools have common toilet facility than private unaided schools. In Giridih, and Pakaur, more private aided schools have common toilet facility

[53] Kapoor, M.M., Dhingra, A. And Tyagi, R.S. (1994), Educational Administration in Jharkhand: Structure, Processes and Prospects for Future, Vikas Publishing House Pvt. Ltd., New Delhi.

than private unaided schools. Similar situation is found in case of separate girl's toilet facility. A large number of girl's toilets are available in private aided and private unaided schools. In private unaided schools, large number of schools is having girl's toilet facility such as in Dhanbad, Sahibganj, , Giridih, Purbi Singhbhum, Palamu, Garhwa, Godda and Dumka. Other districts have large share of girl's toilet in private aided schools.

5.6: Per School having Electricity and Playground facility:

This part would focus on the electricity and playground facility per school at district level

Table-5.4 shows schools having electricity facility across the district of Jharkhand. But this share is less as compared to other facility. Per school is having electricity facility very less in case of government school. A large number of private unaided schools have electricity and playground facility as compared to government schools.

Government schools have less play ground as compared to private aided and private unaided schools. The main difference found in table-5.4. The electricity facility is more in case of private aided schools and playground facility is more in case of private unaided schools. But these facilities are very less in government schools. In Jharkhand, 83.97% government schools have electricity facility, 98.99% private aided schools have electricity facility and 97.96% private unaided schools have electricity facility. In case of play ground facility, 65.58 % schools have playground facility in government schools, 77.67% schools have playground facility in private aided school.

TABLE-5.3

PERCENTAGE OF COMMON AND SEPARATE (GIRLS) TOILET FACILITY AT ELEMENTARY STAGE OF EDUCATION ACROSS THE DISTRICTS OF JHARKHAND, 2008-09

Districts	Common Toilet Facility			Girls Toilet Facility		
	Govt.	Private Aided	Private Unaided	Govt.	Private Aided	Private Unaided
Dhanbad	99.42	98.46	100	92.4	92.31	95.93
Hazaribagh	86.51	75	66.67	88.49	100	66.67
Sahibganj	89.95	92.31	95.1	91.84	100	95.92
Deoghar	87.84	87.5	95.4	89.83	100	98.85
Lohardaga	89.53	83.33	91.67	45.68	95.83	91.67
Bokaro	89.19	91.84	94.75	89.93	97.96	95.54
Giridih	81.58	97.62	93.28	86.4	90.48	97.01
Kodarma	100	100	100	71.1	82.81	84.75
Paschim Singhbhum	80.95	88.89	100	68.65	88.89	81.82
Chatra	88.22	81.94	92.69	89.32	93.06	92.92
Ranchi	82.19	75	98.18	83.26	100	94.55
Purbi Singhbhum	80.36	76.92	93.81	83.47	92.31	93.81
Palamu	87.03	78.57	93.33	83.84	92.86	100
Pakaur	85.32	100	96.69	88.1	100	96.69
Garhwa	87.17	87.5	100	81.45	81.25	100
Gumla	96.21	88.89	95.24	90.79	96.3	92.06
Godda	97.02	100	94.23	82.54	85	92.31
Latehar	87.84	87.5	95.4	89.83	100	98.85
Ramgarh	89.53	83.33	91.67	45.68	95.83	91.67
Khunti	89.19	91.84	94.75	89.93	97.96	95.54
Simdega	81.58	97.62	93.28	86.4	90.48	97.01
Seraikela-Kharsawan	100	100	100	71.1	82.81	84.75
Jamtara	80.95	88.89	100	68.65	88.89	81.82
Dumka	88.22	81.94	92.69	89.32	93.06	92.92
Jharkhand						

Source: DISE, 2008-09 Jharkhand

TABLE-5.4

PERCENTAGE DISTRIBUTION OF ELECTRICITY AND PLAYGROUND FACILITY AT ELEMENTARY STAGE OF EDUCATION IN DIFFERENT TYPE OF SCHOOLS ACROSS THE DISTRICTS OF JHARKHAND

Districts	Electricity Facility			Playground Facility		
	Govt.	Private Aided	Private Unaided	Govt.	Private Aided	Private Unaided
Dhanbad	62.98	98.46	96.67	58.43	64.62	71.11
Hazaribagh	93.42	100	66.67	63.49	75	33.33
Sahibganj	93.88	100	99.18	70.8	92.31	79.59
Deoghar	90.07	100	98.85	72.7	75	93.1
Lohardaga	62.37	100	96.49	61.91	75	88.16
Bokaro	82.03	100	96.85	63.87	87.76	84.51
Giridih	86.52	100	100	69.45	88.1	86.57
Kodarma	92.08	100	98.31	56.54	71.88	77.97
Paschim Singhbhum	87.04	100	90.91	61.77	77.78	81.82
Chatra	93.36	95.83	98.86	64.52	69.44	76.94
Ranchi	93.13	100	96.36	71.67	50	78.18
Purbi Singhbhum	97.22	92.31	98.23	68.74	69.23	87.61
Palamu	83.13	100	97.78	76.73	92.86	84.44
Pakaur	90.71	100	100	69.7	80	88.43
Garhwa	95.98	100	100	68.78	93.75	100
Gumla	84.93	100	98.41	70.38	85.19	96.83
Godda	100	100	97.12	70.63	75	81.73
Jamtara	93.12	95.12	98.21	64.21	69.32	76.13
Latehar	93.22	100	96.21	71.24	50	78.42
Simdega	97.24	92.32	98.42	68.12	69.21	87.23
Ramgarh	83.21	100	97.21	76.36	92.75	84.23
Khunti	90.32	100	100	69.34	80	88.32
Seraikela-Kharsawn	95.23	100	100	68.23	93.43	100
Dumka	50.13	100	98.82	52.61	83.33	89.41
Jharkhand						

Source: DISE, 2008-09, Jharkhand.

5.7: Student Class Room Ratio:

SCR implies that student class room ratio which is very important indicator to determine the physical infrastructure.

There are many schools which they do not have class rooms facility.Therefore, we will estimate the student class room ratio and determine the SCR across the districts of Jharkhand.

TABLE: 5.5

STUDENT CLASS ROOM RATIO (SCR) AT PRIMARY AND UPPER PRIMARY STAGE OF EDUCATION, 2008-09

District	Primary SCR			Upper Primary SCR	
	Govt.	Private	Local bodies	Govt.	Private
Dhanbad	29.31	19.41	23.66	39.52	19.98
Hazaribagh	33.82	0	78.75	42.99	0
Sahibganj	34.27	24.46	145.22	24.16	27.35
Deoghar	35.66	18.1	27.76	33.58	18.03
Lohardaga	28.82	16.08	25.38	27.17	18.9
Bokaro	15.97	16.87	19.5	52.6	16.75
Giridih	22.28	11.07	14.77	23.73	13.61
Kodarma	25.57	0	26.04	30.39	0
Paschim Singhbhum	23.98	0	22.08	35.44	0
Chatra	24.39	20.53	22.91	26.92	17.92
Ranchi	37	17.23	33.57	42.93	23.56
Purbi Singhbhum	32.77	27.16	24.24	20.57	27.67
Palamu	24.48	4.13	16.17	29.98	4.01
Pakaur	37.23	15.08	38.47	30.42	15.37
Garhwa	20.8	0	16.05	20.26	0
Gumla	47.55	0	23.05	92.98	0
Godda	38.07	0	35.75	50.18	0
Jamtara	37.01	17.12	33.21	42.21	23.12
Khunti	32.12	27.12	24.15	20.23	27.21
Simdega	24.21	4.24	16.21	29.14	4.33
Latehar	37.23	15.22	38.12	30.44	15.22
Ramgarh	20.12	2.12	16.22	20.21	2.14
Seraikela-Kharsawan	47.55	2.21	23.12	92.12	12.2
Dumka	38.07	0	35.75	50.18	0

Source: DISE New Delhi,2008-09

As shown in table-5.5, Student Classroom Ratio is low in private schools and high in government schools at primary and upper primary stage of education. In case of primary schools, there is low Student Classroom Ratio in case of private schools and high Student Classroom Ratio in government schools. But Student Classroom Ratio increased at upper primary stage of education in case of government and private schools. Table shows that there is less class room facility is in government schools and this problem is increasing from primary to upper primary stage.

Table-5.6 shows that per school having blackboard facility in government schools, private aided and private unaided schools across the district of Jharkhand, 2008-09. As shown in figure, there is no problem in case of blackboard facility. The situation is almost same in different type of management. Almost every school has blackboard facility. There is some variation across the district but there is similar result in case of government, private aided and private unaided schools. In case of private aided schools, Ranchi, Purbi Singhbhum, Dumka have less blackboard facility as compared to private unaided and government schools.

In Hazaribagh, Ranchi, Purbi Singhbhum, Dumka have less number of blackboard in private unaided schools. But there is no significant results found to determine per school having blackboards. Almost every school had blackboard facility.

TABLE-5.6

DISTRICT WISE DISTRIBUTION OF NUMBER OF BLACKBOARDS PER SCHOOL, 2008-09

District wise distribution of number of blackboards per school,2008-09					
District	Primary School			Upper Primary	
	Govt.	Private	Local bodies	Govt.	Private
Dhanbad	1.2	0.95	1.17	1.06	0.96
Hazaribagh	1.7	0	0.75	1.59	0
Sahibganj	1.79	1.06	2.78	1.68	1.04
Latehar	1.94	0	1.97	1.46	0
Deoghar	1.73	1.03	1.66	1.51	1.03
Lohardaga	1.36	2.33	1.39	1.3	2.2
Bokaro	1.39	1.13	1.21	1.12	1.42
Giridih	1.7	1.03	1.88	1.29	0.9
Kodarma	1.42	0	1.82	1.34	0
Paschim Singhbhum	1.44	0	1.91	1.45	0
Chatra	1.66	0.82	1.75	1.2	0.76
Ranchi	1.62	1.13	1.73	1.41	1.09
Purbi Singhbhum	1.43	0.97	1.52	1.14	0.97
Palamu	1.57	0.76	1.68	1.07	0.76
Pakaur	1.13	0.84	1.21	1.33	0.79
Garhwa	1.63	0	1.61	1.3	0
Gumla	1.42	0	1.6	4.73	0
Jamtara	1.45	1.27	1.57	1.2	1.22
Godda	1.59	0	1.75	1.5	0
Simdega	1.43	0.97	1.52	1.14	0.97
Seraikela-Kharsawan	1.57	0.76	1.68	1.07	0.76
Ramgarh	1.13	0.84	1.21	1.33	0.79
Khunti	1.63	0	1.61	1.3	0
Dumka	1.03	0.57	1.09	1.86	0.53

Source-DISE,New Delhi,2008-09

Table: 5.7 shows that there are not major problem of per class is having blackboard facility. Almost every class is having blackboard facility. So there is no problem found in case of per class having blackboard. Every District have sufficient blackboard.

5.8: Number of computers per school:

The computer facility was not popular before 1990's i.e before liberalization, globalization, liberalization. It was not taught in school as a subject. But during this period and after, it has became an important subject. It is not taught only in private schools but it is very important subject in government schools also. Therefore the study estimates that does every school has computers or not in Jharkhand. We do not have district level data, so the study estimates computer facilities on basis of District level.

TABLE NO.-5.7

DISTRICT WISE DISTRIBUTION OF NUMBER OF COMPUTERS FACILITY, 2008-09

District wise distribution of number of computers facility,2008-09					
District	Primary School			Upper Primary	
	Govt.	Private	Local bodies	Govt.	Private
Dhanbad	0.04	2.79	0.03	6.6	3.12
Hazaribagh	0	0	0	2.1	0
Sahibganj	0	4.25	0.12	8.1	6.4
Latehar	0	0	0.05	5.5	0
Deoghar	0.03	2.55	1.72	8.4	2.92
Lohardaga	0.03	1.5	0.31	7.7	1
Bokaro	0.12	2	0	7.7	2.86
Giridih	0	2.8	0	7.9	4.43
Kodarma	0.07	0	0	6.6	0
Paschim Singhbhum	0.14	0	0.06	5.8	0
Chatra	0.16	6.33	0.02	4.2	7.22
Ranchi	0.04	3.89	0	7.9	5.17
Purbi Singhbhum	0.02	7.1	0.1	7.3	7.89
Palamu	0.04	14	0.03	7.6	14
Pakaur	0.06	6.39	0	7.1	7.88
Garhwa	0	0	0.05	8	0
Gumla	0.46	0	0.29	5.3	0
Jamtara	0.21	2.25	0.14	6.9	2.75
Godda	0	0	0	10.6	0
Simdega	0.02	3.82	0	7.2	5.12
Ramgarh	0.03	7.2	0.4	7.3	7.23
Khunti	0.23	3.2	0.21	7.12	5.12
Serakela-kharsawan	0.12	6.21	0	7.12	7.32
Dumka	0.12	7.32	0.24	8.43	9.23

Source-DISE,New Delhi,2008-09

Table-5.7 shows that there are no problem of having computers in schools. Almost every school has computer facility. But the share of having computer facility is high from primary to upper primary stage of education. In case of primary schools, more schools are having computer facility in private schools than government schools. But in case of upper primary schools, there is high share of computers in government schools. The major reason is that computer is compulsory subject from 4^{th} standard in case of private schools but it is compulsory from upper primary classes in case of government schools. So there is no need of having large number of computers at primary stage in government schools. Another issue is less number of computers at upper primary stage in private schools

There is no problem found in case of physical infrastructure in Jharkhand. There is not much problem found in District. Almost every school has class room, blackboard, electricity facility, common toilet & girl's toilet facility. There is difficult to do comparative analysis between government and private schools. The only result found that government school have less facility of electricity and play ground as compared to private schools. Manpreet (2008) also estimate that there was no facility on physical infrastructure in some district and there was need to improve quantity of education but there is no problem in quality of education.

5.9: On the basis of Infrastructure Index:

The following variables are used to calculate composite index:

Number of schools with blackboard facility

Number of schools with common toilet facility

Number of schools with separate girls toilet facility

Number of schools with electricity facility

Number of schools with playground facility

TABLE-5.8

INFRASTRUCTURE INDEX AND RANKS

Districts	Infrastructure Index	Rank
Saraikela-kharsawan	1.556139	1
Garhwa	0.966837	2
Godda	0.906284	3
Kodarma	0.838568	4
Sahibganj	0.800870	5
Pakaru	0.792307	6
Khunti	0.586340	7
Giridih	0.530107	8
Gumla	0.528884	9
Deoghar	0.524957	10
Ramgarh	0.346783	11
Bokaro	0.328414	12
Jamtara	0.085800	13
Latehar	0.056881	14
Chatra	-0.014992	15
Paschim Singhbhum	-0.028425	16
Dhanbad	-0.201316	17
Simdega	-0.399324	18
Purbi Singhbhum	-0.530788	19
Palamau	-0.767538	20
Lohardaga	-1.011484	21
Ranchi	-1.027407	22
Dumka	-1.968972	23
Hazaribagh	-2.898924	24

Source:DISE, 2008-09 New Delhi

As shown in table-5.8, Saraikela kharsawan, Garhwa, Godda, kodarma, Sahibganj, Pakaur, has good physical infrastructure facilities as compared to other districts like Hazaribagh, Dumka, Ranchi, Lohardaga, Palamu, Purbi Singhbhum which has not good infrastructure facilities.

TABLE 5.9

DISTRICT WISE TYPES OF BUILDING AT ELEMENTARY LEVEL.

	TYPES OF BUILDING						
	PUCCA BUILDING	PARTIALLY PUCCA	KUCCHA	TENT	MULTIPLE TYPE	NO BUILDING	CLASS_MAJ REPAIR
BOKARO	152	1	0	0	5	58	103
CHATRA	561	16	3	3	138	17	542
DEOGHAR	267	1	1	1	32	8	218
DHANBAD	316	3	1	1	38	3	353
DUMKA	340	1	1	1	38	9	298
GARHWA	135	5	3	3	80	6	235
GIRIDIH	243	4	0	0	29	18	201
GODDA	245	9	7	3	19	8	115
GUMLA	184	14	19	19	96	5	423
HAZARIBAG	511	5	0	0	80	6	385
JAMTARA	207	2	0	0	22	3	150
KHUNTI	154	8	6	11	28	7	178
KODARMA	122	0	3	3	10	13	112
LATEHAR	156	11	2	2	91	3	115
LOHARDAGA	64	3	2	2	44	4	64
PAKAUR	137	0	0	0	19	9	29
PALAMU	237	14	3	3	111	110	370
PASHCHIMI SINGHBHUM	191	16	7	7	108	9	322
PURBI SINGHBHUM	168	6	9	14	59	15	231
RAMGARH	172	8	7	17	68	18	243
RANCHI	382	15	3	3	115	5	465
SAHIBGANJ	312	14	13	13	76	39	449
SARAIKELA-KHARSAWAN	246	6	4	4	62	33	245
SIMDEGA	138	11	15	15	71	9	349

Availability of buildings in school.

Building is most important facility among the basic facilities in the primary and upper primary schools. schools without building cannot be imagined. However in India there are schools without building .

Following table shows the type of building at elementary level, most of them schools have pucca building but many of the building type also comes under multiple type, that

means that many of the schools are also used for other purposes also like commercial purposes and others. there are also schools which are partially pucca, kuccha, tent and no building.

TABLE 5.10

DISTRICT WISE STUDENTS PASSED AT ELEMENTARY LEVEL (PRIMARY AND UPPER-PRIMARY)

	GRADE _V_ PASSED		GRADE_VIII_PASSED	
DISTRICT	B_V	G_5	B_8	G_8
BOKARO	86.3	83.43	97.16	97.62
CHATRA	90.33	91.75	83.6	94.71
DEOGHAR	92.68	92.7	88.06	97.17
DHANBAD	96.82	95.89	97.55	95.9
DUMKA	88.42	87.67	95.29	82.56
GARHWA	96.01	93.84	96.65	97.61
GIRIDIH	93.26	90.78	95.52	93.33
GODDA	93.5	92.1	95.19	83.56
GUMLA	93.87	93.39	92.52	89.66
HAZARIBAG	93.57	93.75	94.61	93.52
JAMTARA	92.21	91.24	97.46	95.74
KHUNTI	95.8	95.2	95.69	89.56
KODARMA	95.12	94.45	99.3	99.73
LATEHAR	87.17	85.73	93.5	91.53
LOHARDAGA	83.38	92.32	91.1	85.46
PAKAUR	89.13	91.92	85.71	92.6
PALAMU	90.85	89.97	95.23	91.69
PASHCHIMI SINGHBHUM	95.86	94.41	95.6	94.48
PURBI SINGHBHUM	96.9	90.9	95.49	84.56
RAMGARH	91.6	90.8	95.69	85.56
RANCHI	88.06	90.5	77.86	93.03
SAHIBGANJ	93.22	92.51	92.61	89.62
SARAIKELA-KHARSAWAN	98.67	98.64	99.93	99.79
SIMDEGA	96.28	94.62	92.62	97.01

The above table shows students passed at elementary level, and we see that in almost every district the passed students are more than 80 %. That shows that almost every

TABLE 5.11

DISTRICT WISE STUDENTS GETTING MORE THAN SIXTY PERCENT AT ELEMENTARY LEVEL

	GRADE _V_ PASSED>60%		GRADE_VIII_PASSED>60%	
DISTRICT	B_5	G_5	B_8	G_8
BOKARO	16.85	15.51	19.06	19.52
CHATRA	27.27	26.15	18.98	16.73
DEOGHAR	20.71	18.93	11.81	12.56
DHANBAD	25.57	24.66	19.61	20.53
DUMKA	28.33	13.57	25.23	17.39
GARHWA	19.46	16.68	14.91	18.97
GIRIDIH	24.18	23.36	17.45	20.6
GODDA	22.33	17.57	28.23	15.39
GUMLA	15.56	18.9	19	8.98
HAZARIBAG	33.17	30.7	25.2	25.55
JAMTARA	30.24	30.26	14.87	20.45
KHUNTI	21.33	19.57	20.23	18.39
KODARMA	30.08	28	28.25	14.7
LATEHAR	14.11	13.88	9.8	9.85
LOHARDAGA	14.1	12.65	12.84	9.93
PAKAUR	13.61	11.62	6.58	6.96
PALAMU	20.13	18.54	19.02	23.27
PASHCHIMI SINGHBHUM	19.92	18.48	14.8	18.02
PURBI SINGHBHUM	24.33	15.57	27.23	28.39
RAMGARH	26.33	11.57	21.23	13.39
RANCHI	24.98	24.61	15.72	15.36
SAHIBGANJ	24.86	25.1	20.84	11.25
SARAIKELA-KHARSAWAN	32.84	28.13	24.7	20.73
SIMDEGA	15.91	17.86	9.94	9.54

5.10: Conclusion:

Physical infrastructure is very important part of schools. Student Population Ratio is more in primary to upper primary stage of education and it is high in private schools. The number of upper primary schools is less in Jharkhand. In physical infrastructure, we used various indicators such as student class room ratio, common toilet facility, separate girls toilet facility, electricity facility and playground facility etc. As we mentioned earlier that the study is based on District level. There is no major problem found in case of physical infrastructure in Jharkhand. There are some variations in different type of management.

Private unaided schools have more infrastructural facilities than private aided and government schools. In case of electricity and playground facility, there are huge variations in different type of management because only private schools have more availability of electricity and playground facility.

The physical infrastructure index has been calculated through Principal component analysis method. As shown in table-5.16, it gives us clear picture about the infrastructural facility availability in different districts through ranking.

CHAPTER 6

SOME CORRELATES AND DETERMINANTS OF ELEMENTARY EDUCATION IN JHARKHAND

In this chapter we have tried to draw linkages across educational indicators and between educational indicators and economic indicators based on some methodology. The methodologies used are:

- Location quotient
- Coefficient of equality
- Sopher's index
- Coefficient of variation
- Educational Development Index (EDI)
- Correlation and Regression

TABLE 6.1
MALE-FEMALE AND RURAL-URBAN LITERACY RATE JHARKHAND

	TOTAL			RURAL			URBAN		
DISTRCITS	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
BOKARO	62.1	76.04	46.33	47.7	65.06	28.79	78.57	88.12	67.28
CHATRA	43.24	55.64	30.24	41.25	53.9	28.06	77.16	83.82	69.47
DEOGHAR	50.09	66.38	31.99	44.55	62.22	25.18	82.33	89.62	73.59
DHANBAD	67	79.54	52.43	58.22	74.5	40.08	74.7	83.79	63.74
DUMKA	47.94	62.86	32.35	45.52	60.87	29.6	80.89	88.68	71.98
GIRIDIH	44.5	62.09	26.62	41.99	60.28	23.53	78.57	85.53	70.81
GODDA	43.13	57.52	27.39	41.62	56.26	25.65	82.35	89	74.46
GUMLA	51.74	63.5	39.95	49.83	61.9	37.77	83.55	89.08	77.59
HAZARIBAGH	57.74	71.81	42.87	50.92	66.55	35.17	78.85	86.69	69.27
KODARMA	57.74	71.81	42.87	50.92	66.65	35.17	78.85	86.69	69.27
LOHARDAGA	53.58	67.28	39.64	49.04	63.85	34.09	82.9	88.76	76.62

PAKAUR	30.65	40.23	20.61	28.25	37.95	18.14	72.18	78.19	65.37
PALAMU	44.95	58.91	29.88	42.72	57.09	27.28	77.63	84.97	69.27
PASHIMI SINGHBHUM	50.17	65.6	34.37	44.17	60.77	27.49	78.16	86.89	68.35
PURBA SINGHBHUM	68.79	79.44	57.32	51.79	66.95	36.08	82.16	88.93	74.64
RANCHI	64.57	76.56	51.72	53.99	68.67	38.9	83.09	89.66	75.53
SAHIBGANJ	37.61	47.93	26.56	33.41	43.84	22.35	71.23	79.28	61.9

Source- Census of India 2001

TABLE 6.2
MALE-FEMALE RURAL-URBAN LITERACY RATE IN INDIA

INDIA	PERSON	MALE	FEMALE
TOTAL	65.38	75.85	54.16
RURAL	58.7	70.7	46.1
URBAN	79.9	86.3	72.9

Source- Census of India 2001

1. LOCATION QUOTIENT FROM ABOVE DATA

The Location Quotient Technique is the most commonly utilized methodology for analysis. This technique compares the local or regional literacy to a reference literacy rate of India, in the process of attempting to identify specializations in the local or state literacy rate. The location quotient technique is based upon a calculated ratio between the local literacy rate and the literacy of some reference unit; in our case we have taken India as reference unit.

Location quotient formula = Literacy rate of female in Jharkhand/Total Literacy rate in Jharkhand

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Literacy rate of females in India/total Literacy rate of India

= 38.87/54

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54.16/65.38

= 0.719815 / 0.828388

= 0.868935

If your LQ value is less than 1 then local concentration of that activity is less than expected given the trends in the region as a whole.

If your LQ value is 1 then local concentration of that activity is as expected given the trends in the region as a whole.

If your LQ value is more than 1 then local concentration of that activity is greater than expected given the trends in the region as a whole.

Thus in this case our location quotient value is less than 1 which suggests that local or regional literacy rate at state level is less than the trends as a whole that is for whole India.

2. COEFFICIENT OF EQUALITY

The database has been taken from census of India (2001). This method is used to measure the male-female and Rural-urban disparity of literacy for a specific year, the formula used is

Coefficient of equality (CE) = X1/X2

Where X2 is more than or equal to X1. The value of CE will range between 0 and 1. In case of no disparity or in case of perfect equality CE will be 1.

- Male-Female equality = X1/X2

  = 38.87/67.3

  = 0.58

- Rural-Urban equality = X1/X2

  = 45.74/79.14

= 0.65

Thus the coefficient of equality suggests that there exist disparity between male female and rural urban when we take literacy as a variable. Rural urban disparity is more than male female disparity. That suggests that variation in literacy is more in case of rural urban as urban literacy is more than rural literacy hence creating wide disparity. Even Male-female literacy has wide variation and there exist much disparity between the two.

3. SOPHER'S INDEX

Disparity Index (D) = log (X2/X1) +log (Q-X1)/(Q-X2), where Q=100 and X2>X1

The database for the study of disparity has been taken from Census of India 2001. Sopher's index has been used to see the disparity among male female and rural urban at Regional level of Jharkhand and at National level. In this method for disparity measurement group 2 is taken for the variable having relatively higher values and group 1 for that having lower value. For example for measuring rural-urban disparity in literacy, the rural literacy is taken as X1 and urban literacy is taken as X2. This is because urban literacy rate is more than rural literacy. In case of perfect equality that is no disparity at all, the value of D will be zero. Higher the value of D then higher will be the extent of disparity and vice versa. This method is useful for measuring relative disparity.

TABLE 6.3

SOPHER'S INDEX

	SOPHER'S INDEX					
	GENDER		**SECTOR**		**RESULTS**	
	MALE	**FEMALE**	**URBAN**	**RURAL**	**SOPHER'S INDEX_GENDER**	**SOPHER'S INDEX_SECTOR**
JHARKHAND	67.3	38.87	79.14	45.74	0.51	0.65
INDIA	75.85	54.16	79.9	58.7	0.55	0.45

Sopher's disparity index for gender in Jharkhand shows that the disparity among male female is there. When we compare it with India's disparity at gender level, then there is not much difference, though India's variation in literacy is more than State of Jharkhand. But when we see sectoral disparity that is rural urban disparity in literacy rate we find that there exists wide disparity in the state compare to at national level. The difference being at wider extent. So steps should be taken to narrow down the disparity between rural and urban.

TABLE: 6.4

DISPARITY IN GER PRIMARY

DT Name	x2/x1	log(x2/x1)	Q-X1	Q-X2	Q-X1/Q-X2	LOG(Q-X1)/(Q-X2)	FINAL
Bokaro	1.20	0.08	53.67	23.96	2.24	0.35	0.43
Chatra	1.23	0.09	69.76	44.36	1.57	0.20	0.29
Deoghar	1.40	0.15	68.01	33.62	2.02	0.31	0.45
Dhanbad	1.14	0.06	47.57	20.46	2.33	0.37	0.42
Dumka	1.21	0.08	67.65	37.14	1.82	0.26	0.34
Garhwa	1.48	0.17	68.10	43.00	1.58	0.20	0.37
Giridih	1.38	0.14	73.38	37.91	1.94	0.29	0.43
Godda	1.34	0.13	72.61	42.48	1.71	0.23	0.36
Gumla	1.14	0.06	60.05	36.50	1.65	0.22	0.27
Hazaribag	1.13	0.05	57.13	28.19	2.03	0.31	0.36
Kodarma	1.27	0.11	57.13	28.19	2.03	0.31	0.41
Lohardaga	1.17	0.07	60.36	32.72	1.84	0.27	0.33
Pakaur	1.27	0.10	79.39	59.77	1.33	0.12	0.23
Palamu	1.33	0.12	70.12	41.09	1.71	0.23	0.36
Pashchimi Singhbhum	1.27	0.10	65.63	34.40	1.91	0.28	0.38
Purbi Singhbhum	1.10	0.04	42.68	20.56	2.08	0.32	0.36
Ranchi	1.11	0.05	48.28	23.44	2.06	0.31	0.36
Sahibganj	1.24	0.09	73.44	52.07	1.41	0.15	0.24

TABLE 6.5:

DISPARITY IN GER UPPER PRIMARY

DT_Name	x2/x1	log(x2/x1)	Q-X1	Q-X2	Q-X1/Q-X2	LOG(QX1)/(QX2)	FINAL
Bokaro	1.23	0.09	37.27	22.54	1.65	0.22	0.31
Chatra	1.34	0.13	52.00	35.53	1.46	0.17	0.29
Deoghar	1.59	0.20	58.05	33.48	1.73	0.24	0.44
Dhanbad	1.19	0.08	34.46	21.86	1.58	0.20	0.27
Dumka	1.35	0.13	53.77	37.52	1.43	0.16	0.29
Garhwa	1.71	0.23	62.99	36.88	1.71	0.23	0.46
Giridih	1.59	0.20	57.13	31.64	1.81	0.26	0.46
Godda	1.48	0.17	60.15	40.93	1.47	0.17	0.34
Gumla	1.20	0.08	40.52	28.40	1.43	0.15	0.23
Hazaribag	1.21	0.08	33.86	19.92	1.70	0.23	0.31
Kodarma	1.44	0.16	45.85	21.86	2.10	0.32	0.48
Lohardaga	1.26	0.10	41.78	26.44	1.58	0.20	0.30
Pakaur	1.38	0.14	71.23	60.38	1.18	0.07	0.21
Palamu	1.46	0.16	56.11	35.83	1.57	0.19	0.36
Pashchimi Singhbhum	1.38	0.14	53.65	36.07	1.49	0.17	0.31
Purbi Singhbhum	1.13	0.05	30.87	21.67	1.42	0.15	0.21
Ranchi	1.16	0.07	31.89	20.78	1.53	0.19	0.25
Sahibganj	1.31	0.12	62.62	50.86	1.23	0.09	0.21

TABLE 6.7:

DISPARITY IN TOTAL LITEARCY

DT_Name	x2/x1	log(x2/x1)	Q-X1	Q-X2	QX1/QX2	LOG(QX1)/(QX2)	FINAL
Bokaro	2.26	0.35	71.21	34.94	2.04	0.31	0.66
Chatra	1.92	0.28	71.94	46.10	1.56	0.19	0.48
Deoghar	2.47	0.39	74.82	37.78	1.98	0.30	0.69
Dhanbad	1.86	0.27	59.92	25.50	2.35	0.37	0.64
Dumka	2.06	0.31	70.40	39.13	1.80	0.26	0.57
Garhwa	2.08	0.32	71.30	40.20	1.77	0.25	0.57
Giridih	2.56	0.41	76.47	39.72	1.93	0.28	0.69
Godda	2.19	0.34	74.35	43.74	1.70	0.23	0.57
Gumla	1.64	0.21	62.23	38.10	1.63	0.21	0.43
Hazaribag	1.89	0.28	64.83	33.45	1.94	0.29	0.56
Kodarma	1.90	0.28	64.83	33.35	1.94	0.29	0.57
Lohardaga	1.87	0.27	65.91	36.15	1.82	0.26	0.53
Pakaur	2.09	0.32	81.86	62.05	1.32	0.12	0.44
Palamu	2.09	0.32	72.72	42.91	1.69	0.23	0.55
Pashchimi Singhbhum	2.21	0.34	72.51	39.23	1.85	0.27	0.61
Purbi Singhbhum	1.86	0.27	63.92	33.05	1.93	0.29	0.55
Ranchi	1.77	0.25	61.10	31.33	1.95	0.29	0.54
Sahibganj	1.96	0.29	77.65	56.16	1.38	0.14	0.43

TABLE 6.8:

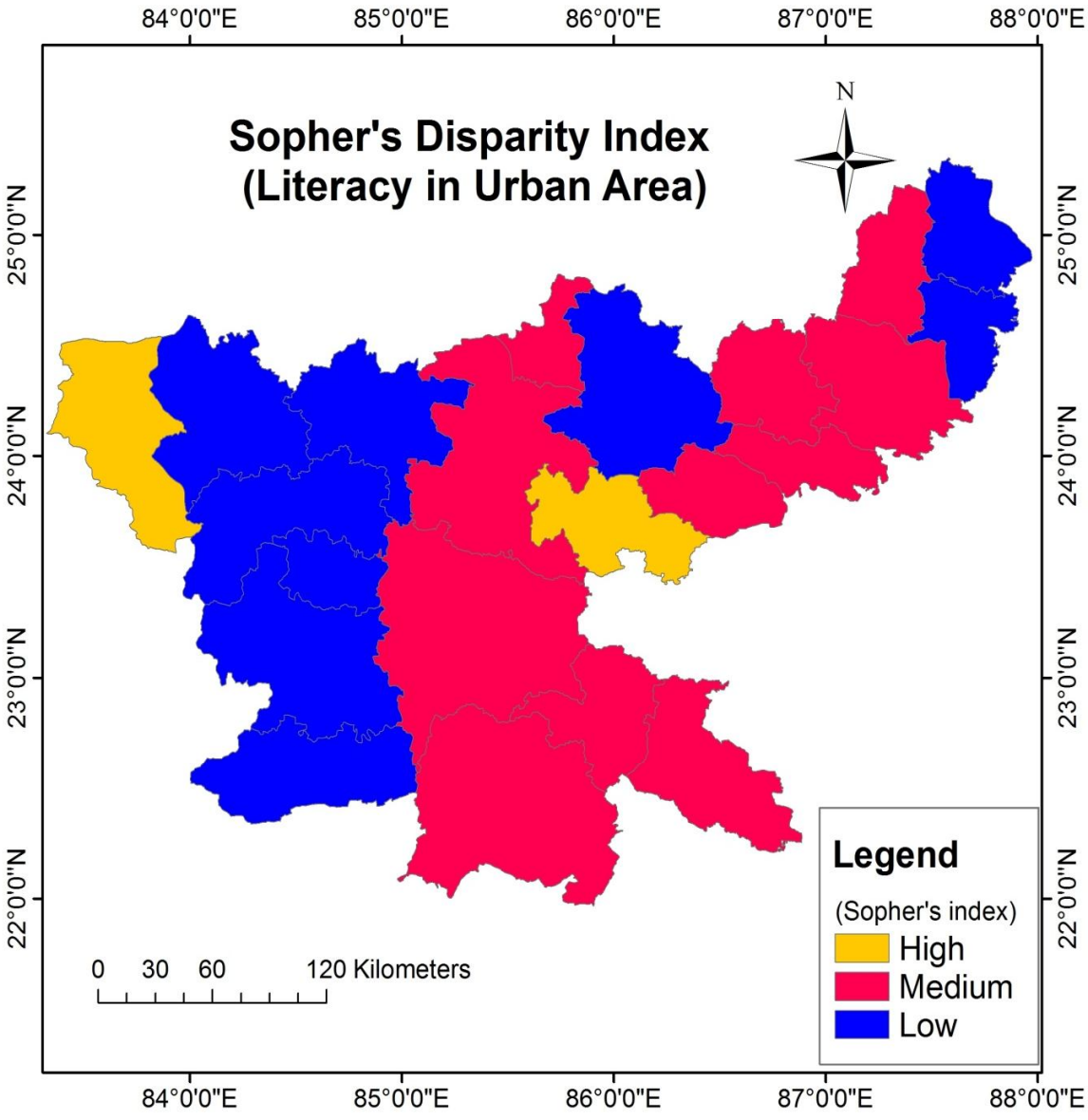
DISPARITY IN URBAN LITEARCY

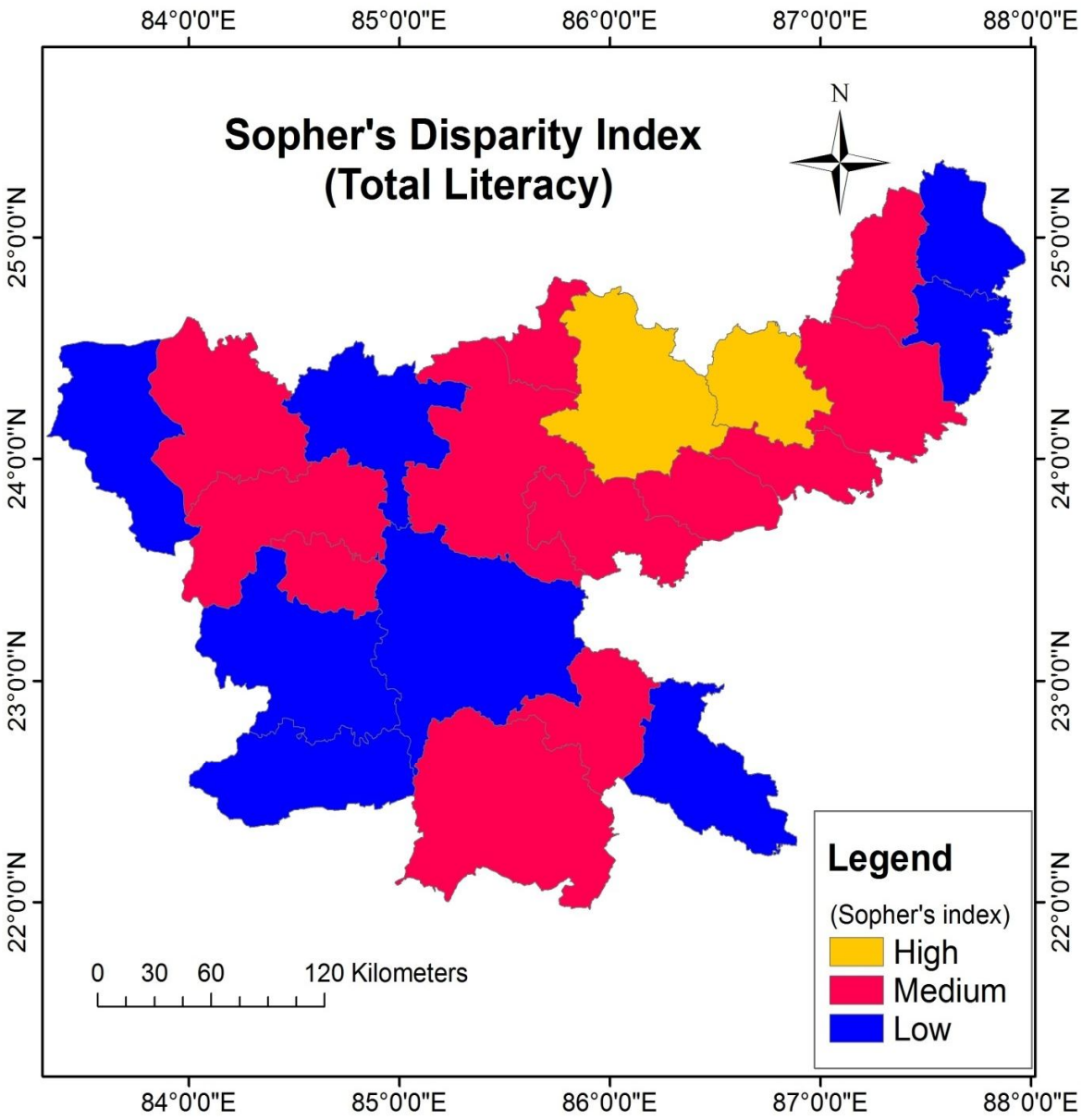
	x2/x1	log(x2/x1)	Q-X1	Q-X2	Q-X1/Q-X2	LOG(Q-X1)/(Q-X2)	FINAL
Bokaro	1.64	0.22	53.67	23.96	2.24	0.35	0.57
Chatra	1.84	0.26	69.76	44.36	1.57	0.20	0.46
Deoghar	2.08	0.32	68.01	33.62	2.02	0.31	0.62
Dhanbad	1.52	0.18	47.57	20.46	2.33	0.37	0.55
Dumka	1.94	0.29	67.65	37.14	1.82	0.26	0.55
Garhwa	1.79	0.25	68.10	43.00	1.58	0.20	0.45
Giridih	2.33	0.37	73.38	37.91	1.94	0.29	0.65
Godda	2.10	0.32	72.61	42.48	1.71	0.23	0.56
Gumla	1.59	0.20	60.05	36.50	1.65	0.22	0.42
Hazaribag	1.68	0.22	57.13	28.19	2.03	0.31	0.53
Kodarma	1.68	0.22	57.13	28.19	2.03	0.31	0.53
Lohardaga	1.70	0.23	60.36	32.72	1.84	0.27	0.50
Pakaur	1.95	0.29	79.39	59.77	1.33	0.12	0.41
Palamu	1.97	0.29	70.12	41.09	1.71	0.23	0.53
Pashchimi Singhbhum	1.91	0.28	65.63	34.40	1.91	0.28	0.56
Purbi Singhbhum	1.39	0.14	42.68	20.56	2.08	0.32	0.46
Ranchi	1.48	0.17	48.28	23.44	2.06	0.31	0.48
Sahibganj	1.80	0.26	73.44	52.07	1.41	0.15	0.41

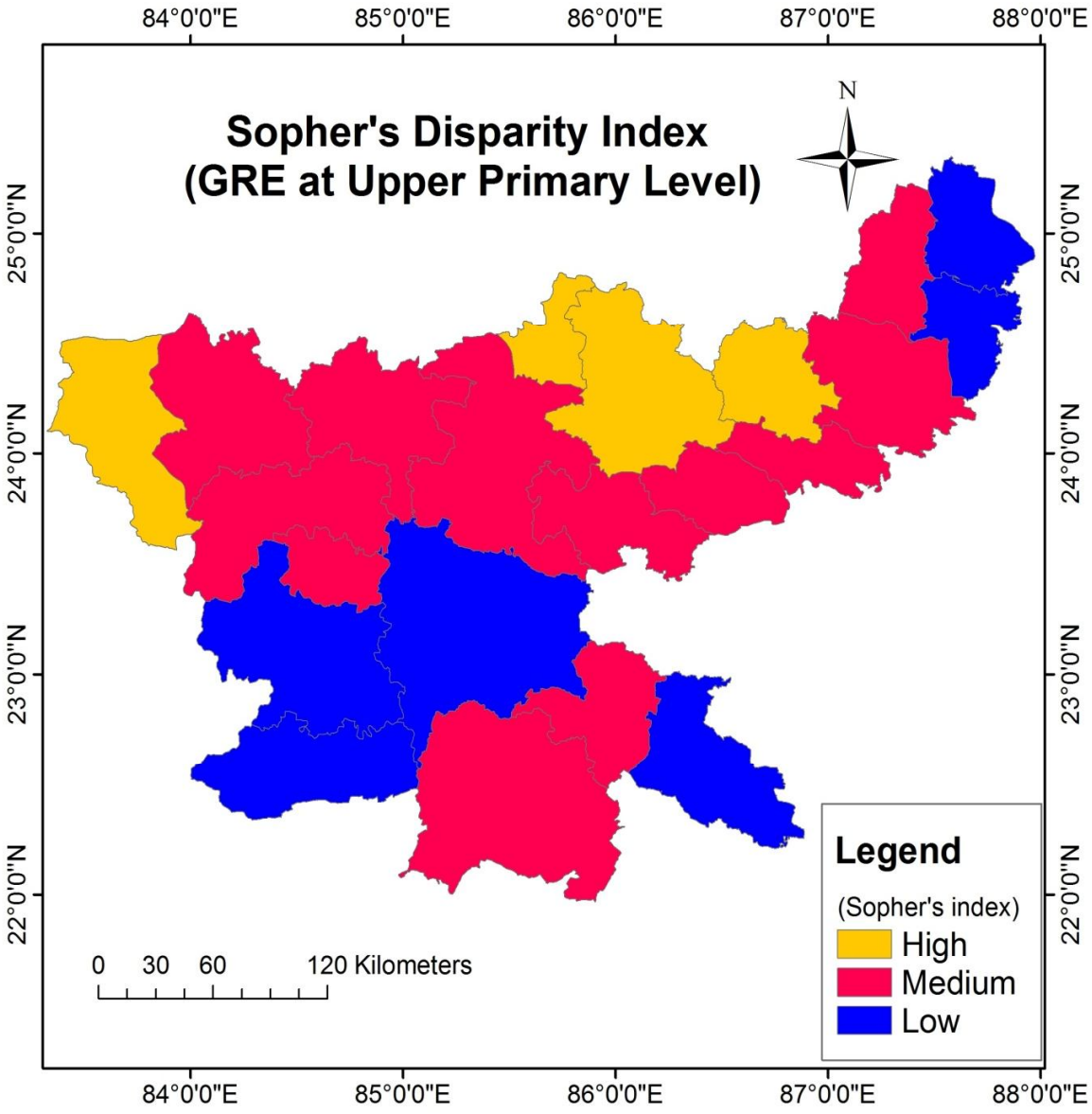
TABLE 6.9:

DISPARITY IN URBAN LITEARCY

DT_Name	x2/x1	log(x2/x1)	Q-X1	Q-X2	QX1/QX2	LOG(QX1)/(QX2)	FINAL
Bokaro	1.31	0.12	32.72	11.88	2.75	0.44	0.56
Chatra	1.21	0.08	30.53	16.18	1.89	0.28	0.36
Deoghar	1.22	0.09	26.41	10.38	2.54	0.41	0.49
Dhanbad	1.31	0.12	36.26	16.21	2.24	0.35	0.47
Dumka	1.23	0.09	28.02	11.32	2.48	0.39	0.48
Garhwa	1.34	0.13	35.40	13.70	2.58	0.41	0.54
Giridih	1.21	0.08	29.19	14.47	2.02	0.30	0.39
Godda	1.20	0.08	25.54	11.00	2.32	0.37	0.44
Gumla	1.15	0.06	22.41	10.92	2.05	0.31	0.37
Hazaribag	1.25	0.10	30.73	13.31	2.31	0.36	0.46
Kodarma	1.25	0.10	30.73	13.31	2.31	0.36	0.46
Lohardaga	1.16	0.06	23.38	11.24	2.08	0.32	0.38
Pakaur	1.20	0.08	34.63	21.81	1.59	0.20	0.28
Palamu	1.23	0.09	30.73	15.03	2.04	0.31	0.40
Pashchimi Singhbhum	1.27	0.10	31.65	13.11	2.41	0.38	0.49
Purbi Singhbhum	1.19	0.08	25.36	11.07	2.29	0.36	0.44
Ranchi	1.19	0.07	24.47	10.34	2.37	0.37	0.45
Sahibganj	1.28	0.11	38.10	20.72	1.84	0.26	0.37


Sopher's Disparity Index
(Literacy in Urban Area)
N
84°0'0"E
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
0 30 60 120 Kilometers
Legend
(Sopher's index)
High
Medium
Low


Sopher's Disparity Index
(Total Literacy)
N
84°0'0"E
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
0 30 60 120 Kilometers
Legend
(Sopher's index)
High
Medium
Low


Sopher's Disparity Index
(GRE at Upper Primary Level)
N
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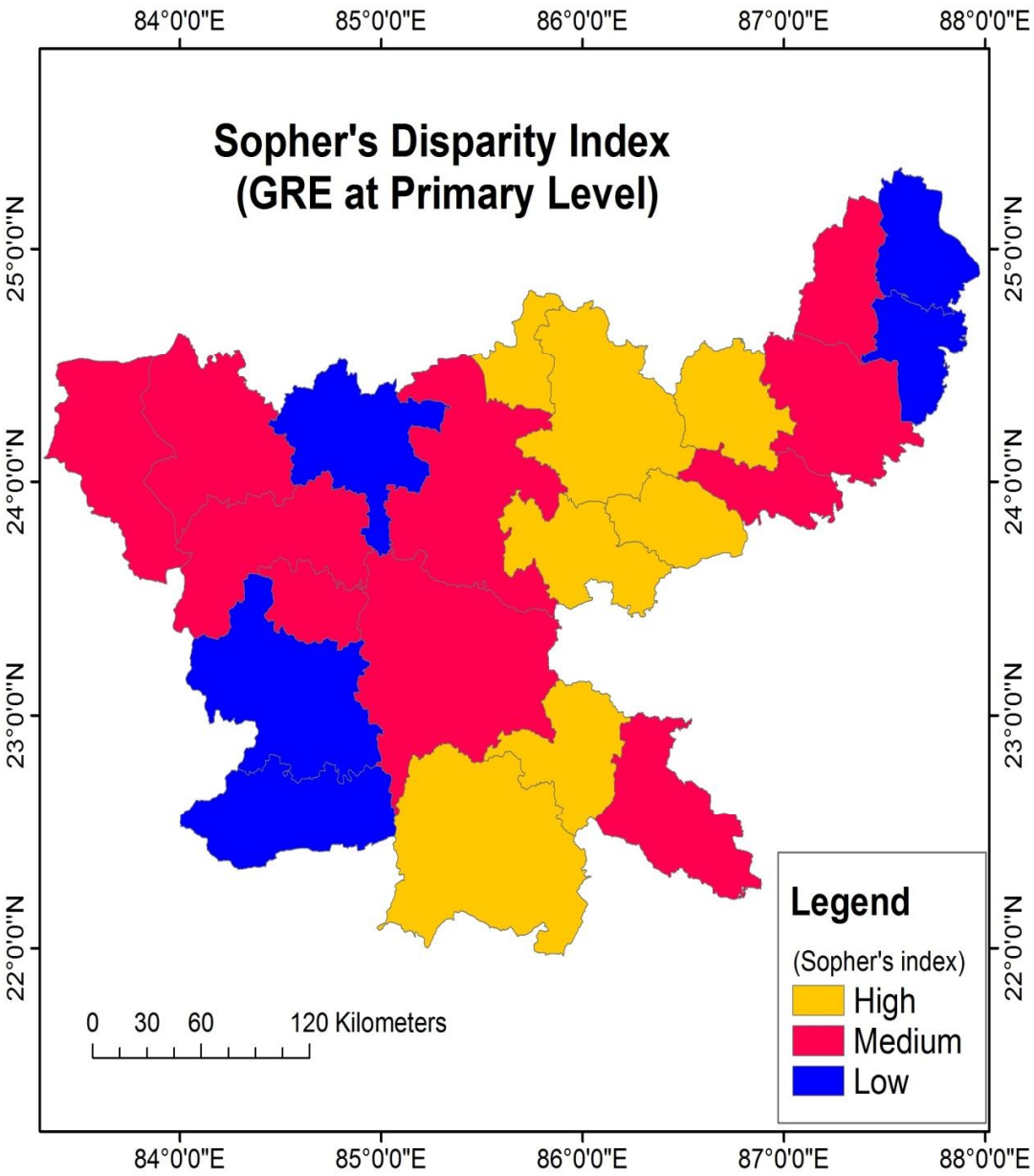
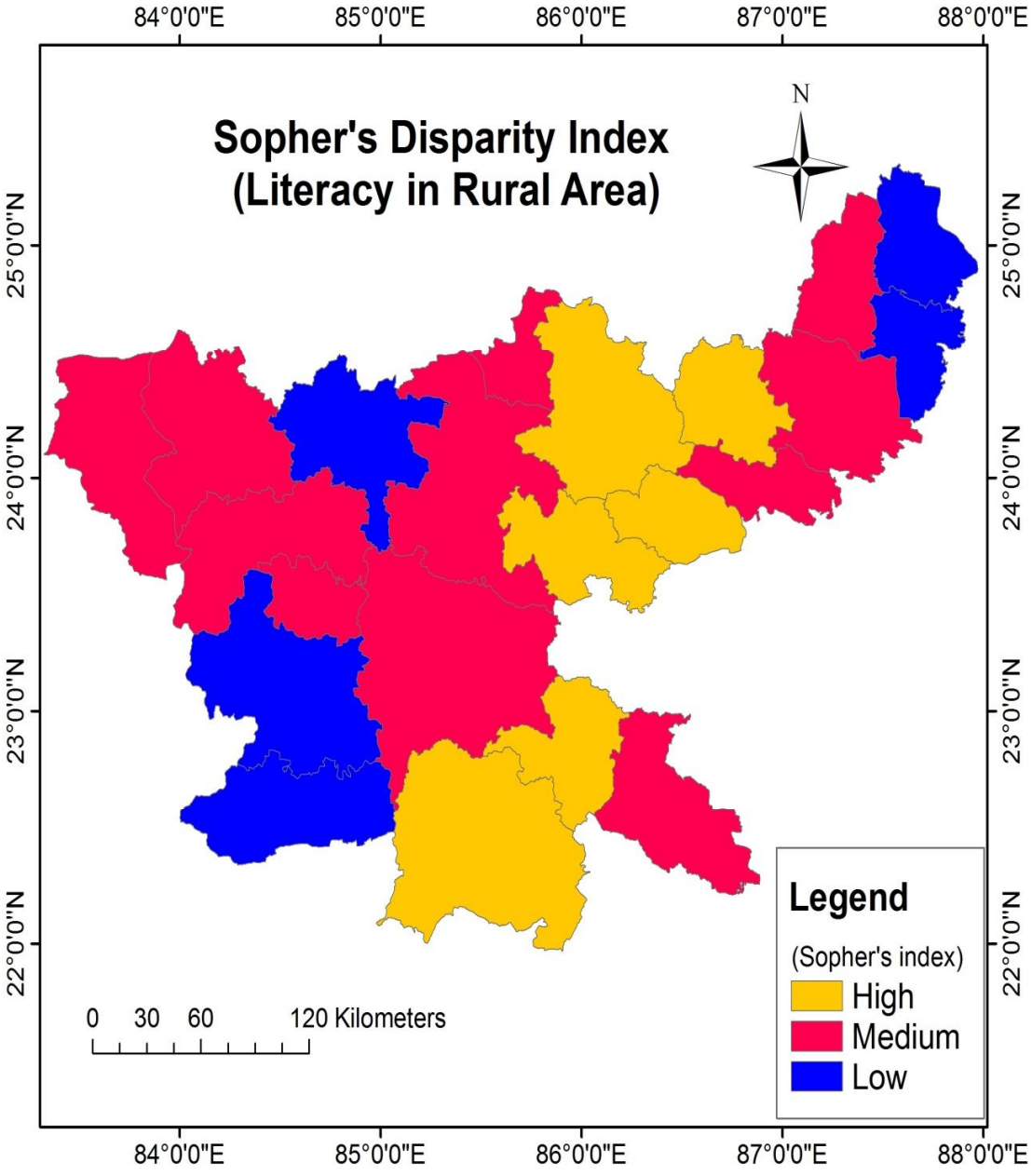
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
0 30 60 120 Kilometers
Legend
(Sopher's index)
High
Medium
Low


Sopher's Disparity Index
(GRE at Primary Level)
84°0'0"E
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
0 30 60 120 Kilometers
Legend
(Sopher's index)
High
Medium
Low


Sopher's Disparity Index
(Literacy in Rural Area)
N
84°0'0"E
85°0'0"E
86°0'0"E
87°0'0"E
88°0'0"E
25°0'0"N
24°0'0"N
23°0'0"N
22°0'0"N
0 30 60 120 Kilometers
Legend
(Sopher's index)
High
Medium
Low

4. COEFFICIENT OF VARIATION (C.V)

C.V = standard deviation / mean

While measuring the variation by using this method we can have series of observations, example literacy rate or enrolment rate of all districts of particular state. To measure the inter-district literacy disparities or inter district enrolment disparity and extent of variation we can use measure of central tendencies like coefficient of variation. The calculated value is always between 0 and 1. in case of perfect equality or no disparity at all the value of C.V will be 0, indicating there is no variation in the series of observation. However the higher the calculated value higher the greater the variation. thus if we measure the C.V for two sets of observation like district wise male and female literacy, we can compare values for these observations and find out if there is inter-district variations is more in case of male or female.

Coefficient of variation for male and female literacy rates in Jharkhand

TABLE 6.10

COEFFICIENT OF VARIATION SHOWING RURAL-URBAN VARIATION

MEASURES OF CENTRAL TENDENCY	TOTAL		RURAL		URBAN	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
STANDARD_DEVIATION	10.83	10.51	8.93	6.37	3.71	3.44
MEAN	61.89	35.76	57.57	28.87	74.83	81.73
COEFFICIENT OF VARIATION	0.17	0.29	0.16	0.22	0.05	0.04

Above table shows that there exist more disparity in females compared to males in rural sector and when we see compare total.

TABLE 6.11

COEFFICIENT OF VARIATION SHOWING VARIATION IN ENROLMENT AMONG GENDER AT PRIMARY LEVEL

	GER _ total	GER _boys	GER _girls at	NER _total	NER _boys	NER_girls
STANDARD_DEVIATION	12.31	11.99	12.99	9.14	8.94	9.60
MEAN	59.67	65.52	53.37	45.86	50.53	40.84
COEFFICIENT OF VARIATION	0.21	0.18	0.24	0.20	0.18	0.23

Coefficient of correlation (C.V) is more for girls when we see GER and NER that again suggests that there is much disparity among girls compare to boys.

TABLE 6.12

COEFFICIENT OF VARIATION SHOWING VARIATION IN ENROLMENT AMONG GENDER AT UPPER PRIMARY LEVEL

	GER_Total	GER_boys	GER_Girls	NER_Total	NER _boys	NER_girls
STANDARD_DEVIATION	11.21	11.00	12.33	6.31	6.44	6.73
MEAN	59.72	67.63	50.88	29.08	33.53	24.12
COEFFICIENT OF VARIATION	0.19	0.16	0.24	0.22	0.19	0.28

similarly at upper primary level girls GER and NER shows much variation compared to boys.

5) EDUCATIONAL DEVELOPMENT INDEX (EDI)

Methodology

To develop educational development index at district level, following four broad indicators with subdivision have been considered for the study[54].

1) **Infrastructure Gap**

Average Student-Classroom Ratio (SCR)

[54] Yadav, Anil K. and Madhu Srivastava (2001), *Educational Development Parameters and the Preparation of Educational Development Index*, Institute of Applied Manpower Research, New Delhi, Planning Commission,Government of India and Anil.k.Yadav, "An inquiry in disparity in educational development

School with SCR > 60

Percentage of Schools with blackboard.

Percentage of Schools with Boys' Toilet

Percentage of Schools with Girls' Toilet

Percentage of Schools with Electricity, playground.

2) **Teachers**

Percentage of Female Teachers

Pupil-Teacher Ratio

Percentage of Schools with Pupil-Teacher Ratio> 60

Percentage of Schools with three or less Teachers

Percentage of Teachers with Professional Qualifications

3) **Outcomes**

Gross Enrolment Ratio (GER) – Overall

Gender Parity Index in Enrolment

Repetition Rate

Percentage of Passed Children to Total EnrolmentPercentage of Appeared Children Passed with > 60 per cent

Based on above indicators Principal Component Analysis methodology is used to develop the educational development index at the District level, which helps in ranking the districts according to different parameters such as infrastructure gap, teachers and outcomes.

INFRASTRUCTURE GAP

- SCR
- SCR>60
- % BLACKBOARD
- %COMMON TOILET
- %GIRLS TOILET
- % ELECTRICITY, PLAYGROUND

TABLE 6.13
INFRASTRUCTURE GAP

DISTRICTS	SCR	SCR>60	PERC_BLA	COM_TOI	GIRLS_TOI	ELECTRICITY	PLAYGROUND
Bokaro	24.34	3	100.00	91.93	94.48	92.96	78.71
Chatra	22.53	2	100.00	87.62	91.77	96.02	70.30
Deoghar	26.63	18	100.00	90.25	96.23	96.31	80.27
Dhanbad	26.38	16	100.00	99.29	93.55	86.04	64.72
Dumka	24.80	1	84.96	87.62	91.77	82.98	75.12
Garhwa	11.42	13	98.76	91.56	87.57	98.63	87.51
Giridih	17.09	13	99.74	90.83	91.30	95.51	81.37
Godda	24.80	11	98.08	97.08	86.62	99.04	75.79
Gumla	32.72	3	97.22	93.45	93.05	94.45	84.13
Hazaribagh	31.11	2	87.25	76.06	85.05	86.70	57.27
Jamtara	30.53	0	99.74	89.95	79.79	95.48	69.89
Khunti	26.17	2	99.29	91.93	94.48	96.77	79.22
Kodarma	16.40	4	100.00	100.00	79.55	96.80	68.80
Latehar	27.25	1	100.00	90.25	96.23	96.48	66.55
Lohardaga	23.27	2	93.62	88.18	77.73	86.29	75.02
Pakaru	27.31	9	100.00	94.00	94.93	96.90	79.38
Palamau	15.75	19	86.78	86.31	92.23	93.64	84.68
Paschim Singhbhum	16.30	10	99.29	89.95	79.79	92.65	73.79
Purbi Singhbhum	26.48	3	94.35	83.70	89.86	95.92	75.19
Ramgarh	12.16	5	100.00	88.18	77.73	93.47	84.45
Ranchi	30.86	2	89.85	85.12	92.60	96.56	66.62
Sahibganj	51.09	14	100.00	92.45	95.92	97.69	80.90
Saraikela-kharsawan	35.44	9	99.29	100.00	79.55	98.41	87.22
Simdega	15.63	2	89.85	90.83	91.30	95.99	74.85

source- DISE (2007-08)

TEACHERS

- PERCENTAGE OF FEMALE TEACHERS
- PTR
- % OF SCHOOL WITH PTR>100
- % OF SCHOOLS WITH 3 OR LESS TEACHERS
- %OF TEACHER WITH PROFESSIONAL QUALIFICATION

TABLE 6.14

TEACHERS INDICATORS

DISTRICTS	PER_F_T	PTR	PTR>100	PER_LESS_3_TEA	PER_PRO_QUA
Bokaro	62.61	30.36	15	405	18.77
Chatra	72.40	30.00	42	308	19.27
Deoghar	62.93	25.75	17	82	19.36
Dhanbad	70.41	29.53	63	242	19.24
Dumka	60.12	90.74	35	153	17.78
Garhwa	53.03	14.23	45	136	18.87
Giridih	58.16	23.51	54	343	18.95
Godda	57.85	25.63	39	203	19.30
Gumla	64.77	15.06	16	273	19.87
Hazaribagh	56.83	21.29	47	61	19.29
Jamtara	63.44	47.94	24	152	19.18
Khunti	62.32	16.23	25	108	18.89
Kodarma	67.47	10.32	3	283	18.68
Latehar	58.51	26.21	10	129	19.65
Lohardaga	56.54	13.16	9	306	19.62
Pakaru	59.43	41.87	15	109	19.49
Palamau	64.84	24.42	70	153	19.57
Paschim Singhbhum	63.62	14.36	5	158	18.98
Purbi Singhbhum	62.39	67.89	28	123	18.90
Ramgarh	54.99	29.83	32	122	19.20
Ranchi	52.86	24.34	43	94	19.09
Sahibganj	67.36	23.66	25	128	19.63
Saraikela-kharsawan	57.81	13.14	28	205	19.90
Simdega	73.24	24.03	4	273	19.13

OUTCOMES

- GER
- NER
- GPI
- REPITION RATE
- % OF PASSED CHILDREN
- % OF APPEARED CHILREN PASSED WIYH >60%

TABLE 6.15
OUTCOMES INDICATORS

DISTRICTS	GER	NER	GPI	REPT_RATE	PER_PASSED_CHIL	PER_PASSED>60
Bokaro	77.7	27.80	0.80	0.05	91.13	17.74
Chatra	76.5	60.90	0.75	11.75	90.10	22.28
Deoghar	81	50.20	0.77	0.00	92.65	16.00
Dhanbad	73.4	35.45	0.81	6.01	96.54	22.59
Dumka	89.3	31.70	0.67	7.98	88.49	21.13
Garhwa	98.4	54.85	0.60	0.00	96.03	17.51
Giridih	85.1	44.10	0.79	3.84	93.22	21.40
Godda	81.2	44.55	0.75	8.74	91.09	20.88
Gumla	87.8	40.25	0.66	0.00	92.36	15.61
Hazaribagh	92.1	54.05	0.66	12.15	93.86	28.66
Jamtara	84.3	44.00	0.60	3.26	94.16	23.96
Khunti	72	48.75	0.69	5.15	94.06	19.88
Kodarma	78.1	55.95	0.75	3.25	97.15	25.26
Latehar	75	37.70	0.74	0.00	89.48	11.91
Lohardaga	88.5	57.95	0.70	3.25	88.07	12.38
Pakaru	71.7	51.95	0.76	5.10	89.84	9.69
Palamau	84.1	35.85	0.77	0.00	91.94	20.24
Paschim Singhbhum	71.6	28.85	0.70	0.00	95.09	17.81
Purbi Singhbhum	84.8	33.15	0.74	5.57	91.96	23.88
Ramgarh	84.8	32.05	0.69	7.75	90.91	18.13
Ranchi	83.8	39.25	0.69	8.59	87.36	20.17
Sahibganj	83.7	39.05	0.67	0.00	91.99	20.51
Saraikela-kharsawan	87.4	35.38	0.88	4.15	99.26	26.60
Simdega	69.3	38.10	0.81	3.41	95.13	13.31

SOURCE-DISE (2007-08)

TABLE 6.16

EDUCATIONAL DEVELOPMENT INDEX (EDI) AT ELEMENTARY LEVEL

DISTRICT	INFRASTRUCTURES	TEACHER	OUTCOMES	ELEMENTARY LEVEL	EDI RANK
Bokaro	0.194751321	0.366483	-1.62624212	0.930240419	3
Chatra	-0.211136466	0.604259	0.94182357	-0.229330624	18
Deoghar	0.970532209	0.102916	-0.47665274	0.661057517	7
Dhanbad	0.160755543	0.092219	-0.97223023	0.520464469	10
Dumka	-1.900160677	-3.33734	1.02070598	-2.681056172	24
Garhwa	1.096683364	-0.58571	0.99604338	-0.205626642	17
Giridih	0.72709101	-0.05738	0.20201002	0.200387727	13
Godda	0.931103697	-0.02855	0.42559776	0.205206496	12
Gumla	0.404942035	1.52731	0.06010403	0.804945876	5
Hazaribagh	-2.814634036	-0.48105	2.42854858	-2.439148853	23
Jamtara	-0.296312464	-0.53555	0.74412427	-0.672525091	20
Khunti	-1.175470687	-0.14265	0.15177128	0.041304106	15
Kodarma	0.390879119	0.779978	0.21986386	0.450780052	11
Latehar	0.487342037	0.421385	-1.28157404	0.659083242	8
Lohardaga	-0.153230509	1.223266	0.21643853	-0.067532263	16
Pakaru	0.845333719	-0.23518	-0.84915796	0.61992025	9
Palamau	-0.126492305	0.006728	-0.43340572	0.132540457	14
Paschim Singhbhum	-0.019146665	0.427046	-1.49433062	0.808993551	4
Purbi Singhbhum	-0.598815945	-1.53389	0.19518473	-0.998827684	21
Ramgarh	0.138272948	-0.50141	0.53193495	-0.382184565	19
Ranchi	-1.067129634	-0.75687	0.94372604	-1.181777829	2
Sahibganj	1.103812692	0.626286	0.14151424	0.681270408	6
Saraikela-kharsawan	1.427760344	1.021223	-0.24438467	1.153250584	1
Simdega	-0.516730649	0.996475	-1.84141313	0.988564571	22

We have tried to capture the educational development in various districts of Jharkhand by means of index known as Educational Development Index (EDI). The index mentioned above has been developed by using the indicators such as Infrastructures, Teachers, and outcomes. It may be observed through the table 6.4 that Saraikela-kharsawan holds rank one followed by Simdega, Bokaro, Paschim Singhbhum, Gumla. The worst performing districts are Dumka, Hazaribagh, Ranchi and Purbi Singhbhum. We have tried to highlight the disparity in educational development at the district level. Though our index (EDI) is showing some different picture, indicator wise positions are different. It means that interventions are required and necessary in those indicators where particular district is weak. In order to make weak districts beneficial as per EDI, resource allocation is required and government should take some strong steps to bring the backward districts or lacking districts to come forefront and thus arriving at sound balance between various districts of Jharkhand or dispersing benefits and development to all the districts of Jharkhand.

The motive of infrastructure development in elementary education is to increase school attendance motivation and to improve academic performance of students. The favourable attitude towards the school infrastructure quality facilitates the above two mentioned factors.

The Importance of Educational Infrastructure Facilities and its impact on other factors of enrolment.

The condition, nature of school infrastructure have a good impact on access and quality of education:

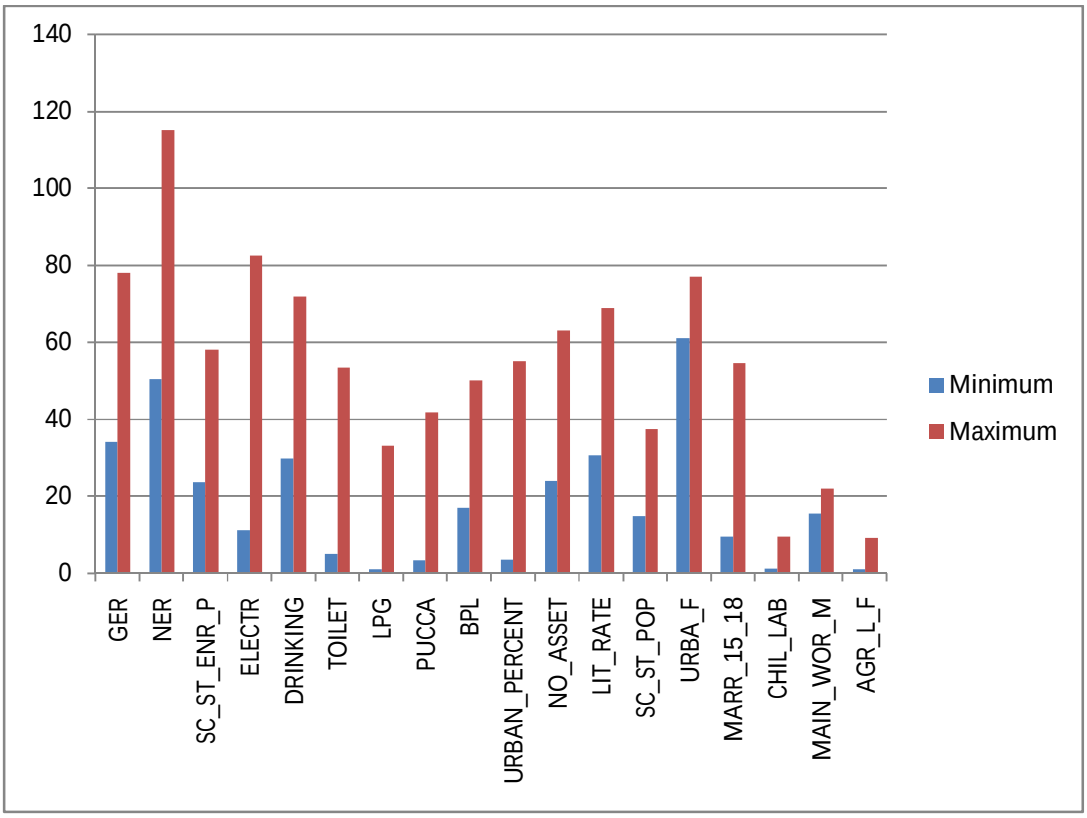
- where the quality of infrastructure (particularly water and sanitation facilities) is improved, enrolment and completion rates are also improved and there is less teacher absenteeism, and
- where the condition of school facilities is improved, learning outcomes are also improved.

TABLE SHOWING DESCRIPTIVE STATISTICS OF CENSUS DATA

TABLE6.17

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
GER	18	43.94	34.10	78.04	60.4000	12.15872	147.834
NER	18	64.73	50.37	115.10	89.5094	17.85098	318.657
SC_ST_ENR_P	18	34.23	23.64	57.87	39.8983	10.30942	106.284
ELECTR	18	71.40	11.10	82.50	35.6556	22.01599	484.704
DRINKING	18	42.20	29.70	71.90	52.7167	13.19199	174.029
TOILET	18	48.40	5.00	53.40	17.3111	12.89646	166.319
LPG	18	32.10	.90	33.00	8.0778	9.04548	81.821
PUCCA	18	38.50	3.30	41.80	16.3944	12.17377	148.201
BPL	18	33.00	17.00	50.00	30.2222	8.86205	78.536
URBAN_PERCENT	18	51.50	3.53	55.03	17.8833	17.24469	297.379
NO_ASSET	18	39.00	24.00	63.00	41.5556	11.00386	121.085
LIT_RATE	18	38.14	30.65	68.79	51.0411	10.41495	108.471
SC_ST_POP	18	22.68	14.76	37.44	25.2911	7.12255	50.731
URBA_F	18	16.00	61.00	77.00	70.2778	4.52191	20.448
MARR_15_18	18	45.12	9.42	54.54	27.5767	14.82332	219.731
CHIL_LAB	18	8.39	1.15	9.54	4.1756	2.50813	6.291
MAIN_WOR_M	18	6.56	15.52	22.08	19.0883	1.64514	2.706
AGR_L_F	18	8.00	1.00	9.00	4.7778	2.31505	5.359
Valid N (listwise)	18						

GRAPH SHOWING MINIMUM AND MAXIMUM OF INDICATORS



There is wide variation between minimum and maximum value of electricity distribution, toilet facility, pucca house, rate of urbanization showing more level of disparity in the region.

The dependent variable of our analysis is GER, NER, SC/ST Enrolment ratio. But GER and NER are almost similarly related with our independent variables hence GER is taken into consideration. There are many independent variables and it has been classified in to three categories. Among infrastructure and amenities some have been picked up due to multiple co-linearity. The indicators taken into consideration are electricity, toilet facility, no asset and urbanization.

TABLE 6.18

TABLE SHOWING CORRELATION BETWEEN GER AND OTHER INFRASTRUCTURAL AND AMENITIES INDICATORS

	GER	NER	ELECT	DRINKING	TOILET	LPG_GAS	PUCCA_H	BPL	URBAN	NO_ASSET_HH
GER	1									
NER	.995**	1								
ELECT	.620**	.628**	1							
DRINKING	-.269	-.303	.228	1						
TOILET	.671**	.656**	.794**	.280	1					
LPG_GAS	.681**	.651**	.711**	.300	.925**	1				
PUCCA_H	.642**	.651**	.932**	.180	.865**	.814**	1			
BPL	.150	.144	-.235	-.189	-.115	-.031	-.295	1		
URBAN	.745**	.723**	.652**	.201	.758**	.856**	.750**	-.226	1	
NO_ASSET_HH	-.872**	-.855**	-.647**	.063	-.762**	-.710**	-.655**	-.028	-.730**	1

INFRASTRUCTURE AND AMENITIES-

We will study the relationship between GER and infrastructural indicators and SC/ST enrolment and infrastructural indicators. The correlation matrix shows the strength and relationship. We see all the indicators have strong positive relation with GER except household with no asset. Hence it indicates that electricity, toilet, urbanization are strongly and positively related with GER and have negative strongt relation with

household with no asset. The amenities and infrastructural parameters though are not directly be related with GER or NER but have indirect impact on GER and NER. As these factors are related with well being and good standard of living. We assume that people who have good standard of living and better well being can be expected to send their children to school. SC/ST enrolment is strongly positively related with toilet facility and urbanization and negatively related with household with no asset possession.

TABLE 6.19

GER AND INFRASTRUCTURE AMINITIES

	GER	ELECT	TOILET	NO_ASSET_HH	URBAN
GER	1				
ELECT	.620**	1			
TOILET	.671**	.794**	1		
NO_ASSET_HH	-.872**	-.647**	-.762**	1	
URBAN	.745**	.652**	.758**	-.730**	1

TABLE 6.20
SC/ST ENROLMENT AND INFRASTRUCTURE AMENITIES

	SC_ST_P_ENR	ELECT	TOILET	NO_ASSET_HH	URBAN
SC_ST_P_ENR	1				
ELECT	.439	1			
TOILET	.645**	.794**	1		
NO_ASSET_HH	-.874**	-.647**	-.762**	1	
URBAN	.647**	.652**	.758**	-.730**	1

SOCIAL PARAMETRES

The relationship is seen between GER and social indicators like literacy rate, SC/ST population and married female between 15-18 years. Literacy rate has strong and positive relation with GER and SC/ST enrolment. But other two indicators like SC/ST population and married female within 15-18 years are negatively correlated with GER. there exist negative strong relation between SC/ST enrolment and female married in age 15-18. Thus indicating that marriage of female within age 15-18 will lead to lowering of GER and SC/ST enrolment.

TABLE 6.21

GER AND SOCIAL INDICATORS

	GER	LIT_RATE	SC_ST_POP	MARR_15_18
GER	1			
LIT_RATE	.830**	1		
SC_ST_POP	-.247	-.286	1	
MARR_15_18	-.218	-.475*	-.314	1

TABLE 6.22

SC/ST ENROLMENT AND SOCIAL INDICATOR

	SC_ST_ENR_P	LIT_RATE	SC_ST_POP	MARR_15_18
SC_ST_ENR_P	1			
LIT_RATE	.755**	1		
SC_ST_POP	-.052	-.286	1	
MARR_15_18	-.476*	-.475*	-.314	1

ECONOMIC PARAMETERS

The correlation between GER and economic indicators suggests that GER is positively related with work participation rate though it is strongly not related. Share of agricultural

labourers are negatively and strongly related with GER and similar is the case with child labour and it is also negatively related with GER. when we see correlation between SC/ST enrolment with other economic variables then we find that work participation rate is positively related with SC/ST enrolment though it does not have strong relation with it. Agricultural labourers share is strongly related but has negative relation. Similarly child labour are negatively related though does not have strong relationship.

TABLE 6.23

GER AND ECONOMIC INDICATORS

	GER	WORK PARTICIPATION	SHARE OF AGRICULTURAL LABOURER	CHILD LABOUR
GER	1			
WORK PARTICIPATION	.198	1		
SHARE OF AGRICULTURAL LABOURER	-.499*	.519*	1	
CHILD LABOUR	-.489*	.415	.030	1

TABLE 6.24

SC/ST ECONOMIC INDICATORS

	SC_ST_ENR_P	WORK PARTICIPATION	SHARE OF AGRICULTURAL LABOURER	CHILD LABOUR
SC_ST_ENR_P	1			
WORK PARTICIPATION	.037	1		
SHARE OF AGRICULTURAL LABOURER	-.563*	.519*	1	
CHILD LABOUR	-.132	.415	.030	1

REGRESSION ANALYSIS

Regression analysis is most commonly used for prediction. The aim of regression analysis is to create a mathematical model that can be used to forecast the values of a dependent variable based upon the values of an independent variable. In other words, we use the model to forecast the value of Y when we know the value of X. (The dependent variable is the one to be predicted). Here the dependent variables are dropout and Gross enrolment ratio (GER). Correlation analysis is often used with regression analysis because correlation analysis is used to measure the strength of association between the two variables X and Y.

The dependent variables are those values which we are trying to predict or whose dependence on the independent variable is being studied. It is also referred to as the explained variable.

The independent variable is used to explain the values of the dependent variables. The values of the independent variables are not being explained or determined by the model. Thus they are independent of the model. The independent values are called explanatory values.

If the significance is less than 0.05 then we assume that the estimate in column B to be asserted as true at level of significance of 95%.

TABLE 6.25

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892[a]	.795	.732	9.23743
2	.946[b]	.895	.821	7.55582

The model summary tells us which of the variables were used as independent variables. The proportion of variance in the dependent variable (GER) that was explained by variations in the independent variable. in this case 82%.

TABLE 6.26

RESULT OF REGRESSION ANALYSIS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	136.506	18.495		7.381	.000
	ELECTR	.091	.169	.112	.539	.094
	TOILET	.273	.359	.197	.760	.061
	NO_ASSET	-1.217	.338	-.750	-3.603	.003
	URBAN_PERCENT	.283	.214	.273	1.318	.010
2	(Constant)	11.997	45.434		.264	.797
	ELECTR	.314	.208	.388	1.509	.062
	TOILET	.420	.448	.303	.938	.071
	NO_ASSET	-.328	.430	-.202	-.762	.063
	URBAN_PERCENT	.481	.233	.465	2.062	.066
	LIT_RATE	1.792	.640	1.045	2.800	.019
	SC_ST_POP	.168	.394	.067	.426	.179
	MARR_15_18	.193	.229	.160	.842	.119

dependent variable- GER

The depenedent variable is GER. On the basis of this dependent variable, the regression results is found as shown in table. The regression results shows that there is significant relationship between GER and electricity, toilet, no asset, urbanization, and literacy rate whereas there is no significant relation between GER and SC/ST enrolment and married girls between 15-18 age group. Thus indicating that increase in one independent variable will lead to increase in dependent variable, and if it is negatively related then vice versa.

TABLE 6.27

RESULT OF REGRESSION ANALYSIS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	77.958	10.522		7.409	.000
	ELECTR	.146	.096	.312	1.519	.153
	TOILET	.107	.204	.134	.525	.109
	NO_ASSET	-.856	.192	-.914	-4.455	.001
	URBAN_PERCENT	.049	.122	.082	.404	.193

2	(Constant)	22.975	24.288		.946	.366
	ELECTR	.352	.111	.752	3.163	.010
	TOILET	.426	.239	.533	1.780	.106
	NO_ASSET	-.301	.230	-.322	-1.311	.019
	URBAN_PERCENT	.311	.125	.521	2.497	.032
	LIT_RATE	1.050	.342	1.061	3.069	.012
	SC_ST_POP	-.132	.210	-.091	-.627	.245
	MARR_15_18	-.233	.122	-.336	-1.907	.086

DEPENDENT VARIBLE- SC/ST ENROLMENT

The dependent variable is SC/ST enrolment. On the basis of this dependent variable, the regression results are found as shown in table. The regression results shows that there is significant negative relationship between SC/ST enrolment and electricity, no asset, urbanization, and literacy rate married girls between 15-18 age group.

- Household with no asset will lead to lowering of GER as it is proxy to no income, People who does not earn much assumed to have no assets.
- Literacy rate is significantly related with GER at the confidence of 95%. as literates are more aware of sending their children to school and hence leading to more increase in GER. in this case rural male, rural female literacy and male urban literacy are all leading to increase in GER and have significant relation with GER.
- Percent urbanization is also an important factor. it is significantly related with GER at 99 % of confidence, determining increase in GER with increase in this factor as the region which is urbanized will have good infrastructure, availability and accessibility of schools.
- Electricity, toilet facility, are amenities assumed to be understood as the parameter of well-being of individual. hence contributing positively and significantly to GER

- Child labour is a vital issue, in the study region between age 5.14, the range between child labour is 2-10% in various districts. There exist negative relation with GER, as it signifies negative relation with GER, these children are out of school children who cant avail the right to education RTE though it has become one of our fundamental rights.
- Share of agricultural labourers are also negatively linked with GER as these labourer are daily wage earner as they does not own land and hence survive at minimum earning, and hence cant afford to send their children at school.
- Whereas work participation rate is positively related with GER, as they work for more number of days and can earn enough to send their children to school.

TABLE 6.28

DISE DATA

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
GER_DI	18	27	71	98	82.28	7.218	52.095
SPR	18	6	3	9	6.78	1.544	2.384
PTR	18	80	10	90	28.78	19.987	399.477
GPI	18	0	1	1	.68	.065	.004
TPS	18	11	2	13	5.00	2.656	7.055
BLA	18	15	85	100	96.11	5.312	28.218
COM_TOI	18	24	76	100	90.30	5.748	33.042
GIRLS_TOI	18	18	78	96	89.67	5.758	33.158
SCR	18	40	11	51	24.50	8.833	78.029
ELECT	18	16	83	99	93.62	4.831	23.339
PLAY	18	30	57	88	75.53	7.736	59.853
Valid N (listwise)	18						

GRPAPH SHOWING MINIMUM AND MAXIMUM OF INDICATORS USED IN DISE DATA

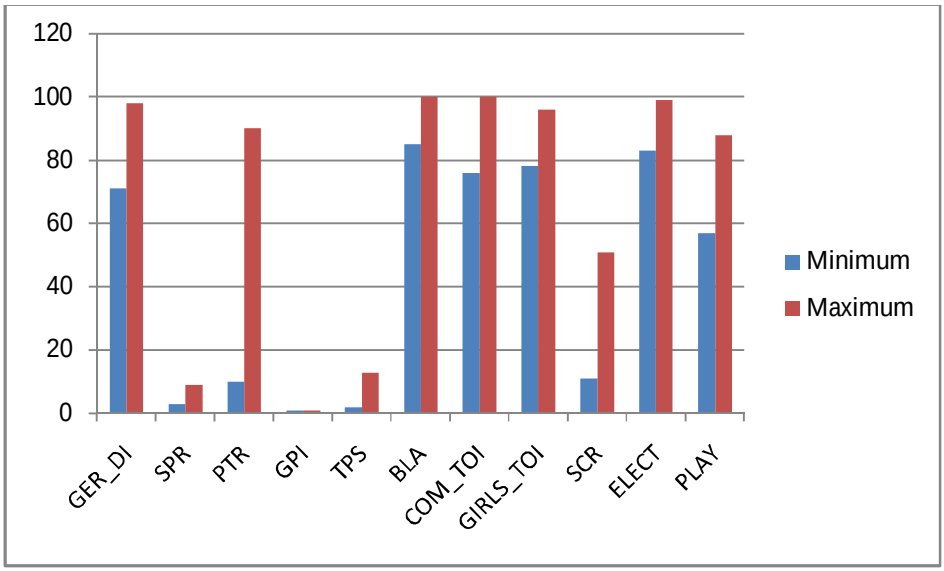


TABLE 6.29

GER DISE AND OTHER DISE VARIABLES

	GER_DI	SPR	PTR	TPS	BLA	COM_TOI	GIRLS_TOI	SCR	ELECT	PLAY
GER_DI	1									
SPR	.256	1								
PTR	.035	-.321	1							
TPS	-.122	-.452	.085	1						
BLA	-.498*	-.127	-.415	.233	1					
COM_TOI	-.448	-.050	-.237	.047	.683**	1				
GIRLS_TOI	-.119	-.316	.342	.562*	.085	.039	1			
SCR	-.027	-.489*	.105	.740**	.000	-.096	.438	1		
ELECT	-.127	.335	-.343	.122	.534*	.286	.201	-.005	1	
PLAY	.199	.452	-.028	.086	.249	.270	.306	-.145	.444	1

TABLE 6.30

GER DISE ND CENSUS VARIABLES

	GER_DI	ELECTR	TOILET	NO_ASSET	URBAN_PERCENT	LIT_RATE	SC_ST_POP	AGR_L_M	MAIN_WOR_M	CHIL_LAB
GER_DI	1									
ELECTR	-.156	1								
TOILET	-.076	.794**	1							
NO_ASSET	-.045	-.647**	-.762**	1						
URBAN_PERCENT	-.094	.652**	.758**	-.730**	1					
LIT_RATE	.005	.860**	.854**	-.854**	.645**	1				
SC_ST_POP	.101	-.483*	-.323	.184	-.458	-.286	1			
SHARE OF AGRI. LAB	.102	-.510*	-.555*	.526*	-.341	-.645**	.240	1		
WORK PART. RATE	-.047	-.119	.046	-.190	.063	-.038	.287	-.044	1	
CHIL_LAB	-.074	-.686**	-.413	.426	-.349	-.580*	.408	.030	.567*	1

There is no strong relationship found between DISE GER and other variables. there I no significant result found through DISE data as was expected. So the result of correlation and regression does not give good result. From various independent variable from DISE data the indicators taken into consideration are student per room (SPR), pupil teacher ratio(PTR), and infrastructures such as electricity, playground and girls toilet.

Even when we have tried to relate DISE data GER and other indicators of census we are not getting the expected result or result according to literature.

TABLE 6.31

REGRESSION RESULT BETWEEN GER(DISE DATA) AND CENSUS VARIABLES

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	136.051	111.426		1.221	.262
	ELECTR	-.067	.357	-.204	-.188	.856
	TOILET	.539	.683	.963	.789	.456
	NO_ASSET	-.568	.801	-.866	-.709	.501
	URBAN_PERCENT	-.361	.422	-.862	-.856	.420
	LIT_RATE	.312	.916	.451	.341	.743
	MALE_T_WOR	-3.503	4.148	-.734	-.844	.426
	CHIL_LAB	2.430	3.560	.844	.683	.517
	AGR_L_M	2.026	2.949	.790	.687	.514
	SC_ST_POP	.267	.604	.263	.442	.672
	MARR_15_18	.417	.465	.857	.898	.399

Dependent variable- DISE GER

There is no significant relation between DISE GER and census socio-economic and infrastructural variables.

CHAPTER-7

SUMMARY AND CONCLUSION

7.1: Introduction

Elementary education is considered as the founding stone leading to formation and development of human skills and key component to human development, it is the great enabling factor to make use of opportunities available. Although India has progressed a lot in the educational field but still it has to go a long way to go in order to achieve the universalization of elementary education, Though it has taken various step to universalize elementary education. The major step towards it is implementation of Sarva Siksha Abhiyan (SSA), the flagship to achieve the goals of elementary education. SSA has achieved the goals of access and enrolment to a larger extent covering Primary and Upper Primary stages.

The Central and State governments in different states have over a period of time evolved strategies to check enrolment and dropout rates and expand levels of attainment in the school, the key element of it include. i) creating alertness and community mobilization. ii)involvement of (ii) involving of communities and PRIs (73rd and 74th Constitutional Amendments); (iii) economic incentives; (iv) expansion in the infrastructure facilities in schools; (v) District Primary Education Programme (DPEP) initiative; (vi) National Programme of Nutritional Support to Primary Education (Mid-day Meals Scheme); (vii) Education Guarantee Scheme and Alternative and Innovative Education; (viii) Teacher Education Schemes, and (ix) Sarva Shiksha Abhiyan (SSA) initiative.

The Government formulated a revised Constitution Amendment Bill (93rd Amendment). The Lok Sabha passed the bill on 28 November 2001. It was considered by the Rajya Sabha on 14 May 2002.The main features/characteristics of the revised Constitution (93rd Amendment) Bill are as follows : (i) Insertion of a new Article 21A (Fundamental Rights) to provide for free and compulsory education to all children of the age of 6-14 years in manner in which State may, by law, determine; (ii) Substitution of existing Article 45 (Directive principle of state policy) of the Constitution with the

following : "The State shall endeavour to provide early childhood care and education for childrens until they complete the age of 6 years"; (iii) Insertion of the following new Clause in Article 51(A) of the Constitution relating to Fundamental Duties of the citizens : "who is a parent or guardian to provide opportunities for education to his child, or, as the case may be, a ward between the age of 6-14 years".

The Scheme of Sarva Shiksha Abhiyan (SSA) was evolved from the recommendations of the State Education Ministers' Conference held in October 1998, to pursue Universalisation of elementary education (UEE) as a mission. Approved in November 2000, the goals of SSA are : (a) that all 6-14 age children (i) are in school/Education Guarantee Scheme (EGS) (ii) completion of five year primary education; and (iii) completion of eight years of schooling (b) Focus on elementary education of adequate quality with emphasis on education for life; (c) bridge and eradicate all gender and social category gaps at primary stage and at elementary education level; and (d) Universal retention. The SSA is aimed to cover the entire country with a special attention on educational needs of girls, Scheduled tribes and Scheduled Tribes and other children in challenging conditions.

Other sponsorship programme include from Centre as Sakshar Bharat Programme, for non-literate female folk of the state's four districts. The scheme is being implemented in a total of 365 districts across the country where female literacy rate in less than 50 %

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though After the implementation of Right to Education Act (RTE) on April 1, 2010 , enrolment of children in primary sections has increased in all districts of Jharkhand, thereby reducing the drop-out rate but the education standards in primary sections has degraded to greater extent**.**

District Primary Education Programme (DPEP and Sarva Shiksha Abhiyan (SSA)

The District Primary Education Programme (DPEP) and the Sarva Shiksha Abhiyan (SSA) are two large scale programs sponsored by government of India aimed at the universalization of primary and upper primary education in India. The Government of India launched the District Primary Education Programme (DPEP) in 1994 with the

endeavour to attain the goal of universal elementary education through district specific planning, decentralized management and community participation, empowerment and capacity building at all levels (Ministry of Education, GOI).

Sarva Shiksha Abhiyan (SSA)

The central government launched the Sarva Shiksha Abhiyan (Universal Elementary Education) in 2001. And in 2002, the 93rd amendment to the Constitution declared free and compulsory education to all children between the ages 6-14. The aim of SSA is to provide significant and value education to all children between the ages 6-14 by 2010. It is an umbrella plan (discussed elsewhere in dissertation) for elementary education in India and includes the District Primary Education Programme DPEP.

The SSA has been engaged in partnership with the state governments. It will not seek to remove or succeed state educational infrastructure. However, it will look for better community participation and to that outcome will aspire at devolution of the school system with community ownership of schools. The financial requirement by the government towards SSA has been expected to be an additional Rupees 6,000 million over the next ten years to be shared by the central and state governments. In the initiation the bulk of the funds will be provided by the central government (75:25 during the 10th five year plan), eventually giving way to a 50:50 accountability between the center and the state.

As the SSA is a relatively current program, we cannot at this point evaluate how well it will be able to achieve its aims. However, the SSA is notable on many counts. Unlike the DPEP, the SSA is a program that is wholly internally funded and does not rely on external resources. The funds for the SSA are allocated from the Union Budget.

Secondly, the SSA is a program of the Central government, even though education in India mainly the liability of state governments. A worrisome factor, however, raised with respect to the SSA is whether the state governments will be able to meet with their share of their financial obligations (which will rise with each five year plan).

Major Schemes for Elementary Education

The chief schemes of elementary education during the tenth plan included SSA, district primary education programme (DPEP), National programme of nutritional support to primary education (NP-NPSE), commonly known as mid-day meal scheme (MDMS), Teacher Education scheme and Kasturba Gandhi Balika Vidyalaya Scheme (KGBVS).

This chapter intends to analyze the findings of the earlier chapter in terms of quantity and quality of elementary education in Jharkhand and the steps that can be taken to overcome the earlier shortcomings.

7.2: Summary:

Enrolment is the key indicator of educational development. It plays a pivotal role in formal education system. Enrolment is the focal point to make programme and polices for the educational development. Statistics, especially the government statistics have shown the high level of enrolment but situation is miserable in reality. The gross enrolment ratio has declined from primary to upper primary and GER is low in case of girls, so there is still a matter of gender biastness found in Jharkhand. The gender disparities are less at upper primary stage as compared to primary stage of education. Gender and caste disparities are more in private unaided schools than government and private aided schools, therefore, the share of boys in enrolment are more than share of girls in enrolment and these disparities are high in Scheduled tribe. There are no gender disparities in case of non-schedule category but the share of the girls in enrolment is lower than boys in case of Scheduled tribe. There are various reason about low gender parity index in private unaided schools because the fee structure is very high and uniform is necessary in private unaided schools and parents do not afford to send every child in private unaided schools. Therefore, they prefer to send male child as compared to female child in private unaided school. Sometimes private unaided school is not near the residence and they do not want to send their daughters by cycle or van. Therefore there are more shares of boys in enrolment in private unaided schools. In every district of Jharkhand, the large shares of enrolled children belong to SC/ST category in government schools. The share of SC/ST girls in enrolment is highest as compared to other categories in government schools. But the share of male children is highest as compared to the share

of female children in all the categories i.e. SC/ST, OBC, general, but in case of schedule caste- there is more gender disparities as compared to other categories. Generally, the girls are busy in taking care of their siblings and sex ratio is very low in Jharkhand as compared to other states. District wise share of SC/ST enrolment is highest in government schools in all the districts of Jharkhand.

Private schools generate the problem concerning gender and caste disparities. The share of non scheduled/OBC is more in private schools than the government schools and there is less gender disparities in case of non scheduled/OBC. The share of Scheduled tribe students are more than the share of non Scheduled tribe and share of girls are more in local bodies schools as compared to private schools.

The number of female teachers is more than the number of male teachers. In case of Jharkhand, same situation is found in different type of management. In government schools, the number of female teachers is more than the number of male teachers except in Lohardaga and Ranchi districts. In case of Private aided and Private Unaided schools, number of female teachers is more than number of male teachers in each district.

The number of teachers in per schools is more in private aided and private unaided schools and then government schools. This situation has been seen at elementary level of education. The number of schools increased in Jharkhand but number of teachers are not increasing as fast as number of schools. In case of private aided and unaided schools, number of teachers is increasing as fast as number of school.

The numbers of teachers are more in private schools than the government schools. District wise analysis was only at elementary level of education. The number of teachers is more in upper primary stage of education as compared to primary stage of education. The highest ratio is 10.11 in case of private schools, 5.18 in case of government schools and 4.00 in case of local bodies schools at primary level. The highest ratio is 16.00 in private schools and 9.43 in government schools at upper primary stage of education. There are huge disparities at primary stage of education in government, private and local bodies' schools. In government schools, the number of teachers is having in per schools increased from primary to upper primary stage of education. The same situation is found in private schools. PTR is very high in private aided schools in Hazaribagh and Dumka.

The pupil teacher ratio is high in government schools and it is very high in Sahibganj, Gumla and Godda. There are inter-district variations in case of PTR. In some district PTR is high in government schools and others have high PTR in private aided or unaided schools. Overall situation of Jharkhand is that PTR is low in private unaided schools and high in government and private aided schools in elementary schools. There are various reasons for low PTR in private unaided schools at elementary level of education across the district of Jharkhand. There is large number of teachers in private unaided schools Table-3.8 shows that the situation is different in case of upper primary schools. Teachers of the government schools are well qualified in terms to qualification and professional qualification.

Physical infrastructure is very important part of schools. School population ratio (SPR) is more in primary to upper primary stage of education and it is high in private schools. The number of upper primary schools is less in Jharkhand. In physical infrastructure, we used various indicators such as student class room ratio, common toilet facility, separate girls' toilet facility, electricity facility and playground facility etc. There is no major problem found in case of physical infrastructure in Jharkhand. There are some variations in different type of management. Private unaided schools have more infrastructural facilities than private aided and government schools. In case of electricity and playground facility, there are huge variations in different type of management because only private schools have more availability of electricity and playground facility.

The main findings of third chapter is: The Gross Enrolment ratio is high in case of boys than girls. GER is declined from primary to upper primary stage of education and this decline is more in case of girls. The share of enrolment is more in government schools than private schools and this share is varying in terms of gender. The boys are more in private schools than girls and girls are slightly more in government schools than boys. This decline of girls in enrolment is more in case of scheduled caste. The share of boys and non-scheduled castes are more enrolled in private schools and the share of scheduled castes and girls are more enrolled in government schools, therefore, this kind of situation is responsible for creating a gap in school education.

The results or the main findings of chapter 4 shows that pupil teacher is lower in private unaided schools than private aided and government schools except Paschim Singhbhm, Garhwa and Gumla.PTR is very high in private aided schools in Hazaribagh and Dumka. The pupil teacher ratio is high in government schools and it is very high in Sahibganj, Gumla and Godda. There are inter-district variations in case of PTR. In some district PTR is high in government schools and others have high PTR in private aided or unaided schools. Overall situation of Jharkhand is that PTR is low in private unaided schools and high in government and private aided schools in elementary schools. There are various reasons for low PTR in private unaided schools at elementary level of education across the district of Jharkhand. There is large number of teachers in private unaided schools. District wise study shows that pupil teacher ratio is low in local bodies schools and it is also low in private schools in some districts Table-4.6 shows that the situation is different in case of upper primary schools. Teachers of the government schools are well qualified (table-4.7 and 4.8) in terms to qualification and professional qualification.

The main findings of chapter 5 suggest that Physical infrastructure is very important part of schools. Student Population Ratio is more in primary to upper primary stage of education and it is high in private schools. The number of upper primary schools is less in Jharkhand. In physical infrastructure, we used various indicators such as student class room ratio, common toilet facility, separate girls toilet facility, electricity facility and playground facility etc. As we mentioned earlier that the study is based on District level. There is no major problem found in case of physical infrastructure in Jharkhand. There are some variations in different type of management. Private unaided schools have more infrastructural facilities than private aided and government schools. In case of electricity and playground facility, there are huge variations in different type of management because only private schools have more availability of electricity and playground facility.

The physical infrastructure index has been calculated through Principal component analysis method. As shown in table-5.16, it gives us clear picture about the infrastructural facility availability in different districts through ranking.

The physical infrastructure index has been calculated through composite index method. As shown in table-5.8, saraikela-kharsawan, garhwa, godda, kodarma are among the top

rankers who have good physical infrastructure. whereas the worst performing districts are hazaribagh, Dumka, Ranchi, Lohardaga, Palamu.

In similar manner the correlation analysis done in the work depicts that there a exists relationship of enrolment and dropout with educational variable such as total government teachers, total female teachers, PTR, GPI, school population ratio(SPR), Teacher per school (TPS). Infrastructure indicators such as black board, common toilet, girl's toilet, school-classroom ratio (SCR), electricity, playground. There exist some relations with these indicators leading to impact on gross enrolment ratio.

CONCLUSIONS.

- The Gross Enrolment ratio is high in case of boys than girls. GER is declined from primary to upper primary stage of education and this decline is more in case of girls. This indicates the gender disparity existing in the region, girls are ignored of sending to schools, and are expected to look after their sibling and work and help in household.
- The share of enrolment is more in government schools than private schools and this share is varying in terms of gender. it is due to right to education. as mid-day meal scheme and other scheme which gives free books, uniforms to children are prevalent in government schools.
- The boys are more in private schools than girls and girls are slightly more in government schools than boys. This is because private schools charge more fees than government schools. Hence parents send their boy child to private schools and girl child are either send to government schools or not send to any schools hence showing the gender discrimination. This decline of girls in enrolment is more in case of scheduled caste. The share of boys and non-scheduled castes are more enrolled in private schools and the share of scheduled castes and girls are more enrolled in government schools, therefore, this kind of situation is responsible for creating a gender and social gap in school education.
- Pupil teacher is lower in private unaided schools than private aided and government schools except Paschim Singhbhm, Garhwa and Gumla.PTR is very high in private aided schools in Hazaribagh and Dumka. The pupil teacher ratio

is high in government schools and it is very high in Sahibganj, Gumla and Godda. Reasons for low PTR in private unaided schools is that there is large number of teachers in private unaided schools though they are not qualified at larger extent. But teachers of the government schools are well qualified in terms to qualification and professional qualification.

- Student-classroom Ratio is more in primary to upper primary stage of education and it is high in private schools signifying more enrolment in these primary and private schools. as here more children are enrolled and more children are there per classroom.
- In physical infrastructure, we used various indicators such as student class room ratio, common toilet facility, separate girls toilet facility, electricity facility and playground facility etc. There is no major problem found in case of physical infrastructure in Jharkhand because district wise study shows that all facility are available in all schools across districts though there exist some variations in different type of management.
- Private unaided schools have more infrastructural facilities than private aided and government schools. In case of electricity and playground facility, there are huge variations in different type of management because only private schools have more availability of electricity and playground facility.
- Among infrastructural or amenities parameters the independent variables which are significantly related with GER and SC/ST enrolment are percentage household with electricity, toilet facility, percentage urbanization and no asset while. These parameters though are not directly be related with GER or NER but have indirect impact on GER and NER. As these factors are related with well being and good standard of living. We assume that people who have good standard of living and better well being can be expected to send their children to school. GER and NER is positively related with electricity, toilet facility LPG gas, pucca houses and urbanization whereas it is negatively related with no asset. no asset is considered as proxy of poverty. and the literature also shows that poverty is indirectly related with GER and NER. according to census the asset comprises of (availing banking facility. radio and transistors, television,

telephone, bicycle, scooter, motorcycle, car, jeep van). hence household with no asset means neither of asset available in houses.

- Among the social indicators the most important independent variables are literacy rate, SC/ST population and married female between age group 15-18, which have greater impact on GER and SC/ST enrolment. Every independent variable is significantly positively related with dependent variables, the literacy rate in different sectors are positively related with GER as the literate population know the benefit of education and hence would lead to increase in GER.
- Among the economic variables the independent variables such as work force participation, share of agricultural workers and child labour. All are are significantly correlated with GER and SC/ST enrolment. Though share of agricultural laboures are negatively related with GER and SC/ST enrolment. People who are engaged in work for more number of days earn more and hence the probability of spending increases. and hence it is positively significantly related with GER and SC/ST enrolment. agricultural labourers are those workers classified under census as one who does not own their land and work on some other's land as wage earner. hence their earning is very less and therefore they could not save so much to send their children to school hence it is negatively related with GER and NER. child labour is negatively related with GER as these childrens are out of school children .the percent child labour vary upto 10 % across districts of Jharkhand
- There is no significant relation between DISE dependent variables (GER) and census data variables.

7.3: Suggestion:

As observed, it is found that there is a gender and caste disparities across the districts of Jharkhand .Even these disparities are found in government schools. Though government launched a scheme to provide free education to all, but still there is caste and gender disparities found in elementary schools. The parents are not ready to send their daughters in school and there is decline in enrolment from primary to upper primary stage of education. This decline is more in girls and Scheduled tribe. These disparities are more in private schools than the government schools. Because education is costly in private

schools and parents generally afford to send one child in private schools and they send boys in private schools. Sometimes the girls are busy to take care of siblings in home and they do not go to schools. One side, government launched a scheme to provide free education to all and other side the private schools generate the caste and gender disparities. The government should do some serious efforts to solve the gender and caste disparities problems in Jharkhand. The government is interested in public private partnership in education and this scheme will create more disparities in weaker section of the society.

The operational blackboard scheme is launched in1990s has made little difference to the instructional quality in government schools. This scheme is helpful to improve the quality of education. As shown in chapter-4th, there is less problem of physical infrastructure found in Jharkhand. But there is still shortage of teachers in government schools. But there is not much variation found in different type of management in case of Jharkhand. The government should do some serious efforts to increase the number of teachers in government schools and trained teachers in private schools because government is interested in public private partnership in education. Therefore, there is need to improve the quality of education in terms of PTR and trained teachers.

The mid day meal scheme is launched to enhance the enrolment and retention status of schools has not been effectively implemented in most of the states. But this scheme is not more effective in Jharkhand.

The concept of 'common schooling system' should be enforced all over the country to have access of quality education to all children. Greater community participation should be encouraged to improve the accountability of the whole education system. Vocational training should be given to children along with formal education. This provision should be given especially to females and to households. This will ensure better economic returns of education for them.

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			Number of Teachers							
DIS	GER	PER	0	1	2	3	>3	T_GOV	Total_teachers	T_F_T
Bokaro	77.7	36.91	35	234	781	306	670	2026	9090	5691
Chatra	76.5	44.72	41	81	379	219	818	1538	11085	8025
Deoghar	81	45.18	14	6	76	55	259	410	3294	2073
Dhanbad	73.4	43.75	9	90	283	186	642	1210	7260	5112
Dumka	89.3	42.99	47	52	165	132	370	766	3593	2160
Garhwa	98.4	43.71	35	47	225	119	254	655	2340	1241
Giridih	85.1	40.01	79	152	679	211	593	1714	8031	4671
Godda	81.2	45.71	28	45	216	210	515	1054	5177	2995
Gumla	87.8	41.23	92	123	415	227	509	1359	5635	3650
Hazaribagh	92.1	40.49	20	13	60	39	172	304	1362	774
Jamtara	84.3	45.98	30	68	304	103	255	760	2932	1860
Khunti	72	42.53	16	23	71	81	347	538	4114	2564
Kodarma	78.1	43.99	47	72	418	235	643	1415	6222	4198
Latehar	75	43.86	31	37	227	108	244	647	3974	2325
Lohardaga	88.5	45.91	88	118	536	209	577	1528	7223	4084
Pakaru	71.7	45.50	15	21	77	87	345	541	3798	2257
Palamau	84.1	43.83	39	76	311	110	229	775	5665	3673
Paschim Singhbhum	71.6	42.77	61	33	244	125	329	792	2980	1896
Purbi Singhbhum	84.8	43.87	18	28	119	78	371	616	4150	2589
Ramgarh	84.8	41.13	28	25	117	73	368	611	3077	1692
Ranchi	83.8	41.56	3	8	63	99	295	468	2904	1535
Sahibganj	83.7	43.33	2	16	80	104	436	638	5658	3811
Saraikela-kharsawan	87.4	41.49	39	58	245	188	493	1023	5221	3018
Simdega	69.3	42.53	89	138	411	225	503	1366	11515	8434
								22754	126300	80328

DIS	S_P_R	PTR	GPI	TEA_PER_SC	PERC_BLA
Bokaro	6.9	30.36	0.80	5.21	100.00
Chatra	4.5	30.00	0.75	5.39	100.00
Deoghar	5.9	25.75	0.77	7.80	100.00
Dhanbad	3.4	29.53	0.81	5.80	100.00
Dumka	6.0	90.74	0.67	4.90	84.96
Garhwa	8.4	14.23	0.60	2.40	98.76
Giridih	8.8	23.51	0.79	6.92	99.74
Godda	8.2	25.63	0.75	3.02	98.08
Gumla	7.1	15.06	0.66	3.21	97.22
Hazaribagh	6.8	21.29	0.66	3.25	87.25
Jamtara	8.7	47.94	0.60	5.12	99.74
Khunti	9.3	16.23	0.69	6.06	99.29
Kodarma	7.4	10.32	0.75	2.36	100.00
Latehar	5.4	26.21	0.74	2.34	100.00
Lohardaga	6.1	13.16	0.70	5.04	93.62
Pakaru	6.5	41.87	0.76	5.80	100.00
Palamau	9.4	24.42	0.77	2.55	86.78
Paschim Singhbhum	8.7	14.36	0.70	2.34	99.29
Purbi Singhbhum	5.8	67.89	0.74	4.10	94.35
Ramgarh	8.9	29.83	0.69	6.04	100.00
Ranchi	6.5	24.34	0.69	6.83	89.85
Sahibganj	5.7	23.66	0.67	13.11	100.00
Saraikela-kharsawan	7.3	13.14	0.88	5.42	99.29
Simdega	6.3	24.03	0.81	2.63	89.85

DIS	COM_TOI	GIRLS_TOI	SCR	ELECTRICITY	PLAYGROUND
Bokaro	91.93	94.48	24.34	92.96	78.71
Chatra	87.62	91.77	22.53	96.02	70.30
Deoghar	90.25	96.23	26.63	96.31	80.27
Dhanbad	99.29	93.55	26.38	86.04	64.72
Dumka	87.62	91.77	24.80	82.98	75.12
Garhwa	91.56	87.57	11.42	98.63	87.51
Giridih	90.83	91.30	17.09	95.51	81.37
Godda	97.08	86.62	24.80	99.04	75.79
Gumla	93.45	93.05	32.72	94.45	84.13
Hazaribagh	76.06	85.05	31.11	86.70	57.27
Jamtara	89.95	79.79	30.53	95.48	69.89
Khunti	91.93	94.48	26.17	96.77	79.22
Kodarma	100.00	79.55	16.40	96.80	68.80
Latehar	90.25	96.23	27.25	96.48	66.55
Lohardaga	88.18	77.73	23.27	86.29	75.02
Pakaru	94.00	94.93	27.31	96.90	79.38
Palamau	86.31	92.23	15.75	93.64	84.68
Paschim Singhbhum	89.95	79.79	16.30	92.65	73.79
Purbi Singhbhum	83.70	89.86	26.48	95.92	75.19
Ramgarh	88.18	77.73	12.16	93.47	84.45
Ranchi	85.12	92.60	30.86	96.56	66.62
Sahibganj	92.45	95.92	51.09	97.69	80.90
Saraikela-kharsawan	100.00	79.55	35.44	98.41	87.22
Simdega	90.83	91.30	15.63	95.99	74.85

	Professional Qualification							
District	JV,JBT or Equivalent	SV,CTSBT OR Equivalent	LT,BT,B.Ed or Equivalent	M.Ed. Or Equivalent	Others		None	Total Teachers
						AVERAGE		
Bokaro	43.76	5.37	41	1.86	1.86	18.77	5.62	6570
Chatra	26.98	4.31	55.9	4.58	4.58	19.27	5.67	7056
Deoghar	38.08	3.44	47.75	3.77	3.77	19.36	4.87	2442
Dhanbad	42.22	5.5	40	2.55	5.93	19.24	3.8	5180
Dumka	41.63	5.07	37.51	2.34	2.34	17.78	5.25	2818
Garhwa	26.88	6.11	55.2	3.08	3.08	18.87	3.89	2210
Giridih	32.66	6.17	51.42	2.26	2.26	18.95	4.33	6583
Godda	28.77	6.11	52.13	4.75	4.75	19.30	5.91	4126
Gumla	27.34	3.93	55.98	6.06	6.06	19.87	4.3	5395
Hazaribagh	28.97	6.7	53.35	3.76	3.67	19.29	5.04	1329
Jamtara	34.11	4.23	47.22	5.12	5.23	19.18	4.32	2293
Kodarma	26.83	5.64	54.08	3.96	3.96	18.89	4.9	5549
Latehar	29.73	3.92	51.02	4.37	4.37	18.68	5.01	2015
Lohardaga	37.16	4.67	49.44	3.48	3.48	19.65	3.35	5374
Mohali	34.28	4.94	47.92	5.47	5.47	19.62	4.68	2287
Pakaur	26.8	4.71	59.41	3.26	3.26	19.49	3.93	2974
Palamu	36.36	7.85	45.2	4.23	4.23	19.57	3.77	2624
Paschim Singhbhum	37.49	5.39	45	3.52	3.52	18.98	5.07	2782
Purbi Singhbhum	33.29	5.37	49.79	3.02	3.02	18.90	5.15	3109
Ramgarh	26.21	4.21	59.12	3.12	3.33	19.20	3.43	2979
Ranchi	35.72	4.62	47	4.05	4.05	19.09	5.84	2447
Sahibganj	28.21	5.28	55.3	4.67	4.67	19.63	3.84	3747
Seraikela-Kharsawn	27.45	3.45	55.54	6.45	6.59	19.90	4.56	5356
Simdega	26.65	6.45	55.45	3.54	3.54	19.13	3.45	2244

	Academic Qualification							
District	Below Secondary	Secondary	H.Secondary	Graduate	Post Graduate	M.Phil or Ph.d.	Others	Total Teachers
Bokaro	3.7	20.24	16.1	34.96	23.52	0.5	0.97	6570
Chatra	11.56	8.3	7.23	32.95	38.75	0.81	0.4	7056
Deoghar	7.25	11.06	9.17	32.39	37.96	0.86	1.31	2442
Dhanbad	13.96	14.59	11.93	31.76	26.68	0.69	0.39	5180
Dumka	12.03	12.92	15.19	34.1	25.05	0.46	0.25	2818
Garhwa	1.72	15.22	9.01	39.71	33.34	0.56	0.02	2216
Giridih	4.33	17.24	11.06	36.31	30.15	0.52	0.39	6583
Godda	3.08	12.24	9.43	31.92	41.47	1.28	0.58	4126
Gumla	2.12	10.05	8.17	31.12	46.02	1.67	0.23	5375
Hazaribagh	11.36	11.44	5.49	31.08	38.75	1.13	0.75	1329
Jamtara	1.22	13.23	8.22	38.2	37.21	0.65	0.19	2986
Kodarma	6.49	11.3	9.21	35.72	36.31	0.63	0.34	5549
Latehar	6.95	8.93	6.65	34.94	41.14	0.99	0.4	2015
Lohardaga	7.07	9.53	10.89	38.15	33.38	0.54	0.45	5374
Mohali	9.23	9.31	8.88	33.19	37.82	1.18	0.39	2287
Pakaur	1.28	13.28	8.24	38.4	37.22	0.87	0.17	2974
Palamu	5.2	13.72	11.82	32.82	34.92	0.62	0.52	2632
Paschim Singhbhum	8.88	13.12	11.39	37.56	27.93	0.72	0.4	2782
Purbi Singhbhum	5.92	15.09	9.84	37.73	29.91	0.61	0.9	3109
Ramgarh	1.95	15.29	9.05	39.73	33.39	0.54	0.05	2210
Ranchi	4.78	10.79	10.26	33.39	39.84	0.69	0.25	2447
Sahibganj	4.99	10.22	7.85	37.55	37.87	1.09	0.43	3747
Seraikela-Kharsawr	5.3	13.76	11.85	32.89	34.98	0.69	0.53	2624
Simdega	2.26	10.01	8.27	31.18	46.08	1.87	0.33	5395

	TYPES OF BUILDING						
	PUCCA BUILDING	PARTIALLY PUCCA	KUCCHA	TENT	MULTIPLE TYPE	NO BUILDING	CLASSROOM NEED MAJOR REPAIR
BOKARO	152	1	0	0	5	58	103
CHATRA	561	16	3	3	138	17	542
DEOGHAR	267	1	1	1	32	8	218
DHANBAD	316	3	1	1	38	3	353
DUMKA	340	1	1	1	38	9	298
GARHWA	135	5	3	3	80	6	235
GIRIDIH	243	4	0	0	29	18	201
Godda	245	9	7	3	19	8	115
GUMLA	184	14	19	19	96	5	423
HAZARIBAG	511	5	0	0	80	6	385
JAMTARA	207	2	0	0	22	3	150
Khunti	154	8	6	11	28	7	178
KODARMA	122	0	3	3	10	13	112
LATEHAR	156	11	2	2	91	3	115
LOHARDAGA	64	3	2	2	44	4	64
PAKAUR	137	0	0	0	19	9	29
PALAMU	237	14	3	3	111	110	370
PASHCHIMI SINGHBHUM	191	16	7	7	108	9	322
Purbi Singhbhum	168	6	9	14	59	15	231
Ramgarh	172	8	7	17	68	18	243
RANCHI	382	15	3	3	115	5	465
SAHIBGANJ	312	14	13	13	76	39	449
SARAIKELA-KHARSAWAN	246	6	4	4	62	33	245
SIMDEGA	138	11	15	15	71	9	349

CENSUS

	ELECTRICITY	DRINKING WATER	TOILET	GAS	PUCCA HOUSE	BPL	URBANISATION
BOKARO	64.6	62.4	36.9	23.2	41.8	17.1	45.26
CHATRA	22.3	44.9	7.5	1.4	8.7	41.4	5.31
DANBHAD	82.5	63.7	29.1	7.8	32.4	21.8	13.72
DEOGHAR	40.4	50.9	12.5	8.6	17	20.6	52.37
DUMKA	13.6	57.6	15.8	2.2	5.2	31.4	5.34
GARHWA	24.8	58.5	5.9	3.7	7.7	31.9	4.12
GIRIDIH	16.1	31.8	6.9	2.1	12.8	35.3	6.43
GODDA	25.4	64.2	5	0.9	9.2	30.9	3.53
GUMLA	15	29.7	13	3.5	3.3	32.3	4.78
HAZARIBAGH	59.8	32.2	25.8	10.6	30.2	27.2	23.23
KODARMA	47.8	37.9	15	6.7	22.7	33.4	17.37
LOHARDAGA	24	45.8	15.1	3.8	8.5	34.5	12.67
PAKAUR	13.5	64.1	7	2	5.3	21.7	5.13
PALAMU	34.5	67.5	8	2.7	10.4	29.7	6.43
PASHIMISINGHBHUM	24.2	63.4	17.1	8.2	9.7	50.9	15.49
PORVI SINGHBHUM	68.2	71.9	53.4	33	38.8	29.8	55.03
RANCHI	54	51	28.6	23.6	23.5	44.2	35.11
SAHIBGANJ	11.1	51.4	9	2.8	7.9	19.9	10.58

	SC/ST	F_Married_15_18	SCSTEnl_M	SCSTEnl_F	SCSTEnl_P	FEMA_WF
BOKARO	19.45	15.94	51.43	36.01	43.91	5.57
CHATRA	33.86	39.47	34.53	22.12	28.55	13.9
DANBHAD	18.73	54.54	43.59	26.01	35.30	11.31
DEOGHAR	20.20	14.83	54.73	39.94	47.56	4.32
DUMKA	28.43	34.79	43.92	33.33	38.80	17.03
GARHWA	31.56	44.43	37.85	20.76	29.78	14.51
GIRIDIH	17.89	49.77	40.60	23.88	32.55	10.84
GODDA	20.37	38.39	38.21	25.55	32.26	13.86
GUMLA	36.88	9.42	56.61	48.90	52.83	22.5
HAZARIBAGH	20.91	21.34	54.10	41.14	47.78	11.42
KODARMA	14.76	43.90	49.25	32.30	41.03	12.04
LOHARDAGA	31.37	14.53	56.85	45.27	51.32	18.13
PAKAUR	25.56	25.09	27.54	19.32	23.64	17.45
PALAMU	32.07	29.49	37.64	23.02	30.62	13.44
PASHIMISINGHBHUM	37.44	10.03	46.59	32.05	39.52	18.2
PORVI SINGHBHUM	18.67	10.69	61.12	48.59	55.05	9.65
RANCHI	26.08	12.92	63.05	52.47	57.87	14.1
SAHIBGANJ	21.01	26.81	34.33	24.82	29.80	12

	M_AG.L	F_AG.L	GER	NER
BOKARO	3.88	2.24	103.86	69.52
CHATRA	8.18	6.88	84.49	57.33
DANBHAD	7.23	4.4	84.92	57.86
DEOGHAR	1.52	1.05	109.87	73.63
DUMKA	7.93	7.45	84.67	57.45
GARHWA	9.68	9.28	72.55	48.59
GIRIDIH	6.21	4.75	84.09	57.05
GODDA	11.22	8.05	75.10	50.50
GUMLA	3.21	4.94	95.18	62.14
HAZARIBAGH	2.68	2.81	111.10	78.04
KODARMA	3.38	3.72	101.04	70.11
LOHARDAGA	3.85	5.72	98.89	67.35
PAKAUR	7.92	5.8	50.37	34.10
PALAMU	9.14	7.52	77.84	51.24
PASHIMISINGHBHUM	5.85	8.02	84.64	57.09
PORVI SINGHBHUM	4.76	5.11	115.15	76.35
RANCHI	3.15	3.96	112.70	74.95
SAHIBGANJ	3.9	3.6	64.93	43.90

	POPULATION		TOTAL WORKERS		MAIN WORKERS		MARGINAL WORKERS	
	M	F	M	F	M	F	M	F
BOKARO	52.77	47.23	23.16	5.57	17.29	1.7	5.86	3.87
CHATRA	50.91	49.09	24.13	13.9	18.28	5.75	5.85	8.15
DEOGHAR	52.24	47.76	25.82	11.31	20.68	3.66	5.14	7.65
DHANBAD	53.35	46.65	23.39	4.32	18.97	1.62	4.42	2.7
DUMKA	51	49	27.39	17.03	20.69	6.15	6.71	10.88
GARHWA	51.68	48.32	24.78	14.51	18.47	4.07	6.31	10.44
GIRIDIH	50.43	49.57	23.14	10.84	15.52	2.47	7.62	8.36
GODDA	51.92	48.08	26.49	13.86	19.02	3.85	7.47	10.01
GUMLA	50.13	39.87	26.63	22.5	22.08	11.34	4.55	11.16
HAZARIBAGH	51.27	48.73	23.32	11.42	19.36	4.09	3.96	7.33
KADARMA	49.99	50.02	22.71	12.04	18.11	3.86	4.6	8.54
LOHARDAGA	50.6	49.4	24.04	18.13	19.1	8.64	4.94	9.49
PAKAUR	51.08	48.92	26.77	17.45	21.99	7.97	4.78	9.47
PALAMU	51.62	48.38	24.56	13.44	17.26	4.03	7.3	9.41
PASCHIMI SINGHBHUM	50.6	49.4	26	18.2	19.12	6.68	6.88	11.52
PURBI SINGHBHUM	51.81	48.2	25.33	9.65	19.41	3.65	5.92	6.01
RANCHI	51.6	48.4	24.69	14.1	20.13	6.88	4.56	7.22
SAHIBGANJ	48	49.7	23	12	18	5	4.8	6.8

	cultivators		agricultural_labourers		household industries		other workers	
	M	F	M	F	M	F	M	F
BOKARO	4.96	1.73	3.88	2.24	0.71	0.4	13.59	1.17
CHATRA	10.76	5.23	8.18	6.88	0.78	0.74	4.39	1.03
DEOGHAR	8.67	3.79	7.23	4.4	1.92	1.83	7.98	1.27
DHANBAD	2.54	1.45	1.52	1.05	0.54	0.28	18.77	1.51
DUMKA	13.08	7.86	7.93	7.45	1.05	0.81	5.31	0.89
GARHWA	9.87	4.18	9.68	9.28	0.61	0.37	4.6	0.67
GIRIDIH	9.33	4.92	6.21	4.75	0.68	0.43	6.9	0.71
GODDA	9.3	4.08	11.22	8.05	1.1	0.87	4.86	0.85
GUMLA	18.92	15.63	3.21	4.94	3.93	0.74	3.54	1.17
HAZARIBAGH	8.81	7.12	2.68	2.81	0.66	0.34	11.15	1.12
KADARMA	8.06	6.89	3.38	3.72	0.63	0.37	10.63	1.4
LOHARDAGA	13.91	10.59	3.85	5.72	0.72	0.52	5.52	1.28
PAKAUR	10.58	5.25	7.92	5.8	0.81	2.97	7.44	3.4
PALAMU	9.28	4.36	9.14	7.52	0.72	0.45	5.41	1.09
PASCHIMI SINGHBHUM	10.82	7.43	5.85	8.02	1.33	1.07	7.98	1.67
PURBI SINGHBHUM	4.36	1.86	4.76	5.11	0.71	0.4	15.48	2.25
RANCHI	9.94	7.47	3.15	3.96	0.69	0.48	10.89	2.17
SAHIBGANJ	8.6	6.9	3.9	3.6	0.12	0.46	6.8	3.2