CHAPTER – III

REVIEW OF LITERATURE

3.1 INTRODUCTION

The research on regional disparities in development is voluminous, as it happens to be a concern of various social scientists, be it geographers, economists, politicians, sociologists, regional planners or bureaucrats. Among the major themes of regional planning the theme which has attracted the greatest attention of the scholars is probably the theme of regional disparities/imbalances in the levels of development. This is true of the studies conducted both within and outside the country.

Like regional planning, planning for educationally backward regions requires multidisciplinary perspective. Scholars from different fields like economists, sociologists, philosophers, psychologists, educational planners and geographers have addressed the issue of educational development in their own distinct way and that is how there exists a vast body of literature in this area.

A perusal of literature on regional disparities in educational development shows that at the international level nodal Centre of such research studies is UNESCOs, International Institute of Educational Planning, Paris. In our country the National University of Educational Planning (NUEPA), formerly known as NIEPA, is engaged in research on dimensions of educational development with a view to identify under developed areas and to evolve suitable planning strategies. Centre for Studies in Regional Development (CSRD), Jawaharlal Nehru University, New Delhi is another nodal centre where several such research studies on regional disparities in educational development are being carried out. Various Post-Graduate departments of
geography in Indian Universities too have carried out sporadic studies related to regional disparities in educational development.

While reviewing literature on the given subject it was learned that in geography there has been no dearth of literature on the theme of regional disparities in India but surprisingly to note that regional disparities in educational development have not attracted adequate attention of geographers and educational planners. The vast body of literature dealing with problems of disparities, largely focus on group disparities like based on residence urban-rural or social structure or by gender and very little has been done in the context of regional frame work. In case of India most of the studies on regional variations in development that have been at somewhat at aggregate level, have been taken states as their regional units. They tend to justify their choice of states as regional units on account of data availability. The studies generally focused on states, which has serious inadequacies for drawing meaningful generalizations for development process. Researches related to micro planning were hardly traced. Considerable attention seems to have been paid to the problem of defining a regional unit for the study of regional variations in educational development in the literature on regional disparities in educational developments. It is attempted in this chapter to extensively review the literature on the subject so that it lays the foundation for further analysis made in the subsequent chapters. The present review of literature is confined to those studies where the focus is on regional analysis of educational development. Some other studies were also review for understanding methodological issues and for drawing inferences. Major studies traced in the area of regional disparities in educational development are:
3.2 EMPIRICAL STUDIES

3.2.1 Before Independence

The report of Central Advisory Board on Education (CABE) in 1944 analysed the post war educational development in India in terms of schooling facilities, enrolment, literacy, achievement, adult education, education of the handicapped and health for the school going child. The emphasis was on qualitative aspect of education rather than quantitative.

3.2.2 Before 1970s

Literacy remained as an important indicator of human development. Various scholars had tried to analyze regional variations in literacy in different time periods. Distinguished geographer, Gosal (1964) has underlined some of the essential features of inter-state variations in literacy and education for different composition of population. His study was based on the result of 1961 census.

Harbison and Myers (1964) attempted comparison of 75 countries on the basis of human resource development. The study was a pioneer in the field of educational development as they have generated composite education index by using arbitrary weights for indicators.

Panchmukhi (1970) carried out study on educational development for 15 major states of the Indian union. In his study eleven indicators of educational development were chosen. In order to measure regional disparities in educational development factor analysis technique was used by the researcher.

Rudolph and Rudolph (1969) discussed regional disparities in educational growth in India by aggregating state into two blocks; rim land and heartland. They contend that patterns of educational growth of regions have their bearing on the British rule; which had its impact on different regions particularly the coastal rim land
as against interior heartland. Such an impact accentuated established differences and/or introduced new ones in economic and social spheres. Thus apart from historical legacies, administrative and political effectiveness would determine the educational progress of different regions, by generating both demand and supply. The authors arrived at a composite index of educational growth for each state by using weights to each level of education.

3.2.3 Studies during 1970s

Rudolph and Rudolph (1972) have examined regional disparities in education and their link with per capita income for the year 1971. They had gone into the question of how the education system in the country differ from state to state with language, history, regions, economic growth, administrative capabilities and political effectiveness influencing the education system in each state. They differentiated the state into two categories, viz. mainland and heartland. A systematic study of states was done by using indicators like Per Capita Income, Expenditure on Education as Percentage of State Income, State Revenue spent on Education and Per Capita Expenditure on Education. They indicated per capita expenditure as energetic effort by the state.

Chattopadyaya and Raza (1975) have made an attempt towards an important task of providing conceptual background for the problem of regional disparities. They dealt with the methodological aspect of the subject and spatial imbalance, which include selection of the indicators and adoption of techniques to measure the levels of development. The authors have very eminently evaluated various statistical techniques like ranking method, principal component method and multivariate techniques developed in this field by different scholars from time to time.
Goyal (1975) study compared the state of education and economic growth. The study was based on financial aspect of education. The study had taken consumption and investment aspects of education and its contribution to national income. Heyneman (1979) for measuring the inequality between different states representing educational inequality used a formula called ‘Representation Index’.

3.2.4 Studies during 1980s

The year 1980 was a watershed in the studies related to regional disparities in educational development as the year saw two monumental books Regional Disparities in Educational Development- a Controversial Issue and another volume with focus on Regional Disparities and Policies for Reduction (Carron and Chau). It is pertinent to recall that as a part of first Medium Term Plan (1973-1978), the IIEP carried out series of studies of regional inequalities, to which many countries were attaching increasing importance in their economic and social development policies. Several studies dealt with conceptual aspects, by examining the policies aimed at reducing regional disparities, and the economic, political and social factors which underlies these policies. In addition, several national case studies like Hungary (Ferge.et.al.), Madagascar (Hugon), and Thailand (Sudaprasert.et.al.) Kenya and Tanzania (Court and Kinyanjui) examined the way in which regional inequalities in education have assumed different forms in different socio-political contexts. Most of these studies were discussed at a seminar organized by the IIEP in 1978 and were subsequently revised by the scholars for publication in book form.

Carron and Chau (1980) points out that if regional educational disparities become wider, this simply reflects the varying importance placed by local population on educational investments compared with other development priorities while Baba (1981) brought out the case of empirical study of regional disparities in
Andhra Pradesh where he has considered various socio-economic indicators depicting education sector.

Quasmi (1981) conducted a geographical analysis of child education in India. The study aimed to examine the regional equity of educational development. Special attention was drawn towards the child education up to secondary stage. The study dealt the enrolment and dropout rates in existing socio-economic environment. About 73 variables have been selected for quantitative and qualitative analysis from the main indicators of social, demographic, economic and available physical facilities within the schools. The study was carried out for both the rural and urban component and for India as a whole. The study derived out the remains of influencing factors of the environment at schools and outside the schools, it was suggested that the districts and tehsils as the unit of study and further planning for development.

Tilak (1981) a scholar of education finance constructed indices of educational development for different states in India for the years 1974-75. Tilak also suggested the measures for removal of these regional disparities. The study was again based on financing of education in different states.

D'Souza (1982) depicted the case of inter-state differences in rural-urban literacy for the year 1981. The study takes into account relation between rural -urban disparity at one hand and with industrialisation on other. In the same year Kundu and Raza (1982) examined a comparative study regarding the nature and pattern of inequalities in literacy rate during 1961-1971 by taking state as the unit. Usha Ram kumar (1982) examined the disparities in education in Karnataka by studying the inter-district variation. Raza (1982) examines inequalities in literacy levels of different components of population in regional framework. The study takes state as a unit. It can be realised that most of the studies were based on analysing census data
based on state and district data. Thus literacy remained as one of the crude indicator of assessing human development in these years.

Raza and Aggarwal (1983) looked into intra and inter-regional disparities in level of literacy. The study was based on Census 1981 data suing districts as spatial units. Inter regional variations in levels of literacy have been studied in the magnitude of a selected measure of intra regional inequalities. They used alternative formulation of Sopher’s Disparity Index for bringing out disparities. The study tried to understand regional disparities linking it with urbanisation, level of industrialisation and other indicators. State and district level was taken as unit of analysis.

Premi et al. (1983) took the case on study on women’s education in India with a focus on regional dimension. The study was conducted with a view to identify backward districts in terms of female education. Keeping in view the varied patterns of female education at different stages of education, the study was based on 31 variables pertaining to various aspect of female education in the country. The study categorised districts into very high, high, medium, low, very low level of female education.

Raza (1984) carried out a mammoth research study on regional disparities in educational development in India. The study was first of its kind. That is how we can make a remark that there was beginning of new era in understanding regional disparities in educational development based on regional approach. The main objective of the study was to identify and analyse the spatial dimension of educational development and its bi-directional links with the process of regional development. Mapping was done on the basis of bi-variate as well as multi-variate statistical techniques. The study was based on the data derived from Fourth All India Educational Survey and Census of India, 1981. The study revealed that the magnitude
of regional disparities is of high order; accessibility is poor in the hill districts of Jammu and Kashmir, Himachal Pradesh, Uttar Pradesh and in the districts of North East and Mid-India Tribal belt; there is ungodly development of education among the scheduled castes, scheduled tribes, and the non scheduled population on the other hand and among the male, female and rural-urban components of these population segments on the other hand.

In another study carried out by Raza. et. al.(1984) discussed the regional patterns (inter- state) in school accessibility in terms of coverage of educational institutions as a proportion to population and also in terms of prescribed norms laid in location of schools. They observed that disparity in school accessibility arises due to random selection of locations for such schools. In the same year another remarkable work was conducted by Raza and Agarwal (1984) where they presented the regional pattern in higher education growth in India. Apart from surveying higher educational growth in India in quantitative terms such as in terms of enrolment, the study observed spatial spread of higher education also. The study took National Sample Survey (NSS) region viz. agro-climatically homogeneous regions as unit for analysis with an assumption that a balanced development would be facilitated with a regional resource base. Inequality in spatial spread has been discussed by using location co-efficient and coefficient of inequality (Sopher’s Index).

Rao (1984) study presents an in-depth analysis of regional imbalances in development of Karnataka. This study is among very few studies which are very comprehensive. She has attempted analyzing in detail the disparities at the micro level taking taluks as unit of analysis. All the 175 taluks of Karnataka state have been covered and as many as 53 indicators encompassing nine sectors of the economy were employed for the study. In order to find out the regional disparities in the educational
development in Karnataka ten indicators were used and the levels of educational development were worked out by arriving at the composite index of educational development for each district. Her study revealed that the district disparities were quite large yet they decreased from 0.207% to 0.104% over a period of study.

Kundu and Rao (1985) comparative study of the nature and pattern of inequalities in literacy rates for different segment of population viz. rural-urban, male-females, scheduled castes and non scheduled castes. For their study they have used census of India data of 1961 and 1971 and considered state as a unit while Agarwal and Vemuri (1986) probed into temporal analysis of disparities in the levels of literacy between scheduled castes and non-scheduled castes of Uttar Pradesh. They have used district as a unit of analysis. Ahmed and Nuna (1986), in their paper focused on the central question of educational development in a lesser developed state in India: the problem of combining growth with justice and stated equity without growth is a stagnant cesspool, wherein only misery can be equitably distributed. It further stated growth without equity leads to the accentuation of structural disequilibrium. The social concerns for two can be handled together, each sustaining and sustained by the other. In their paper they have examined the disparity in the literacy rates between the scheduled and non-scheduled elements of the population. They have brought out serious inadequacies in the implementation of policies related to the rapid spread of literacy among deprived groups particularly in the rural areas with a view to achieve universalization. Finally with the help of varimax factor rotation model they came out with a pyramid of hierarchies in educational development.

Iyer (1986) discussed in depth the modeling techniques and socio economic indicators relating to educational planning. More particularly, he presents the
autonomous educational model, associated with the UNESCO and more familiarly known as the Educational Simulation Model (ESM); along with its characteristics and limitations in relation to certain inter sectoral global models. Further in their paper they have discussed a variety of indicators like input, process and output indicators and the variables corresponding to them in the context of educational planning.

Kundu and Rao (1986) explored the methodological issue concerned with several issues related to the measurement of inequality in educational development, besides being valuable empirical contributions on the same issue. Finding that the existing measures of inequality are inadequate, they propose a new class of measures that satisfy certain axiomatic requirements. Having identified the pattern of international disparities in the levels of educational development within the ESCAP region, they focus their situation in India, where they highlight inter-state differentials. They have also developed a set of rural and urban literacy rates in India and have examined the validity of number of hypotheses relating to these relationships which are being currently debated.

Noordin (1986) study presented a detailed description of account of long range of educational planning in Malaysia. Padmanabhan (1986) highlighted regional disparities in educational finance by analyzing educational expenditure incurred by different states. He argued that disparities in educational financing would deprive opportunities for some sections of population and thereby hampers the well known social objectives of the state. Paswan (1986) had tried to examine the levels of literacy among urban scheduled castes of selected states 1971.

Rao (1986) presenting the case of Karnataka studied the educational development and inter-district taluk disparities by using more than one dozen indicators of educational development with statistical technique of factor analysis
while Moonis Raza and Agarwal (1986) in their thought provoking paper have very ably dealt with various aspects of inequalities in literacy rate in India. They have studied the inequalities between males and females, rural-urban, S.C and non-S.C, and S.T and non S.T. In all these types of inequalities regional dimension is aptly incorporated taking district-wise data for analysis. The study has pointed out that the economic base of a region is significantly related with level of literacy. Further more than half of the districts in the country continue to have high level of disparities between rural-urban, male-female etc., besides economic factors the process of urbanization and industrialization also have strongly influenced the level of literacy and the inequalities in the distribution of literates.

Packiam (1987) studied the progress of secondary education in Tamil Nadu during a period of twenty five years from 1950. The study was mainly a statistical study which mainly focused on growth rate of enrolment, schools, teachers and infrastructural facilities along with growth in expenditure on secondary education. It also reflected on the trend of growth of secondary education in the state. The study lacked regional flavour.

Mohapatra (1988) found that socio-economic analysis of inter-district disparities at the school level in Orissa. The study included all the thirteen districts of Orissa and they were later classified as advance or backward on the basis of 26 indicators for constructing composite index. The data was used from published sources of government reports and publications. The research revealed that from mid sixties to the end of seventies, the growth in the number of primary schools was higher between tribal dominated districts than in the coastal districts. On account of the hilly topography a large number of habitations could not avail of the primary educational facilities in some of these areas. In the coastal districts a larger population
took advantage of primary education than in the tribal areas. The percentage of girl’s enrolment was higher in the coastal districts. The scheduled caste enrolment was highest in Sundargarh. There were more single teacher schools in the tribal areas than in the coastal areas. This affected the quality of teaching in these areas. The dropout rate was higher in tribal dominated areas. Seven districts had higher levels of educational development. Among them Cuttack was on the top. Among the six low achievement districts Kalahandi registered the lowest level. The inter-district disparity was analyzed from the angle of educational achievement. A number of socio-economic factors played a significant role in educational disparities. These were multidimensional deprivations, the development process, scarcity of resources, ineffective educational planning. The study provided the basis for the formulation of micro level or district level planning of education in Orissa. In the same year Bahadur (1988) conducted a similar study on education in the hill region of Darjeeling. The study highlighted on the development aspect of education along with focus on present status of education in the district. Asikhio (1988) conducted a study on growth and development in education in Manipur from 1947-68 with a historical perspective.

Reddy (1988) explored the inter-regional disparities with his pertinent questions, which attempted to answer various queries like how wide are the disparities in literacy among the states? How wide are the disparities in the education expenditures of the states? To what extent are disparities in education expenditures responsible for disparity in literacy? If the same policies continue, can there be equalization of the literacy rate in the near future? What does the experiences of the past one decade- particularly after education being brought under concurrent list-say? Has the national policy of education anything up to its sleeves? The comparisons was made among sixteen major states, certain atypical states whose inclusions distorts the
comparisons, were excluded. The paper came out with the findings like disparities in literacy among the states continued to be the same as they were decade and half ago, probably even three decades ago. The expenditure policies of the states seem to be somewhat in disharmony with the national objective of universalization of elementary education. Disbursement seems to have been gone more in favour of higher education then in elementary education, in certain states example, Gujarat and Andhra Pradesh. The study recommended that in order to implement the objectives of National Policy on Education, a close watch over the financing of education at all levels- elementary, secondary and higher- is necessary for the Central Government. Otherwise mere inclusion of education under the concurrent list will be of little use.

Seetharamu (1988) chooses to focus on the state of Karnataka and described the development in education sector since independence. His study presented a detailed picture of literacy, performance of students, drop out phenomena, non formal education, out of school children, adult education, and levels of the progress in various stages of education, growth of schooling in state, qualitative improvements and vocationalisation of higher secondary education in the state in Karnataka universalization of primary education. Study interpreted statistics rather than focusing on regional dimensions. The study concluded that there is a greater need for undertaking detailed analysis at least at the state level because the all India figures though important in them, tend to camouflage the reality.

Sinha (1988) conducted a comparative study of Bihar and Haryana on regional disparities in the levels of development of school education. In his study he developed analytical framework for the measurement of educational development using the selected educational indicators derived from primary and secondary sources. The study explored and established relationships among selected indicators at different
areal levels—both at macro and micro level. Further the study measured the spatial patterns and processes of educational development and also traced the evolution of disparities among regions and among social segments inhabiting the study area. The later has been done at the micro level in much greater detail. The study was base on three major groups of indicators like enrolment, educational infrastructure and investment in education which were further categorized into twelve sub indicators.

In another study Sinha (1989) examines the extent of disparities among different segments of population of Bihar. The unit of the study is district. Zaidi (1989) took a look at the educational development in various parts of the state one finds that eastern region is most backward while the Hill region is the most advanced region of Uttar Pradesh. Raza (1989) in his district level analysis of educational inequalities observed that most of the districts of Andhra Pradesh have high levels of inequality in terms of literacy among different strata. Imran (1989) have investigated the development of school education in Uttar Pradesh since independence focusing at regional dimension. The study was designed to identify the geographical patterns of development of education in Uttar Pradesh. The study identified areas which are lagging behind in educational development. The study further probed into causes and factors from social, economic and demographic characteristics of region which directly or indirectly contribute to the development of education.

3.2.5 Studies during 1990’s

Raza, Ahmed and Nuna (1990) have attempted to find out the status of school education keeping regional dimension in focus. Various attributes viz. accessibility, availability, quantity, interconnectivity, equity and utility were selected for measuring the efficiency of schooling in India. For the study district wise data of the Fourth All India School Education Survey was utilized. In the study regional patterns of selected
indicators and of overall development were cartographically presented along with the interpretations of regional patterns. In another study Tilak and Bhatt (1990) had tried to examine educational development of Haryana using district level data for the analysis.

Bhatta (1990) studied secondary education in Karnataka state from perspective of systems analysis. The study was set in two stages: in the first stage macro level analysis of performance of 1816 secondary schools in districts and regions of the state is made. Sex, Rural and Urban status, social class referring to SCs and non SCs were taken as intermediate variables Performance was defined in terms of three summative indicators (a) average achievement of schools in districts and regions over a period of eleven years from 1972-1982, keeping state average as the norm, (b) equality in achievement among sex groups, rural-urban areas, social class groups, and (c) relevance of secondary education defined in terms of work participation, response to mass media and participation and leadership in village level organisation. In the second stage, a micro-level analysis is made in 36 secondary schools chosen through a stratified random technique. Fifty percent schools were rated as good and rest 50 percent as poor on the basis of their relative and consistent performance as compared to that of the state as a whole.

Tanwar (1990) conducted a study on disparities in levels of socio-economic development in Rajasthan and Bihar. In his study he had used indicators from education and literacy for computing socio-economic development in these two states.

Tilak (1991) conducted a study on educational planning at the grassroots. This was one such study where an attempt was made to understand the problems of educational planning at micro level in the rural areas in India. The focus of the analysis in the study shifted from macro level to micro level- from the state of
Haryana in India to the Sohana and Punhana blocks in Gurgaon district, and finally to Kheria and Punhana education clusters in the respective two blocks. The analysis was based on primary data collected from households, villages and schools, beside of course the secondary data on the blocks, the district and the state. The studies focused on developed and relatively less developed block of the district; and highlighted inter regional disparities at the micro level.

Upendernath (1991) tries to map out school situation in India with the help of fifth All India School Education Survey. Progress of School education in states has been ascertained in terms of some important indicators classified into facilities, quantity and quality. Along with ordinal ranking of states in terms of indicators, Principal Component Analysis has been used to arrive at composite index of educational progress under each of the subgroups. The analysis revealed that states like Kerala, Tamil Nadu, and Karnataka have advanced in many of the indicators, while Andhra Pradesh, Orissa, Bihar and Uttar Pradesh had remained backward. The paper further revealed that the broad comparisons with educational situation of sixties revealed that that there has been shift in ranks of the states at top and middle levels, but the states which were most backward in sixties have remained backward in eighties. There was no statistically significant relationship between three subgroup of indicators meaning that there has been mismatch in the priorities selected for educational development of states and secondly, it is asserted that the influence of extraneous variables in the spheres of extraneous variables in the sphere of educational progress need to be probed.

Premsagar (1991) looked inter regional disparities in literacy in India. State wise analysis was based on 1991 census he had also traced the trend of literacy rate in last few decades.
Rohmiglen (1991) made an attempt to depict the levels of educational development among tribes in north-eastern India. The study focused more on disparities among various tribal groups than on regional disparities in north-eastern region of India.

Reddy and Reddy (1992) attempted to focus attention on inequality in utilisation of and participation in education in rural areas of Andhra Pradesh. More specifically differences in gross enrolment ratios between different socio-economic groups and sex was examined with the gender perspective. It was found that gender discrimination exists irrespective of economic positions and it is more in poor families. The result also shows that there exist more disparities in higher education as compared to primary and secondary education. The paper expressed that inequality in education is not an educational problem alone. It cuts across the entire, social, economic and political fabric of a nation. Hence any piecemeal approach may not solve the problem of inequality in education. It simultaneously affects all fronts of inequality- socio-economic, cultural etc., must be made to overcome the problem of inequality. The study was based on data collected from a socio-economic survey in Nizam Sagar Command Area conducted during 1983-84.

Tripathi and Tiwari (1993) have analysed the spatial pattern of literacy rate among the scheduled castes of Madhya Pradesh taking nine variables. The Analysis is made at the district level. They have found that literacy rate of scheduled castes is low and not spatially uniform. They have categorized the districts into six groups on the basis of literacy among different groups.

NIEPA (1993) a series of papers presented in the seminar conducted deals with studies on regional disparities in educational development. C.P Bhambri (1993) brings out the constitutional aspect of education with emphasises on prevailing social
imbances and constitutional remedies. Mathur (1993) using 1971 census, attempts to value the stock of human capital in India by regions/ the paper furthers looks into the structural and spatial disparities in human capital and development. It notes a wide regional disparity and inequality (by sex ratio also) brings out the need for educating need for educating women, providing them particularly job oriented professional education at the middle level. Nuna (1993) proposes a set of planning interventions towards minimisation of disparities in educational attainments. The paper very clearly brings out a picture of the regional disparity in terms of mismatch between accessibility and enrolment. Similarly Kolhatkar (1993) presents indicators and measures to deal with educational backwardness, in terms of financial outlays in past and future perspectives. Mishra (1993) discusses the role of education in rural development, with international comparisons. Bhat (1993) emphasizes the need for micro level educational planning to reduce regional disparities.

Nalla Gouden (1993) using the household production approach and the 1981 district level data for rural India, estimates the trade-off between quality (measured by education) and quantity of children. It is only serious quantitative (rather econometric) paper in the collection. The elasticity estimations show that the rural Indian households trade quantity to quality of children. Chaubey (1993) came out with another interesting theoretical exercise, with emphasise on the linkages between education and poverty in regional perspectives. Prakash and Srivastava (1993) look into the locational patterns of educational institutions, and brought out the disparity between what is called the actual location. The main focus is on private supply of education.

KusumPriya (1991) using the 1981 DHTP (Degree Holders and Technical Personnel’s) data presents a state level analysis of links between education,
employment and earning of technical personnel in India. Its merit lies in its attention to the problem of unemployment in the technical category of manpower. Similarly Varghese (1993) presents the inter-district comparison of education-employment linkages, using the work participation rates. Patnaik and Rao (1993), using the 1981 data, presents the state wise analysis of the links between urbanisation and educational development, cross-classifying rural-urban and male-female differentials.

Ahmad and Nuna (1993), assessing the tribal education situation in India, suggested 14 steps to improve the situation which calls for radical reforms in the present approach. Similarly Jangira and Mukhopadhyaya (1993) analyse the education and rehabilitation of the disabled at the national levels. However, much discussion is on highlighting the prevalence of disability and the government measures for rehabilitation; too little is discussed in terms of educational development and disparities. Raju (1993) emphasizes the role of social movements in spreading female literacy in an attempt to bring out the regional disparities in female literacy in urban areas.

On the whole, this section on national scenario brings to light much evidence on the wide educational disparity existing between regions and sections of population. Singh (1993) emphasizes the role of infrastructure in the access of education and specific programmes to suits the reality of locations. Similarly, Singh and Bansal (1993) emphasize the universalization of primary education, while analysing the educational disparity in Punjab. One noteworthy finding in this district wise analysis is that the development of infrastructure has been successful in reducing the educational disparity. Vyas (1993) also discusses the strategies for reducing the disparities in Rajasthan, suggesting a number of steps. Sinha (1993) looks into the existing distribution of infrastructure in Bihar as a cause for regional disparities. The
paper suggests effective universal supply of schooling for universal enrolment and retention of pupils. Guha (1993) analyses the inter-district variations in the universalization of female primary education in West Bengal, looking into the links between socio-economic indicators and education. The suggested key policy issues for improvement are income maintenance, supply side considerations and accessibility using certain indices to measure the inter-district and intra group disparities in literacy in Orissa. Debi (1993) calls for disaggregated inter regional planning rather than a uniform programme of universalization of primary education. Further, the need for a comprehensive rural programme of educational awareness and eradication of poverty is emphasised by the study of Gujarat by Desai (1993).

The paper by Guha (1993) explores the educational development among scheduled castes in Marathawada, and observes the educational development has followed the path of economic development. Prasad (1993) tries to explain the regional imbalances in education in Andhra Pradesh in terms of imbalances in the development of health. Similarly, Sujatha (1993) analyses inter and intra-tribal inequalities in Andhra Pradesh. Using an index of educational development, Rao (1993) finds that in Karnataka the inter-district disparities, though high, declined from 0.207 per cent to 0.104 per cent during 1979-80 to 1987-88. Nair (1993) argues that in Kerala both the demand and supply have increased steadily, which accounts for the relatively better educational performance. He emphasizes the need for concentration on quantitative aspects.

Sharma (1993) analysing, the spatial variations in educational development in North-East India, finds marginal educational improvements in that region since independence. Premi, Narula and Pakhuongte (1993) have analysed the tribal educational development in the context of protective discrimination (for SCs and STs)
and outline various policies and their variations and impacts, in terms of literacy rates. The concentration ratio method has been adopted by Chowdhury and Buragohain (1993) to study the educational status in North-East India. The results show a poor rate of educational development and concentration of educational activities in some regions as a cause for regional imbalance. Mahapatra (1993) analyses inter- district variations in literacy, and suggests four strategies for removal of illiteracy in the region, viz. development of female literacy, reducing household size, increasing the accessibility, and diversification of economic activities into non-agricultural sectors.

Sahay (1994) studied the spatial temporal analysis of disparities in the levels of development in Orissa during 1971-1991. He too had used education and literacy related indicators to assess disparities.

Zaidi (1994) paper concentrated on examining the educational development of Himalayan region in a bit detail by taking into account not only the literacy figures but also the data on enrolment, educational institutions and teachers in the region. The paper mainly focused on the school level though some data on number of institutions and enrolment in colleges and universities were also presented. The study came out with findings that the Himalayan region is an educationally advanced region though it belongs to the state that is educationally and even otherwise backward. The paper lacked in highlighting the reasons of educational advancement of the Himalayan region therefore suggested further examination and study the causes.

Chatley (1995) in his study has examined educational disparities in Border States of the country. Rehana (1995) had made a detailed study on spatial temporal analysis of literacy in Maharashtra using districts as regional units. 1991 census data was used for conducting the study.
Kalantari (1996) presented the case of regional development, which aims at finding out disparities at the county level within the province, in contrast with many studies conducted in Iran to find disparities in levels of development at the provincial level. Hence the author claims this study as the pioneer in the respect that it tries to find intra-provincial disparities in the country. The study was intended to identify the degree of intra-provincial disparities in terms of economic development, social development and socio-economic development and also to find out the impact of 1979 Islamic revolution on these disparities besides finding out reasons for these disparities. The study has taken into consideration 17 indicators covering wide socio-economic spectrum and used 1976 and 1986 data. The author has analysed the data using rigorous statistical techniques like principal component method, co-efficient of variability and co-efficient of correlation. The study has revealed that there exist significant degree of intra-provincial disparities almost in every province but high degree of disparities is found in province located in the periphery which are large in size and which are at a low level of development. The study also found that there has been drastic decline in intra-provincial disparities during the post Islamic revolution in all the sectors but prominently in social sector. The revolution thus has rendered spatial justice to a greater degree. The study has brought to light some important factors such as development level of the province, size of province, distance from the national capital, road density and number of counties in a province, which determine disparities. The study has thus thrown light on the significance of finding regional disparities at the micro-level.

Baraik (1997) looked into disparities in the level of socio-economic development of Bihar. Inter-district disparities were identified by him. Pathania (1997) had made an attempt to study socio-spatial analysis of literacy the state of
Himachal Pradesh. The study is based on district level patterns by using census data of 1981-1991. The study also estimated the disparity level in the literacy rate for different segments of population that is Rural-Urban, Male-Females, SCs and non SCs at two point of time.

Dutta (1998) looked into Inter regional gender disparities in the levels of social well being ...

Saha (1999) looked into the geographical analysis of education in Rajasthan of girl child in Rajasthan. Joshi (1999) has attempted to highlight the spatial variation in literacy level of Rajasthan State taking panchayat summits as unit of analysis. The researcher has analysed literacy pattern for all the 232 summits on the basis of 1991 census data. Crude Literacy Rate (CLR), Index of Depreciation (IOD) in CLR and Crude Literacy Development Index (CLDI) has been calculated and the summits are ranked on the basis of CLDI and CLR. Afterwards all the summits have been grouped into five levels of CDI viz., Very High, High, Medium, Low and Very low. The author has also given the major characteristic features of each of the group and the important reasons for the difference in literacy standards among these regions. Spatial Variation in CLDI is shown through Choropleth map.

In 1999, Education Division of Planning Commission of India attempted to develop an Educational Development Index at all India level. The logic was that it would have help in grading of administrative units in hierarchy of achievement on the basis of performance levels, assessment of progress made over time, and allocation of resources in a rational manner. The Planning Commission used four parameters for the development of EDI; investment in education, literacy, achievements, and universalization of elementary education. First two indicators were used as input parameters and other two as output indicators.
3.2.6 Studies during First Decade of Twenty-First Century

Anurag (2001) studied the regional dimension of inter caste and gender disparities in literacy in Bihar. The study aims at building up of a literacy scenario of Bihar over the last four decades starting from 1961 with the objective of tracing temporal trend and spatial pattern of literacy of scheduled caste and non-scheduled caste population and to measure caste and gender disparities in literacy therein.

Vaidyanathan and Nair (2001) brought out the participation in and performance of elementary education in nine major states of Maharashtra, Madhya Pradesh, Orissa, Tamil Nadu, Bihar, Andhra Pradesh, Rajasthan, Uttar Pradesh and Kerala with an in-depth analysis. Pande (2001) brought out the striking features of regional variations in literacy and expressed stark contrast between the hill region and rest of the Uttar Pradesh. Her paper reflected that despite physical terrain, poor communications and small, scattered settlements, the hill regions have achieved a high level of literacy and enrolment. Economic factors- especially the traditional importance of army and the cities in the plains as sources of employment for the men of Garhwal-created a strong demand for education even during the nineteenth century.

Acharya (2001) reviewed the salient features of literacy status and access to elementary education in rural areas of Maharashtra and Madhya Pradesh. The author came out with explanatory model for explaining inter-tehsil and inter village variations. The paper has also explored the dimension of schooling of children in rural Maharashtra while taking enrolment and cost of education into account. Thomas conducted a case study of selected backward villages in Kerala with respect to dynamics of educational development. Krishan in his paper had studied the regional variations in districts of Andhra Pradesh literacy rates in rural literacy rate for 1971-1981 while studying poverty, gender and schooling in Andhra Pradesh. Nambissan
Debi (2001) conducted inter and intra-spatial analysis of inequality of access to elementary education in Orissa. The study has provided sufficient evidence that serious inequalities in literacy and among regions and caste groups, and between the sexes exist. In order to remove the inequalities between educationally backward and advanced villages within the same district, local specific educational programmes and policies should be formulated and implemented with active local participation and involvement.

Nagarajan and Madheshwaran (2001) have studied the inter-district variations in school environment and its determinants for rural Maharashtra. The study finds huge disparities in rural enrolment across the regions within the state.

Ryngnga (2001) looked into the levels of intra regional development in the hills of North-Eastern parts of the country. The study presented the typology of backwardness/development regions and had also delineated homogeneous regions in the region. She developed various index of development like resource, agricultural, industrial, socio-cultural, services and infrastructural, household amenities and overall index of development. While calculating Social and cultural index of development she has used three indicators like percentage of literacy to total literacy, percentage of female literacy and percentage of urbanisation. The areal unit of study was district and data was mainly collected from secondary sources.
Tiwari (2001) highlighted the inter-district disparities in literacy among the scheduled tribes of Rajasthan and focussed on some aspects of growth and equity.

Yadav (2001) felt a need to develop the Educational Development Index at the district levels in the country to probe deeper into the disparity in educational development. This would subsequently serve to achieve the goal of higher educational development as well as equity through need-base funding at the state and national levels. DISE data managed by NUEPA was used to compute EDI at the district level. The study covered two districts each from six major states namely Uttar Pradesh, Madhya Pradesh, West Bengal, Rajasthan, Karnataka and Tamil Nadu of the country. The researcher used four broad indicators of Access, Infrastructure Gap, Teachers, and Outcomes as broad indicators. These indicators were further spelled out in 22 variables. Principal Component Analysis method was adopted for development of EDI.

Government of Karnataka (2002) had appointed a high power committee for redressal of regional imbalances (HPCRRI) under Dr. Nanjundappa in October 2000 to study regional imbalances in the state and to advise the government and to recommend appropriate strategies for development to minimise inter-district and intra district regional disparities. The committee also suggested an appropriate institutional mechanism for implementing the strategy for moving towards balanced development. The committee adopted two-fold approaches as methodology which included determination of overall level of backwardness of taluk by evolving comprehensive composite development index using 35 indicators, further, to consider taluks which are more backward and most backward. They considered 35 indicators from the sector of Agriculture and allied, Industry Trade and Finance, Economic Infrastructure, Social Infrastructure and Population Characteristics of different taluks. In order to
calculate CCDI actual data of indicator was collected, data was normalised with respect to state average, weights at two levels were then used to arrive at CCDI of each taluk, in the first level, the normalised values were multiplied by the weight assigned to each indicator within the sector and added. In the second level, these sectors specific values so arrived were multiplied by weight given to the sector to arrive at CCDI. While submitting report 39 taluks out of 175 were categorised as most backward, 40 more backward, 35 backward and 61 developed.

Venkatesh (2000) carried out study to find out the problems and prospects of backward regions in Karnataka. Through his study he tried to analyse inter-district disparities in productive, economic, social and infrastructure sectors. While identifying disparities in education sector he had considered 14 indicators related to enrolment (1), educational infrastructure (4), and literacy (9). The result indicated that out of 19 districts Dakshina Kannada ranked first and Raichur attained the 19th position.

Bharthy (2002) in her studies related to regional imbalances in Karnataka considered 34 variables from agriculture (12), industry (4), infrastructure (11) and demography (7). She had considered availability of primary schools, secondary schools, degree colleges and technical colleges while generating the infrastructural index. In demography she had given consideration to indicator like literacy rate to measure inter-taluk disparities. The study had a snapshot of regional disparities in Karnataka at two time frames 1974-75 and 2000-2001. She had used mean, standard deviation and co-efficient of variation as statistical tools to measure the disparities and in order rank taluks Kendall’s ranking method was used by her. In her study she stated that an area that needs to be researched further is that every sector of economy viz. agriculture, industry, infrastructure, demography should be taken up for detailed
research. It should be done incorporating more number of variables and collecting primary data to support the findings with secondary data. This would help the government to tackle more scientifically and efficiently the problem of regional disparities sector wise.

Mehta (2002) has presented various papers related to educational development viz. Status of Secondary Education in India. He used NCERTs Sixth All India School Education Survey to assess the status of secondary education. Study was more concentrated on statistics than focussing on regional dimension. His paper related to Indicators of Educational Development, Concepts and Definitions (1999) is worth enough. It gives description of various indicators of educational development that is access, efficiency, quality and equity. The paper gives guidelines to future educational planners to diagnose the status of education.

Antonyrajan (2002) analysed the case of spatial-temporal disparities in socio-economic development in Sri Lanka. In order to arrive at socio-economic disparities she has used five group of indicators i.e. health, agriculture, industry, infrastructure and education for the five bench mark years. Data was analysed by employing techniques such co-efficient of variance, principal component analysis, simple correlation and regression analysis. She derived the Composite Index of Development by adopting 44 indicators from five sectors. In order to calculate Educational Development Index she has used 12 indicators namely schools per 1000 sq km., percentage of students by distance of travelling less than 3 Km., teacher school ratio, teacher-student ratio, teacher pupil ratio (total enrolled between 6-10 years) teacher child ratio (total number between 6-10 years) percentage of schools with electricity facility, percentage of school with science lab facility, participation rates at all levels, participation rate at primary level, literacy rate and female literacy rate. The ECI and
SDI have been constructed by adding the development index of Agriculture, Industry, Infrastructure, Education and Health. In each of these sectors the development indices have been derived from Principal Component Analysis. Based on cumulative index all the districts were divided into five categories of highly developed, developed, moderately developed, less developed and very less developed.

Sahay (2003) had made a spatial temporal study on expenditure on higher education in India. Shamin (2003) analysed the regional disparity in socio-economic development in West Bengal. While assessing socio-economic development he used indicators related to literacy and education. Gupta (2003) looked into regional disparities in Elementary Education in Rural India. In her study she has studied the patterns of financing of elementary education since1980s; she depicted the quality of schooling available in different states, along with highlighting the spatial variation in enrolment and retention across various states of the country. Physical accessibility of elementary schools in different states was also looked by the researcher. She had also brought forward certain policy measures for reducing the disparity in elementary education in rural India. The researcher used Sopher Index modified by Kundu along with other statistical techniques such as Index of Social Equity by Aggarwal, Coefficient of Variance, Correlation Matrix and Linear Regression Analysis.

Prakash (2003) analysed the multi dimensional aspect of inter-district levels of socio-economic disparities in Madhya Pradesh. In his study nine set of variables like resources, agriculture, employment and income, infrastructure, basic amenities, health, urbanisation and population, women empowerment and education were used. These variables were further divided into 45 indicators out of which five were from the domain of education. The indicators from education were included like Number of Primary School per 10 square kilometre, Number of teachers per 100 students in
1-10 classes, Share of Children attending School in the age group of 7-14 years in Rural Areas in percentage, Rural Female Literacy Rate in Percentage and Percentage of Educated person higher than Graduates level to total population above 19 years. Composite Index was derived by using Principal Component Analysis.

Asadullah (2004) conducted a study for identifying educational disparities in Pakistan, 1947-71, with an objective to study the distribution of educational research and facilities between east and West Pakistan. The analyses were carried by quantifying the extent of inter-regional disparity and its evolution over time using annual data extracted from various historical publications and government documents, more importantly, desegregated regional data on all school types, unit costs of schools and educational expenditure all analysed to identify the causes behind regional disparity, particularly that in the total number of primary schools.

Reinventing Regional Development Festschrift to honour Gopal Krishan Sinha traced the historical roots of regional disparities taking the chief parameter of education as determinant of development attained by India. His studies regional disparity as a consequence of the levels of development achieved at the school education level in the country. He feels that to understand the differential equation, it is mandatory to have a look at the roots of disparities and take into account the patterns of social and economic differences churned up in the contemporary period.

Kotani (2004) had presented a monograph on regional disparities in Primary Education achievements in Brazil. The study examines regionally divergent educational achievement in Brazil at the upper primary level. His studies revealed despite the remarkable nationwide advancement in access to primary education in the 1990s the disparity in the student achievement persists among regions, most
conspicuously between the Northern/North eastern and South/South eastern states. The study examined the gaps in student achievement demonstrated by SA&BE National Basic Education Evaluation System results, by way of descriptive statistics and ANOVA, secondly the study sought to identify the factors that are associated with the inequalities by correlation and regression. The monograph employed conflict theory and critical social theory frameworks in those analyses.

Khandelwal (2004) studied the dynamics of changing literacy scenario in and traced in Rajasthan and traced persistent regional pattern in the case of literacy during the period from 1951-2001. In order to measure inequalities in literacy achievement Sopher’s Index of Disparity (1970) was used. In order to assess the impact of various social, economic, cultural and infrastructural factors on literacy rates and gender disparities, various composite indices have been built. The relationship between various indices and the literacy rates and gender disparities has been studied by using Pearson’s Co-efficient of Correlation. This study was also state-based which discussed district level patterns.

Saharan (2004) looked into the temporal and spatial analysis of literacy and education in Rajasthan. He took the case of Jaipur district for interpreting spatial pattern of literacy and to examine change in literacy with time. The study was based on thirteen tehsils of Jaipur District. Alam (2004) assessed the literacy and educational level among major religious groups i.e., Hindus and Muslims and disparities therein. He also probed into socio-cultural and economic determinants of such disparity. The study was focused on two districts of Bihar i.e., Patna and Purnea.

Lakshmana (2005) in his working paper had tried to bring out the spatial dimensions of literacy and index of development in Karnataka. Highlighting the importance of literacy author opined that over the years, social scientists have used
data on literacy as one of the criteria to understand the levels of development where significance lies in growing levels of literacy among different groups of society. The paper presented a brief appraisal of the index of Deprivation (IOD) and crude literacy development index (CLDI) in Karnataka state for the two census years 1991 and 2001. The paper further attempted to show the relative status of taluks wise development through literacy. The study revealed that out of 175 taluks in Karnataka, Mangalore in Dakshina Kannada has the highest CLDI (0.873) both in 1991 and 2001; Followed by, Karwar, Madikeri, Sirsi, Udupi, Sulya, Sringeri, Bantwal and Bangalore South taluks. Yadgir taluk of Gulbarga district has the highest IOD (0.374) followed by Shahpur, Devadurga, Manvi, Shorapur, Siruguppa, Jewargi and Sedam taluks in the districts of Gulbarga, Raichur and Bellary respectively.

Shaukath Azim (2005) probed into the literacy growth and disparity in Karnataka. In his study he had used districts as unit of study. Yadav (2005) made an attempt in his paper to make an inquiry into the disparity in the educational development at the district level so that appropriate funding could be realised. The data used in this exercise was from DISE managed by NUEPA. The EDI was computed at the district level. For the exercise two districts from six major states like Uttar Pradesh, Madhya Pradesh, West Bengal, Rajasthan, Karnataka and Tamil Nadu were selected. For working out an EDI four broad indicators of Access, Infrastructure gap, teachers and outcomes were used. These four indicators were further broken into 22 indicators. The Principal Component Analyses method was used to develop EDI at the district level. Coimbatore district of Tamil Nadu emerged as the best district in the composite index, while indicator wise positions were different. The study suggested for re-allocation of resources for the upliftment of weak districts.
Narula (2005) paper dealt with the development of elementary education in terms of access, participation, gender and quality in education in seven districts of Banda, Hamirpur, Jhansi, Mahoba, Lalitpur, Chitrakoot and Jalaoun of Bundelkhand Region of Uttar Pradesh the paper concluded that in spite of various initiatives taken by the centre and the state Government to achieve the goal of Universalisation of Elementary Education, vast disparities in terms of literacy, access, participation and gender were found, These disparities threaten to undermine efforts to achieve Universalisation of Elementary Education.

Zaidi (2005) through his presented an account of facilities in primary and upper primary schools in India for major states of India using DISE data of 2004. Various indicators of facilities like availability of buildings in schools, percentage of schools by number of classrooms, percentage of schools with single classroom and schools with single teacher were assessed along with tracing the availability of other infrastructure facilities like black board, playground, electricity connection, computer facilities, book bank etc. separate state wise analyses was done for primary and upper primary level. In another paper Zaidi (2005) presented the status of elementary education in five North-Eastern States comprising of Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. These were the states which were not covered under DPEP for which DISE data was made available in 2004. The paper highlighted the elementary education scenario focusing on five major components of universal access (i.e. provision), universal enrolment, universal retention, universal participation and universal achievement.

Makkar (2005) studied regional disparities in educational development in Haryana with an objective to find out the development of education and to examine the inequalities among different districts of the state of Haryana. The study was based
on various indicators like literacy rate, number of educational institutions, density of educational institutions, enrolment ratio, and number of teachers, pupil-teacher ratio and expenditure incurred on educational institutions by type of education. Simple mathematical and statistical tools were used to analyse the disparities in the growth of Haryana. The study was based on two time intervals of 1966-67 and 2000-01. The analysis of paper clearly highlighted the fact that the inter-district disparities were existed in educational development of the state, so need of the hour is to reduce these inequalities. But this problem cannot be treated by making it an isolated issue. Multifaceted plan action in various fields including our socio-economic as well as political and institutional structure is needed. A wholesome regional planning is required to combat the problem.

Das (2005) carried out a study on levels of educational development of Scheduled Tribes of North-Eastern India. In his study he examined the disparities in literacy among the tribes and tried to measure the disparities in the levels of educational attainment. In his study he evaluated the tribal literacy and the progress in literacy during 1981-1991 in the North Eastern Region. He too used growth rate and Sopher’s Index modified by Kundu to measure inequalities.

Bishnoi (2005) carried out a spatial- temporal study on trends and determinants of school education in Rajasthan. The study took the stock of literacy scenario in 2001. Apart from that the study also analysed the spatial patterns of enrolment ratios at various levels of schooling, patterns of change in enrolment ratio between sixth and seventh All India School Educational Surveys. Researcher in his research also examined various disparities like rural-urban, gender and social. Again the study was primarily based on elementary education. The study also suggested strategies for balanced educational development of the state of Rajasthan.
Yadav et al. (2005) had made an attempt to construct the EDI of India at various levels of education viz. primary, upper primary, secondary and higher secondary for rural and urban areas separately. The analysis was made on the basis of five broad variables namely i) literacy, ii) achievement of education, iii) quality of teaching, iv) infrastructural facilities and v) expenditure on education etc. They had also developed EDI for sixteen major states of our country. EDI was developed to facilitate inter temporal as well as cross sectional analysis of the level of development among various states. They adopted PCA, composite variable rank and growth index to find out disparities. The study noted that the state of Bihar is most backward in respect of all education parameters both in urban and rural areas. The study revealed that the state of Karnataka was highly backward state at higher secondary level followed by Bihar and Uttar Pradesh. The state of Kerala was the most developed state at all ranks of schooling except higher secondary. At the higher secondary stage Haryana ranked the highest followed by Kerala, Punjab and Rajasthan.

Qian and Smyth (2005) in their paper tried to measure educational inequality between the coastal and inland provinces and compared it with rural-urban educational inequality in China using Ginni education Co-efficient and decomposition analysis. They came out with the finding that disparities in access to education between rural and urban areas rather than between coastal and inland provinces are the major cause of educational inequality in China.

Honnali (2006) looked into the aspects of political economy of uneven development in Karnataka. In the study researcher had explained historically the genesis of uneven development in Karnataka with special reference to the colonial impact in different regions of the state and unfolded the factors and forces that played the important role in the progress of Kannada speaking region into a unified state. The
study had also explained the pattern of uneven development pursued by the post independence state of Karnataka and its consequences of conventional economic growth of human development within the state. The study further highlighted the crises of uneven development and the underlying political dynamics of the nascent movements for separate statehoods in different regions in the state. The study proposed for balance regional development in the state. While highlighting various disparities certain educational indicators were also used like percentage of literacy rate especially rural literacy rate and distribution of educational institutions.

Hartwell et al. (2006) conducted a study on sub regional disparities with respect to out of school children. They examined the data from 30 countries and suggested the importance of the sub national inequalities in education distribution, particularly for designing educational policies. The result indicated that countries with low national attendance rates showed greater regional disparities and that low attendance rates within sub national regions correlate with low overall development. The study revealed that the most notable exception to this was Bangladesh, where most children are in school, even in the least developed regions. The study suggested studying the Bangladesh as model for good practice for bringing all children to schools.

Kumar (2006) measured the spatial patterns of educational development and disparities among states of India and among various segments inhabiting them. The study also discussed regional disparities in detail. The study was based on qualitative and quantitative work. Composite index, correlation along with other statistical methods was used to trace the regional disparities. The study was based on NCERT’s All India School Education Surveys (5th (1986), 6th (1993), and 7th (2002) the study was based on more than three dozen variables. The study recommended that there is a
strong need for the government to substantially increase their spending on education. It is generally felt that it is not the financial resources, but a political will that is lacking. Study further suggested that suitable norms should be developed in such a way that a minimum proportion of education should serve the goals of social equity and economic development.

Kumar (2006) conducted a state level analysis of elementary education in India. In his study he measured the spatial patterns of educational development among various states of India and among various social segments inhabiting them. The study also analysed the availability and quality of elementary education various states and union territories of India. Kumari (2006) made an attempt to study educational development in Haryana during 1991-2001. A Temporal-spatial analysis of literacy at the district level in the state across the regions, social groups and among males and females was analysed. She had also used Sopher’s Index modified by Kundu and Rao for measuring gender disparity.

Singh (2006) analysed the regional variations of dropouts in elementary education. The study explored state wise patterns in drop-out rates in India. The work was based on school education in India focussed mainly on elementary education and the dropouts has tried to discuss four aspects which are believed to be the obstacles in achieving universal elementary education. The study revealed that the disparities within the country were found to be very high between the states. Kundu (2006) depicted the picture of state level analyses of gender disparity in education in the context of millennium development goals.

Tirkey (2007) in his study related to regional dimension of educational disparities in Jharkhand analysed the district level spatial patterns of literacy among sexes and social groups and rural and urban areas. To compute disparity, the disparity
index by Sopher as modified by Kundu was used. The study also made an attempt to discuss the impact of various socio-economic factors on the literacy rate and the disparity existing therein with the help of correlation.

Saukath (2007) examined the temporal spatial patterns of disparity in literacy in relations to the regions and districts in his study of Uttar Pradesh during 1991-2001. Alam (2007) in his explanatory study has talked about genesis and perpetuation of social disparities in school education in India. In his paper he has addressed the forms of social disparities appeared between regions; between rural and urban; between male and females; between religious and social segments of society. Khudgata (2007) studied availability of infrastructure and access to higher education in Bihar.

Geetha (2007) while examining status and performance of secondary education in India has developed two indices, namely educational development and education performance. She used three indicator enrolment, institutions and teachers for computing the development index. On the other hand for computing the performance index she used the transition rate from upper primary to secondary education, dropout rate, the percentage of students who appeared in secondary board examinations. The objective was to examine inter-state variations in the status of secondary education by using these indices. The study has computed the indices for two points of time and compared their movements from 1990s to 2000-01/2003-2004. The study adopted the UNDPs method for calculating the Human Development Index. Results of the studies showed that that the same set of four states, Bihar, Uttar Pradesh, Rajasthan and Madhya Pradesh have the poor scores on both indices at secondary level. Beside Kerala other six states namely Haryana, Maharashtra, Andhra

Khatoon (2008) study was intended to analyse the levels of educational development of Uttar Pradesh and to ascertain the historical roots of the observed trends. It also focused on the spatial temporal patterns and disparities in literacy among different segments of the population.

Zaidi (2008) brought forward the inter-state disparities among sixteen major states of the country with respect to facilities in primary and upper primary schools in India. The data for the study was drawn from DISE analytical report 2004. The paper was much oriented towards statistics than highlighting regional variations.

Kaushal and Patra (2008) reflected on the regional disparities in Elementary Education in Bihar using 2006-2007 DISE data. In their paper they have discussed educational development in two states i.e. Bihar and Kerala have been compared in terms of different educational indicators which are vital for providing Universalisation of Elementary Education. They computed EDI separately for primary and upper primary level by using 23 indicators which were grouped into four subgroups namely access, infrastructure, teacher and outcome. The major finding of EDI showed that the Bihar ranked 35 in case of composite index of primary and upper primary level of education with an EDI as lower as 0.321 which is much lower than the same compared to the top ranked state.

Chugh (2008) made a comparative study of the progress of literacy and elementary education in three different states of Himachal Pradesh, Kerala and Mizoram. The paper highlighted the contributing factors and circumstances responsible for the education growth of these three states. The paper argued that the pathways to achieve Universalisation of Elementary Education differ significantly
from state to state and no different pathways can be considered to produce results. The pathways and strategies may have to be evolved in tandem with local conditions, culturally, linguistically and geographically different have made considerable educational progress by adopting different ways and means.

University Grants Commission (2008) conducted a research study for the identification of educationally backward districts for the purpose of effective implementation of strategies and programmes of the UGC during the Eleventh Five Year Plan. The study was carried out by obtaining the enrolment data from Census of India while data on availability of educational facilities namely colleges and other institutions offering degree level courses from the University Grants Commission. The study revealed that the UGC adopted overall literacy rates as the single indicator of funds under the educationally backward areas schemes during X plan. Districts that had overall literacy rates below the national average (i.e. below 64.4 percent) were identified as educationally backward districts. Accordingly the number of such districts, as per the census 2001, was 294 for the country as a whole. Finding literacy as inappropriate indicator of identification of educationally backward districts in the XI plan, Literacy rate if the district was substituted by Gross Enrolment Ratio of the district as GER includes all enrolled in higher education proportionate to population in a relevant age group (18-23 years). It was instructive to note that literacy was stock variable, whereas GER indicates the current status of enrolment in higher education.

In a book on Higher Education in India: Issues related to expansion, Inclusiveness, Quality and Finance Sinha (2008), Identified Educationally Backward Districts to examine the socio-spatial patterns of enrolment in higher education both at the state and districts levels. To examine the spatial patterns of availability of educational facilities and to identify the areas suffering from supply constraints with
respect to several of institutions imparting degrees courses. To identify educationally backward regions at the district level for the purpose of effective implementation of strategies and programme of the UGC during the Tenth Plan.

Debapriya et al. (2008) have analysed the inter-district disparity in the levels of development in education and health care facilities in the state of Orissa so as to enable the planners to formulate region specific human development plans. The development index of education and health care is constructed of all the 30 districts using 16 indicators. The co-efficient of each indicator for each indicator was computed. The study revealed that inter-district disparity was very high in the state. The coastal districts of Cuttack, Khurda, Jagatsinghpur, Balasore and Kendrapada were highly developed. There were 9 highly backward districts and 6 backward districts. The distance from highly developed regions explained their backwardness.

Hangaragi (2008) paper assessed the inter taluks disparities in 11 taluks of former Bijapur district. Author opined that these regional disparities gave rise to multiple social, economic and cultural problems. This hampers national integrity and unity and political stability and it is against the principle of social justice. In his paper he laid emphasis on minimising regional imbalance. Study was based on secondary data. Sixty one indicators pertaining to four groups’ viz. agriculture (13), industry (10), infrastructure (24) and demography (14) pertaining to the year 2000-01 were used.

Garhwali (2008) made an attempt to study the spatial analysis of the social inequality among social groups in India with special reference to levels of educational developments for various stages of education. Singh (2008) through his study provided a vivid account of elementary education in the state of Bihar. The study was significant as it show cased the situation of an Indian state which was placed at the
35th position as per the analytical report brought out by NUEPA in 2005. The study reviewed the progress made by the state of Bihar with regard to Universalisation of Elementary Education. It also analysed the status of universal access, enrolment, retention, availability of infrastructure and teachers. Singh in his study had computed and demonstrated the Educational Development Index for 37 districts of Bihar using principal component analysis by using SPSS. He had used four components of access, infrastructure, teachers and outcome. These components had several other indices.

Lalsangzuala (2009), Azad Thakur/Anil Kumar (2009) conducted similar studies for the state of Mizoram and Himachal Pradesh respectively. All these three studies brought out the inter-district inequalities in elementary education.

Singh (2009) while describing the trend of regional disparities in India since independence used female literacy for measuring social development along with urbanisation, rural non-agricultural workers and population above poverty line. District was used as the basic areal unit of study and with the help of component indices; aggregate index of development was derived.

Singh, Monika (2009) conducted study, perhaps first of its kind on development of secondary education in Kerala and Uttar Pradesh using Educational Development Index. The study was attempted to compute and compare the Secondary Education Development Index SEDI for major states in India, the study further tried to explore the role of socio-economic factors in the development of secondary education and to review the policies and programmes in development of secondary education. The study was confined to two major states of India namely, Kerala and Uttar Pradesh. For computation of SEDI four parameters of Access, Expenditure, Teacher, Infrastructure and Outcome further divided into seventeen indicators were
In this study the researcher had used PCA for assigning factor loading and weights.

Siddiqui and Hussain (2010) in their paper studied the imbalances in the level of development with special emphasis on regional dimension. They have analysed prevailing regional disparities among fifteen blocks of Malda district of West Bengal. Regional disparities were traced by using thirty eight variables from seven service sectors like education, health, market, electricity and drinking water, agriculture finance and recreation. Disparities were measured by using Development Index (Deprivation Method). While measuring disparities in education sector seven indicators were selected by them which included, Number of primary schools, middle schools, secondary schools, higher secondary schools, per 1000 population and number of colleges, professional training institutes and number of adult education centre per 10,000 population.

Kaushik (2010) paper aimed at assessing spatial problems of primary education among the blocks of Mathura district of Uttar Pradesh. The study was based on secondary data. A total of 18 selected variables were grouped into three categories of primary educational attainment, primary educational facilities and socio-economic development. Statistical techniques like Z score and Correlation have been applied to these data sets. The study revealed that at the block level that there was unequal distribution of attainment in primary education. It was also interesting to note that the low level of attainment in primary education was mainly due to the socio-economic conditions of the people rather than the educational facilities available in the blocks.

Tiwari and Mathur (2010) made a study on inter regional economic disparities in Rajasthan with an objective of measuring inter-district disparities prevalent in various sectors of economy and livelihood and to take necessary measures to reduce
inter regional disparities The study covered 32 districts focusing on 12 sectors with 91 indicators. Meher’s composite index of development, Shastri’s composite index and modified principal component analysis was used in the study. 12 indicators were selected for education sector like Net enrolment rate, pupil-teacher ratio, percentage of out of school children, dropout rate, percentage of never enrolled, single teacher school, common toilets, drinking water, gender gap in enrolment, students passed with more than 60 percent marks, percentage of male literacy and percentage of female literacy. Majority of the indicators in education sector confined to elementary education. Jaipur and Jhunjhunu district were ahead of other districts in education sector while Jalore was the least developed district. The analysis also showed that desert districts like Jhunjhunu, Sikar, Nagaur, Jodhpur and also Jaipur have better schooling facilities.


3.2.7 Recent Studies

Kumari (2011) studied access to higher education in Haryana with a comparative study of Hissar and Fatehabad District. The study analysed the availability of higher education in the state of Haryana. Regional Patterns of higher education were also explored in the study. She has used Composite (Principal Component Analysis) Index for determining the levels of educational development in the state. Kumar (2011) carried out a study to analyse social and economic dynamic of out of school children in rural Bihar with special reference to its districts, where
smallest analysis was household. Negi (2011) examined spatial distribution of educational institutions in terms of components related to quality and quantity of educational inputs and outputs at primary, upper primary, secondary and higher secondary levels. The study also analysed the disparity in educational indicators related to access, enrolment and transition to higher level of education, dropouts and failures in rural and urban areas with differences across gender and social groups. The study comprised of Himachal Pradesh in general and the districts of Kangra and Sirmaur in particular and was based on both secondary and primary data sources collected through a field survey in selected villages from the districts of Kangra and Sirmaur. The study concluded that the quality of academic and physical infrastructure at the school level is an outcome of various demographic, social, economic and physical factors. Of these physical settings contributing in a consequential manner, as providing quality services in a high mountainous terrain may be difficult due to low accessibility.

Hussain (2011) came out with a paper on dimension of educational development and its determinants in Malda District of West Bengal. He analysed the regional imbalances in the levels of literacy consequent upon the various socio-economic factors. He analysed his study by using standard techniques like Z score, Karl Pearson method and T test. Spatial variations were represented by Choropleth method. In the analyses he observed that the Blocks of Kaliachak-I and Chanchal I have attained the top position in literacy and education factors while Harishchanderapur II and Kaliachak III Block is at the bottom.

Saharan (2011) had studied spatial patterns of literacy and education levels in Bikaner District of Rajasthan. The study was based on village level analysis. The study identified and evaluated enrolment rates and their variations in elementary
education in Bikaner district of Rajasthan. The study further examined the level of school accessibility, infrastructural availability, teacher’s quality and other related parameters associated with elementary education like school monitoring mechanism, financial allocations and community participation levels in elementary schools and their linkages with elementary education outputs and evaluated social and economic characteristic linkages with educational output and school enrolment rates. The study was based on primary and secondary data. The study stressed that there is need to plan and implement policies and programmes related to elementary education which can bring inclusive development of schools located in villages, by eliminating basic infrastructure disparities prevailing among schools in villages in the district. Educational Development Index of villages was developed by using PCA. Study revealed that villages with low educational development in Bikaner District were located towards western parts of the district this may be partly attributed to the presence of vast expanse of sand dunes in this major parts of the district which acts as a stumbling block in expansion of basic educational facilities in villages located there as economic activities are less and hence population size of villages are low. EDI was better among the villages located in eastern and southern part of Bikaner which may be due to favourable geographical conditions prevailing in these villages that has provided favourable condition in expansion of educational facilities in these villages and also due to less concentration of SCs and STs Population in these villages.

3.3 STUDIES PERTAINING TO SECONDARY EDUCATION

Various studies have been conducted in the area of secondary education. Much of the studies conducted in this area are based on psychological, sociological and philosophical foundations of educations. There are studies those have traced the growth and development of secondary education at different levels. Kaura (1976)
conducted critical study of secondary education in Punjab since the year 1947. Phadke (1983) had studied the role of government of Maharashtra in the development of secondary education. Nath (2006) had studied the development of secondary education in post independence era with a historical perspective. Shraddha (1990) had surveyed the status of secondary education of Aligarh city. Various studies have been traced on secondary education focusing on financial aspects like Arugham (1984) had conducted a study on cost and demand for secondary education in Tamil Nadu. Deka (1993) had conducted an analytical study for looking into the status of secondary education in Darrang district of Assam. Packiam (1987) traced the progress of secondary education in Tamil Nadu during a period of twenty five years from 1950. Panchmukhi P.R. et al. (2008) conducted a study on public financing on secondary education. The study was conducted with the objectives to find out the trends and patterns of education with respect to institutions, enrolment and teachers in secondary education along with trends and patterns of secondary education, in general and secondary education in particular. The study also probed into the patterns and composition of grants in aids to secondary education in Karnataka over the years and the steps taken by Government of Karnataka to improve the efficiency and equity in educational expenditure, in general, and the grants in aids policy in particular. Akhtar and Rai (2002) came out with their paper on secondary education scenario in Uttar Pradesh in the same book. In 2002 Mukhopadhyaya came out a book on secondary education, the book comprised,more than forty six papers contributed on different aspects of secondary education. The papers were subdivided into five sections mainly development perspectives in secondary education and senior secondary education, capacity building of educational administrators, management of secondary education, financing of secondary education, school based management
3.4 CONCLUSION

Exhaustive review of literature facilitates us in exploring the past practices in research and identification of research gaps. Based on the above account following generalizations can be made:

- There are few nodal centers in the country where research related to regional disparities in educational development is being carried out. This includes National University of Educational Planning and Administration, New Delhi, Center for Studies in Regional Development, Jawaharlal Nehru University New Delhi, and in Karnataka studies are carried out by research organizations like Institute of Social and Economic Change (Bangalore) and Centre for Multi-Disciplinary Development Research, Dharwad. Sporadic researches are also carried out in various university departments.

- There is no dearth of literature available with respect to studies related to regional disparities, but majority of the researches in geography are confined to conceptual and theoretical implications of regional planning, regions, regionalization and regional methodology, metropolitan area planning, rural development planning and resource planning. There were very limited studies related to planning for educationally backward regions,

an attempt to analyze regional disparities but their studies were mainly concentrated on holistic development of the region than focusing on a single sector wise development.

- In sectoral development also much attention has been given to sectors like agriculture, industry, transport and infrastructure than addressing to the needs of educational development in an area.

- Majority of the studies carried out in regional disparities in educational development done in the past were related to identification of regional disparities in the Elementary Education. These studies were commonly available after 2000 when the country came out with a centrally sponsored scheme of Sarva Shiksha Abhiyaan to promote Universalisation of Elementary Education (UEE). In order to strengthen SSA, NUEPA established DISE for data collection and maintenance at primary and upper primary level.

- There were several scholars focused their attention on highlighting regional disparities in elementary education. This includes; Zaidi (1989; 2008), Acharya and Debi, (2001), Gupta (2003), Khatoon (2008), Chugh (2008), Kaushal and Patra (2008), Singh (2008), Kumar (2006), Lalsangzuala (2009), Thakur (2009), Kumar (2009), Tiwari and Mathur (2010).


- The stage which was most neglected was secondary education. As it is normally said that it is the middle which always suffer, and then there is another statement that secondary education in our country had always met with secondary treatment. It looks like researches in regional disparities in secondary education received
secondary importance than other stages of education like elementary and higher education.

- There are very few studies, Packiam (1987), Mehta (2007) and Monika (2009) probed into the development of secondary education.

- Literature came across several overseas studies related to regional disparities in educational development. At the global level Harbison and Myers (1964) conducted a study for 75 countries. Several case studies were carried out in late seventies like Hungary (Ferge et al.), Madagascar (Hugon), Thailand (Sudaprasert et al.), Kenya and Tanzania (Court and Kinyanjui). In these studies scholars examined the way in which regional inequalities in education have assumed different forms in different socio-political contexts. Kalantri (1996) carried out a study for Iran, Antonyraj (2002) for Srilanka, Assadullah (2004; Pakistan), Kotani (2004; Brazil), Qian and Smith (2005; China). Apart from that UNESCO also brings out regional variations in school education among various countries.


Bhatt (1990; Karnataka), Tanwar (1990; Rajasthan and Bihar), Rohmiglien (North Eastern states), Reddy and Reddy (1992; Andhra Pradesh), Sahay (1994; Orissa), Zaidi (1994; Uttar Pradesh), Rehana (1996; Maharaahtra), Baraik (1997; Bihar), Pathania (1997; Himachal Pradesh), Saha and Joshi (1999; Rajasthan), Anurag (2001; Bihar), Ryngnga (2001; North Eastern states), Venkatesh (2000; Karnataka), Prakash (2003; Madhya Pradesh), Khandelwal and Saharan (2004; Rajasthan), Alam (2004; Bihar), Makkar (2005; Haryana), Bishnoi (2005; Rajasthan), Kumari (2006; Haryana), Tirkey (2007; Jharkhand), Saukath (2007; Uttar Pradesh), Khudgata (2007; Bihar), Khatoon (2007; Uttar Pradesh), Singh (2008; Bihar), Debapriya (2008; Orissa), Tiwari and Mathur (2010; Rajasthan). These national level and state level studies carried out by different scholars were successful in attaining its objectives but at the same time it can be stated that these studies had serious inadequacies for drawing meaningful generalizations for micro-level planning.


Certain studies were carried out at sub-district level. Rao (1984), Tilak (1991), Bharthy (2002), Sinha (1988), Hangragi (2008), Siddiqui and Hassan (2010),
Kaushik (2010), Kaushik (2010), Negi (2011). These studies help in formulating district level plans focusing on sub-districts like blocks talukas and tehsils.

- **Studies Pertaining to Karnataka:** Very few studies are available directly on Education in Karnataka. Most of the studies carried out are general in approach and revolves around theme of literacy. Usha Ram Kumar (1982) studied disparities in education in Karnataka was limited in scope and confined to inter-district disparities. Rao (1984) studied regional disparities in Karnataka using taluks as unit of study. The study though carried indicators from education sector did not focus much on secondary education. Seetharamu (1988) focused on the various aspects of educational development in Karnataka. The study was more inclined towards statistics rather than portraying regional dimension. Bhatta (1990) though focused on secondary education from system analysis perspective highlighted regional analysis but remained silent on other aspects of secondary education like access, infrastructure and teachers. High Power committee for redressal of regional imbalances in Karnataka (2000) made a comprehensive analysis of regional disparities. The socio-economic indicators used were representing the entire gamut of education sector rather than pointing out clearly the disparities in secondary education. Venkatesh (2000) analyzed problems and prospects of backward regions in Karnataka. Similarly Bharthy (2002) in her study related to regional imbalances in Karnataka considered 34 variables from agriculture, industry, infrastructure and demography. While generating infrastructural index she had used indicators like availability of primary schools, secondary schools, degree colleges and technical colleges. Limiting the scope to simply availability of schooling facility does not spell out the status of secondary education in the state. Azim (2005) also remained confined to literacy growth and
disparity in Karnataka. Lakshmana (2005) too focused on spatial dimension of literacy in Karnataka. Thus to conclude one can say that though there are few studies related to education in Karnataka none of the studies specifically focus exclusively on development of secondary education focusing on regional dimension.

- There are scholars like Chattopadyaya and Raza (1975) those have made an attempt towards an important task of providing background for the problem of regional disparities. They dealt with the methodological aspect of the subject and spatial balance. They have also evaluated various statistical techniques like ranking method, Principal component analysis and multivariate techniques developed in the field by different scholars from time to time. Carron and Chau (1980) provided theoretical inputs to regional disparities in educational development. Mehta (1999) paper gave enough thought to selection and availability of indicators to assess educational development. Study conducted by IMAR (2001) provided a framework for the selection of educational indicators and methodology for calculation of Educational Development Index.

- Thus looking at the importance of district level educational planning the present study has immense significance. The study will provide strength to national flagship programme of Rashtriya Madhyamik Shiksha Abhiyaan for promoting universalization of secondary education in the country.