CHAPTER III

REVIEW OF RELATED LITERATURE

3.1 STUDIES RELATED TO EDUCATION AND ECONOMIC GROWTH

3.2 STUDIES RELATED TO RATE OF RETURN TO EDUCATION

3.3 STUDIES RELATED TO INEQUALITY IN EDUCATION AND POVERTY
REVIEW OF RELATED LITERATURE

A review of related literature is inevitable for the systematic identification, location and analysis of documents containing information related to the research problem. ‘Citing studies that show substantial agreement, and those that seem to present conflicting conclusions helping to sharpen and define understanding of existing knowledge in the present problem area provides a background for the research project and makes the researcher aware of the status of the issue’ (Best, 2002). Such an attempt has helped to eliminate the duplication of what has been done and provide useful hypotheses and helpful suggestions for significant investigation (Koul, 2005).

In the present study, the literature was collected from various books, theses and dissertations. For the latest related studies the investigator has referred current journals and internet. The studies directly or indirectly related to the topic were collected, classified, organized and presented chronologically under the following heads:

3.1 Studies Related to Education and Economic Growth

3.2 Studies Related to Rate of Return to Education

3.3 Studies Related to Inequality in Education and Poverty.

3.1 STUDIES RELATED TO EDUCATION AND ECONOMIC GROWTH

Miller (1960) estimated the life-time income of people with different years of schooling in 1939, 1946, 1949, 1956 and 1958. The study revealed
that during the period of study the relative income position of highly educated has no change.

Schultz (1961) analysed the relation between expenditure on education and income in the United States for the period of 1900-1956. The study revealed that the resources allocated to education rose about three and half times, relative to consumer income and gross formation of physical capital.

Dension (1962) in his study ‘Education, Economic Growth and Inflation’ revealed that education has a great role to play in economic growth. He stated that every economy should give top priority to education for their path to development.

Curle (1964) conducted a study on a sample of fifty-seven countries for which he collected a variety of economic, educational and political data around the year 1958. The study found out high rank order correlations between educational expenditures as a proportion of national income on the one hand, and both per capita GNP and post-primary enrolment on the other.

Harbison and Myers (1964) attempted simple correlations among indices of human resource development, proportions of the population in selected countries and national income in a cross-sectional study of 75 countries at different stages of education, and found a positive correlation of 0.88 between per capita gross national product and a composite index made up of secondary and college level enrolment ratio.

Goudan (1965) conducted a study to assess the contribution of education to India’s economic development during 1950-51 to 1960-61. The
study revealed that gross investment in education and physical facilities in education, as percentage of adjusted national income was 8.90. And gross investment in education formed 44.10 per cent of the gross physical capital formation.

Bennet (1967) investigated the relationship between vocational and general secondary education in the development process and found that economic variables are generally more highly correlated with vocational than with academic schooling.

Mukherji and Krishna Rao (1967) studied the relationship between education and economic development. The study estimated high correlation between higher technical education and gross national product per capita.

Padmanabhan (1967) conducted a study on Economics of Education and found that educational development and economic growth are correlated to each other.

Chaudhri (1968) conducted a study on ‘Education and Agricultural Productivity in India’ and revealed that the impact of education on the level of agricultural productivity is not perceptible in the inter-district data, provided if the inter-district data variations in the level of education are very small and also the socio-cultural factors may weaken the impact of education on agricultural productivity.

Bowman and Anderson (1968) conducted a study in the United States on human capital and education based on cross-national comparison. The major finding of the study was that, an apparent threshold effect of at least
40 per cent adult literacy is a necessary but not sufficient condition of economic emergence.

Adams and Bjork (1969) made an effort to quantify the relation of education to economic, political and other aspects of development. The major finding of the study was that unless the formal education is related to life of the masses of people, none could eradicate the problems of the backward and scheduled castes especially, the poor people in the underdeveloped countries.

Beida (1970) found out the correlation between marginal difference in educational expenditure and the rate of economic growth of a sample of 45 countries. He found the correlation figures for 41 countries for the period of 1960-63.

Ramanujan (1970) with a project team conducted a study on manpower development in rural India. The major finding of the study was that the traditional artisans are not in a position to cater to the needs of modern technology and the existing facilities for training have not so far reached the attention it deserves and some changes in education should be introduced.

Komarov (1971) tried to study the relationship between education and economic development and the development of education. He stressed that improvement in education and cultural and technical level of workers affect the national economy and such improvements have the effects of raising wages and real income and enable the workers and his family to enjoy a higher standard of living.
Singh (1972) attempted to find out the relation between education and economic growth in Punjab. The findings of the study shows that with 33 per cent literacy Punjab ranked fifth among the states of India in 1971.

Gupta (1973) conducted a study on the manpower planning in India. The study stressed that educational planning should be integrated with overall economic planning, and education should be based on the type of economic activity followed in the country.

Sharma (1973) made a study on the Economics of Education with special reference to educational development of Madhya Pradesh. The study examined the development of education in Madhya Pradesh during the different five-year plan periods with a view to estimate the proportion of achievement in respect of the expenditure.

Chaudhri (1974) examined the impact of education in the agricultural sector and gone into the details of the effects of farmer’s education on his ability for innovation and allocation.

Dhlakia (1974) estimated the relative contribution of education to economic growth in India for the period 1948-49 to 1968-69 as 6.79 per cent. The absolute contribution for the same period was estimated as 0.22 per cent. The output per unit for economies of scale for the period was found as 37.60 per cent.

Pandey (1976) conducted a study to evaluate the precise contribution of education to the development of Nepal. The study found out the effect of education on the earnings of the educated in Nepal increased as one moved to higher and higher levels of education.
Chaudhri (1979) in another study on Education innovations and Agricultural Development – A study of North India (1961-72) investigates the effect of general formal education on agricultural productivity and innovations. The study comes to the conclusion that mere literacy is inadequate to ensure wide spread adoption and diffusion of high yielding innovations.

David (1979) made an investigation into human resource planning in relation to employment and education in Madhya Pradesh. The study revealed that human resource development depends mainly on the general growth of employment and education in the right direction.

Dey (1980) conducted a study to assess the effect of education in Indian agriculture. The investigator found that there was a high correlation between education and agricultural development and the study revealed that the level of literacy and agricultural yield in India were still so low that it was very difficult to assess any casual relationship between the two.

Jaleel (1980) conducted a study on the impact of education in the economic growth of Kerala using the technique of correlation by taking enrolment of students at the secondary stage as the educational index and per capita income during the same period as index of economic growth. It was found that for increase in per capita income enrolment in educational institutions should be increased. Jaleel (1982) conducted another study on education and economic growth in Malappuram, Kerala. The study revealed the impact of education on the economic growth of Malappuram.
Lockhead (1980) made a survey in 13 countries relating the educational level of farmers to their productivity and found that four years of schooling may be capable of increasing productivity by around 10 per cent a year.

Nair (1980) conducted a study on Education in Kerala and the Development of Human Resources. The study revealed that the present system of education is not conducive to the development of productive capacity of the masses. Nair (1981) conducted another study on the development of education in Kerala, especially during the British period. The investigator puts forth the indirect benefits of education on the economic and social life of the people, especially the weaker sections of people.

Mary (1983) conducted a study on the Education and Economic Development of the weaker sections of people in Meenachil Taluk in Kerala. The study revealed the role of education in the upliftment of backward sections.

Kalairajan and Shand (1984) made a study to determine whether the schooling of farmers has a significant influence on yield that is independent of the influence of other non-formal forms of education. The study revealed that schooling of farmers had an independent effect on yield, but was not significant and farmer’s non-formal education had a significant and greater influence on yield.

Lalithakumari (1984) conducted a case study of two villages on ‘Education and Economic Development with special reference to family size’. The investigator made use of Age-Education-Earning Profiles and
Economic Status to compare the economic and educational development of the two villages. It was found that earnings of people increase with increase in levels of education in both the villages.

Shah and Srikantiah (1984) analysed the determinants of earnings in the framework of human capital theory by constructing linear and semi-log linear function. The regression analysis of data shows that education and earnings are positively related and a good deal of variations in earnings are explained by education in conjunction with other human capital variables.

Kanakamani (1985) made a study on Education and Economic Development of women working in the unorganized sectors of Kerala. The major finding of the study is that the earnings and economic status scores of different sectors differ according to the change in their age and education.

Tilak’s (1986) study on education and regional development covered a range of aspects, focusing on a few important functions of education at regional level employment, earnings etc. and the differential capabilities of the education system in performing these functions in different regions in India.

Veena (1987) on education and economic growth attempted to study the role of education in economic development. A detailed analysis of the educational and manpower implications of a development plan for India was also undertaken. For this, Gujarat was taken as the sample region. Cross-sectional data were collected using both primary and secondary data. Wheeler’s work was extended by
Chacko (1990) conducted a study to explore the effect of education on the economic development of people living in the rural areas of Kerala. The study throws light on the role of education in the socio-cultural development of people in the rural areas of Kerala.

Liu and Amer (1993) conducted a study using the multiplicative Cobb Douglas production function to model Taiwanese economic output as a function of labor and capital inputs and of measures of educational attainment. The finding of the study is that expanding junior high and vocational education met human needs and affected economic growth.

Shaji (1995) in his study attempted to find out the role of education in the economic welfare of people in the rural areas of Thodupuzha Taluk in Kerala. The major finding of the study is that there is significant correlation between education and economic welfare of people in the area.

Mehta, (1996) conducted a study on Educational Progress and Economic Development of Ujjain District. The study revealed that the introduction of modern techniques in production in developing areas was according to the level of education of people.

Daniel (2000) conducted a study on Age-Education and Earnings of Engineers in Kerala. The study explored the relationship between age, education, and earnings of different categories of engineers in Kerala.

Drori (2000) attempted to find out the link between science education and economic development from a comprehensive perspective and examined the current global trends in science education expansion. The study revealed
the effects of science education and economic development from a comparative or cross national perspective.

Joseph (2000) conducted a study on education and human resource formation in rural setting. He found that sex, place of birth, caste and size of the family have significant influence on the development of human resources.

Blom and Holm, (2001) examined the statistical relation between education and earnings in Brazil and the benefit staying one extra year in school. The study revealed that the overall economic reward for staying in school for one more year fundamentally changed from 1982-98 and this development fundamentally altered the way education was remunerated in the labor market.

Mustapha and Greenan (2002) conducted a study on the role of education in the economic development of Malaysia. The study revealed that vocational education contributes to economic development and vocational graduate have good technical skills, but they needed employability skills.

Hunghey (2003) conducted a study on higher education and the public, private and non profit sectors as equal partners in promoting regional development. The study reveals the advantages of such partnerships and various approaches to regional economic development.

Nartgun and Eren (2007) conducted a study on education policies of Turkish political parties and their possible effects of economic development. The findings of the study show that equality of opportunity is the common issue in the education policies of the parties. Equality of opportunity is
included in the policies of all parties shall ensure that all individuals benefit from the existing educational opportunities and that current human resources are utilized at the maximum level.

Tilak (2007) conducted a study on post-elementary education, poverty and development in India. The study shows that post elementary education is important for reduction poverty, in improving infant mortality and life expectancy, and for economic growth.

3.2 STUDIES RELATED TO RATE OF RETURN TO EDUCATION

Hansen (1963) in USA estimated private and social rates of return for a variety of schooling combinations in 1949. The social rates of return were found to be 15.00 per cent for elementary, 11.40 per cent for four years of high school and 10.20 per cent for the four years of college. The corresponding private rates of return were infinity, 14.50 per cent and 10.10 per cent.

Becker (1964) estimated the private returns for white male college graduates, unadjusted for ability difference, as 14.50 per cent in 1939, a little over 13 per cent in 1949, 12.40 per cent in 1956 and around 15.00 per cent in 1958 and 1961. The private rates of return to white male high school graduates unadjusted for ability were 16 per cent in 1939, 20.00 per cent in 1949, 25.00 per cent in 1956 and 28 per cent in 1958.

Carnoy (1964) on a cross sectional sample of 4,000 male wage earners collected data on the wage or salary of the employee, the number of completed years of schooling, age, father’s occupation, the type of industry
in which employed and the city of residence. Schooling was found to be the largest single determinant of income differences. Age earnings profiles were constructed. Both private and social rates of return were estimated in terms of standardized rates.

Lassiter (1965) computed private rates of return based on opportunity cost. The returns to non-white college graduates in central cities were found only one-half the returns to white graduates (four per cent against eight per cent). However, the non-white in rural farm areas was found to enjoy almost the same returns as whites in the same areas.

Harberger (1965) carried out a survey of 5,800 men workers in Hyderabad in 1956. The social rates were calculated based on the assumption that the direct costs of education were equal to 50 per cent of the foreign earnings, 10 per cent for secondary education and 16 per cent for higher education.

Harberger and Salowsky (1966) computed social rates of return for 1959 by using case studies for the income of the urban labour force by years of schooling and for the costs of education in Chile. Social rates were 24 per cent for primary level, 16.90 per cent for the secondary level and 12.20 per cent for university level.

Klinov-Malul (1966) in a study of the returns to education in Israel estimated “present values” for different educational levels. The social rates of return was found to be 16.50 per cent for primary, 6.90 per cent for secondary and 6.60 per cent for university education. The corresponding private rates were 27 per cent, 6.90 per cent and 8 per cent respectively.
Hansen (1966) used earnings data from collective agreements to estimate normal hourly earnings. Lawyers showed a private rate of return of 11 per cent and a social return of 10 per cent, Civil engineers appeared to enjoy the highest returns (13.50 per cent private and eight per cent social) and medical doctors the lowest (eight per cent private and five per cent social).

Goundan (1967) estimated the social and private rates of return on investment in different levels of education. The social rates of return were calculated as 16.80 per cent for primary education, 11.80 per cent for middle level, 10.20 per cent for matriculation, seven per cent for degree level and 9.80 per cent for engineering degree.

Kothari (1967) estimated marginal rates of return from Bombay city data. The social rate of return was 20 per cent for high school over middle school and 13 per cent for college over high school. The social rates for arts and science graduates and engineering graduates were estimated as 13 per cent and 25 per cent respectively.

Schmidt and Baumgarten (1967) analysed the earnings data of Germany based on the 1964 micro census survey which sampled 2,00,000 people. The unadjusted returns to male university graduates were found to be 4.60 per cent and the returns to female graduates six per cent. Higher returns were recorded for female graduates from vocational colleges (7.90 per cent).

Hanoch (1967) estimated earnings functions that included a large number of explanatory variables. By means of multiple regressions,
expected age-earning profiles by years of schooling were estimated. When
the elementary school graduates were compared with persons with zero to
four years of schooling the private rate of return was above 100 per cent,
16.10 per cent was the rate or return for four years of high school whereas it
was 9.60 per cent for the extra four years of college education.

Blaug (1967) estimated private and social rates of return of a sample
of about 2,800 male employees in five large firms in Britain. The private
rate of return to a pass or ordinary university degree was equal to 8.50 per
cent, whereas the social rate was six per cent.

Arrestad (1967) computed rates of return for senior secondary and
university education on the basis of different sectors and occupations into
which graduates enter in Norway. The private rate of return to university
education was found as 7.70 per cent and the social rate as 7.50 per cent.

Schultz (1968) in his study on returns to education used a rather small
sample of urban labour force of Bogota in 1965. Earnings functions were
estimated separately for men and women.

Dewolf and Ruiter (1968) used in their study data from the Central
Bureau of statistics on the earnings of employees in industry and
government service of Netherlands. An overall average estimate of the
private return to higher education in Netherlands was found to be 10.40 per
cent; whereas for secondary education it was 8.50 per cent.

Ogily (1968) estimated the private and social rates of returns to
education in New Zealand. Alpha co-efficient of 0.5 were used throughout
the study. The private rates of return were 20 per cent for secondary
schooling and 14.70 per cent for a University degree. The respective social rates were 19.40 per cent and 13.20 per cent.

Selowsky (1968) estimated a variety of social rates of return of working people Bogota during 1963 - 66. Both adjusted and unadjusted rates of return were calculated. The result of his study led him to conclude, ‘today rates of returns are rather insensitive to different patterns of expansion of the educational system.’

Thias and Carnoy (1969) calculated rates of return to education in Kenya, using a special survey data. The private rates were found to be 32.70 per cent, 30 per cent and 27.40 per cent for primary, secondary and university levels of education respectively. The corresponding social rates were 21.70 per cent 19.20 per cent and 8.80 per cent.

Panchamukhi (1969) using the survey data of the Greater Bombay estimated rates of return investments in different levels of education. The estimated returns were: 21.37 per cent to secondary education, 7.41 per cent to undergraduate diploma, 6.73 per cent to first degree in arts and 8.60 per cent to first degree in science.

Rogers (1969) estimated both and private rates of return to a number of subjects within higher education in Brazil. The overall social rate to higher education in the northern region of Brazil was 15 per cent, whereas the corresponding private rate was 29.70 per cent.

Psacharopoulos (1969) estimated rate of return to investment in education in Hawaii based on the reports of the 1960 census of population and starting salary offered to University of Hawaii graduates. The private
rate of return for elementary schooling was found to be infinitive. High
school yielded a private rate of 5.50 per cent and college 11 per cent. The
social rates for the three levels were 24.10 per cent, 4.40 per cent and 9.20
per cent respectively. In 1965 the private rate of return to masters degree
was 6.70 per cent and to a doctorate degree 12.00 per cent.

Blaug, Layard and Woodhall (1969) estimated rates of return to
investment in education in India. The private rates of return adjusted for
wastage, unemployment, other factors (alpha = 0.65) and growth (2.00 per
cent per year) were found to be 18.70 per cent for primary 10.40 per cent for
a first degree (over matriculation) and 15.50 per cent for an engineering
degree. The corresponding social rates were 15.20 per cent, 8.90 per cent
and 12.50 per cent, respectively.

Maglen and Layard (1970) used the age-earning profiles of
employees in the electrical engineering industry in 1966 and a variety of
profitability estimates were produced. Private rates of return were estimated
as 12 per cent for a first degree, 10.50 per cent for a maters degree and 12.90
per cent for a doctoral degree. The corresponding social rates were 8.10 per
cent, 5.70 per cent and 7.40 per cent.

Carnoy (1970) using 1960 population census of Puerto Richo
estimated the rate of return figures in urban and rural areas. The private
rates unadjusted for labour force participation for males were over 100 per
cent for primary, 26.40 per cent for secondary and 23 per cent for higher
education. The corresponding social rates were 19.80 per cent, 20.10 per
cent and 11.90 per cent, respectively.
Clark and Fong (1970) using sample household survey in 1966 estimated the returns to education in Singapore. Expect for the primary level, the rates for men and women were found almost the same. The private rate for the secondary level was 20.005 and for the higher level 25.40 per cent for the higher level.

Bowman (1970) used sample surveys in firms employing ten persons or more in order to estimate rates of return to investment in education in Japan for 1959, 1961 and 1966. The rates were unadjusted for ability, growth and other factors. Both social and private rates were calculated for different types and levels of education with necessary adjustments.

Hewlett (1970) estimated both private and social rates of return in Brazil during 1962. The private rates, which were based on the assumption of zero direct costs of schooling, were 11.30 per cent for primary, 22.20 per cent for the first cycle of secondary, 20.50 per cent for the second cycle of secondary and 38.10 per cent for higher education.

Hines, Tweeton and Redfern (1970), using the same basic earnings data estimated social and private rates of return. The social rates of return for white males were found to be 17.80 per cent for elementary school graduates, 14.00 per cent for high school graduates, and 9.70 per cent for college graduates. On the private side, the corresponding rates were 15.10 per cent, 19.50 per cent and 15.60 per cent, respectively.

Hoerr (1970) calculated the returns to education in Malaysia. The social rates were 8.20 per cent for primary, 12.80 to 15.60 per cent for secondary and 5.80 per cent for university education. The corresponding
private returns were 12.90 per cent, 15.60 per cent to 21.10 per cent and 11.40 per cent, respectively.

Learner (1970) using Brazilian demographic census data estimated private rates of return for males and females at elementary level of education. Regression analysis yielded estimates of earnings by level of formal education. Learner’s estimate of the private rate of return of elementary schooling for females was more than double (38.60 per cent) the one for males (17.90 per cent).

Hinchliffe (1971) conducted a rate of return study for Ghana based on government pay scales. Social rates were estimated as 18 per cent for primary, 13 per cent for secondary grammar and 16.50 per cent for university, whereas the private rates were 24.50 per cent, 17 per cent and 37.00 per cent respectively, for the three levels.

Danialson and Okachi (1971) used 1966 cross-sectional data from the statistical yearbook of Japan to estimate average and marginal rates of return. Their rates were private and referred to males only. The secondary cycle yielded a rate equal to 10 per cent whereas the higher education cycle yielded rate equal to 10.50 per cent.

Paul (1972) in his cost-benefit study of the two-year post-graduate programme of the Indian Institute of Management found a positive social net present value. He made 32 estimates of social net present values based on alternative assumptions regarding rate of discount, alpha co-efficient, foreign exchange and elasticity of demand for management education.
Pandit (1972) in his study on the effectiveness and financing of investment in Indian education found that the rate of return for an illiterate to become literate was 18.80 per cent and social and private rates of return diminished with an increase in the level of education.

Goel (1975) analysed the private cost of education per nominal year for 1965-66 and private rate of return from investment in education in urban India. He obtained the data on returns from the research by Blaug et.al. He mentioned the effect of adjustment factors and probable differences between the adjusted and crude rates.

Tilak (1980) in his investigation on inequality in return to education used the date collected through a sample survey of 415 households in West Godavari District. The study found that there could be large social returns to investment in the education of women provided effective measures to improve their participation in the labour force and to reduce wastage in their education are adopted.

Reddy (1981) attempted to examine whether the policies in relation to allocation of resources to different levels and types of education were rational and efficient in terms of rate of return. The social and private rates of return for all post-graduates were found to be below five per cent, except those with first class. It also found some variations in the trend in social and private returns for graduates of different faculties.

Harikumar (1986) through his cost-benefit analysis of Mathematics education in the University of Kerala measured the private rates of return to Mathematics at B.Sc., B.Ed. and M.Sc. levels. The rates were 10.20 per cent,
17.70 per cent and 38.60 per cent respectively. A positive correlation between age, education and earnings was found.

Kumari (1986) estimated the internal rates of return to post-graduate collegiate education in the University of Meerut. The study estimated the overall internal rate of return as 6.92 per cent of additional investment in post-graduation. The study concluded that costs and benefits are associated in a positive manner.

Debi (1987) estimated both adjusted and unadjusted internal rates of return to higher education in Orissa. Marginal rates were calculated on the data obtained through a sample survey conducted in Bhubaneswar in Orissa during 1981-82. In all cases the adjusted rates of return were only less than half of the unadjusted earnings.

Mathew (1987) estimated the private rates of return to different levels of education in Chunakkara village in Kerala. The internal rates of return to S.S.L.C., graduation and post-graduation were found as 15.10 per cent, 12.15 per cent and 13.83 per cent, respectively.

Nair (1987) estimated both private and social internal rates of returns (IRR) for eight different categories. The study revealed that IRR is determined by such factors as the choice of profession rather than by the level of education.

Daniel (1988) estimated the internal rates of return to secondary education in Pathanamthitta district in Kerala. The internal rate of return to Secondary education was found to be 15.08 per cent.
Sharma (2002) conducted a study on Investment on Education: A study of Scheduled Caste Self-Employed Persons in Twin Cities of Hyderabad and Secunderabad. To work out the rates of return at various stages of education and to identify the factors those are influencing the earning differences among the educated Scheduled Caste households. The study revealed that many factors like age, activity undertaken; gender etc. determines the earnings of people.

Asadullan (2006) estimated the returns to education in Bangladesh using data from nationwide household survey. The study observed that returns are higher for urban than rural sample and returns are higher for female samples compared with their male counterparts.

Dutta (2006) estimated the returns to education for workers in regular and casual employment using Indian National Survey data. The study shows that the returns to education for regular workers are positive and U shaped with respect to education levels.

Koliniusi et al. (2006), conducted a study on Subsidies, Selectivity and the Returns to Education in Urban Papua New Guinea and found that rate of return to education in developing countries declines with the level of schooling.

Meer (2007) examined the returns to secondary vocational education. The study revealed that students on a vocational track would benefit from a more academically rigorous education.

Najeeb (2007) conducted a study on household Rates of Return to Education in Rural Bangladesh: Accounting for Direct Costs, Child Labour,
and Option Value. The study estimates the returns to boys' education for rural Bangladeshi households by accounting for some conventionally neglected items: direct costs of education, foregone child labor earnings, and option value. The estimated returns are 13.5 per cent for primary education.

Douglas (2007) conducted a study on Diminishing Marginal Returns and the Production of Education. Major finding of the study is that school inputs have 'predominant influence' on achievement of students.

Temple and Reynolds (2007) analyzed the benefits and costs of investments in pre-school education. The study found out the consistently positive economic returns of high quality pre-school programmes.

Arrazola and De Hvia (2008) estimated the returns to education using European household data for Spain. The results show that there are incentives in Spain for investing in Education not only because it is an increase in wages but also it raises the probability of obtaining any wage at all.

Hung (2008) compares the returns to education in transitional economies in central and eastern Europe and in China in the 1890s and 1990s. The study shows that the marginal returns to university education are the highest of all the marginal returns to various levels of education. The results also show that it took about a decade for the central and eastern European countries and two decades for China to raise their respective returns to education to 10 per cent level.

Kingdon and Theopoid (2008) examined the relation between returns to education and schooling participation. The findings of the study shows
that improved economic incentives for acquiring education have a positive impact on educational attainment.

Leigh and Ryan (2008) estimated the rate of return to schooling in Australia and found the rate of return to education in Australia is around 10 per cent which is similar to the rate in Britain, Canada, Netherlands, Norway and the US.

Pritto-Rodriguez et al. (2008) analyzed the relationship between wages and education at European level and revealed the relationship between wages and education.

3.3 STUDIES RELATED TO INEQUALITY IN EDUCATION AND POVERTY

Ribich (1968) made a study on ‘Education and Poverty’ and analysed the role of education as an effective means of helping people to lift them out of poverty. The findings of the study constitute a warning against excessive reliance on the expansion of education as a solution to the problem of poverty.

Khjapeer (1976) studied about the vicious circle of illiteracy and found that there is relationship between over-population and poverty and there is high relationship between poverty and illiteracy.

Pavithram (1978) in his study on “An enquiry into the possibilities of implementing non-formal education programmes in Balusseri Panchayat” pointed out that the root cause of illiteracy lies on poverty and other economic problems. There exists a cause and effect relation between illiteracy and economic backwardness.
Gulati (1981) in the study on ‘Profiles in Female Poverty’ has assembled the life histories of five women who belong to the bottom of the caste pyramid in Kerala. The major findings of the study was that despite of economic, social, cultural and occupational changes taken place in Kerala the position of the under privileged, oppressed sections of society, especially the position of women belonging to this category had not changed much. The only panacea for this malaise is the attainment of education and large-scale investment in the field of education especially for the poor.

Saradamony (1981) through her study on “The Divided Poor – A study of a Kerala Village” throw light on the educational, social and cultural problems of the weaker sections of people in the Venganur Panchayat in Thiruvananthapuram District. The study shows that in spite of the favorable political and social climate in the state, attainment of cent per cent literacy, a larger section of the scheduled caste as well as the poor of other communities are outside the pace of development and its benefits.

Jain (1981) reviewed the original imbalances in the field of education among 17 states in India, according to the indicators like enrolment, expenditure, average annual cost per pupil, teacher-pupil ratio, trained teachers, etc, during 1966-67 to 1975-76. On the basis of combined composite rank of all levels for the decade 1966-76, Kerala, Tamil Nadu, Punjab, Himachal Pradesh and Maharashtra were found as the leading states in educational advancement.
Panchamukhi (1981) made a study to examine the extent to which the policies of expansion had achieved the aim of equitable distribution of education and concludes that even in an educationally advanced environment, participation in education was severely constrained by socio-economic inequalities.

Siva Kumar (1982) in a study on education, social inequality and social change in Karnataka explored the relationship between social inequality and access to educational opportunity.

Raza and Aggarwal (1983) in a study on “Inequalities in the level of literacy in India,” concerning identification, measurement and explanation of inequalities in territorial distribution of literacy proposed a new method for measuring intra-regional inequalities between differential binomial elements of the regional space.

Ahmad and Nuna (1985) conducted a study on “Inequality in the literacy levels of population in Maharashtra”. Using the modified version of Sopher’s disparity index, the disparities have been computed. The main conclusion of the study is that the policy measures adopted so far to universalize literacy among the socially backward communities, particularly in rural areas, have not delivered success.

Kundu and Rao (1985) made an attempt to study the inequity in educational development in India. The educational inequity has been measured by using the modified version of Sopher’s disparity index. The study found out that the disparity in education for all the categories have declined significantly.
Tilak (1986) made a study on education and regional development. It emphasized that an elaborate in depth analysis of disparities in education is an essential pre-requisite for formulation of meaningful policies toward reducing educational disparities. In another study, Tilak (1987) on “Economies of Inequality in Education,” provides ample evidence to show that investment in the education of weaker sections is more than justified even from the point of view of economic returns alone, quite apart from the social, historical and cultural implications.

Reddy (1987) made an attempt to study the inter-state disparities in educational expenditure in India. The study analysed the extent of wideness in the disparities in literary among the states and to what extent were the disparities in education expenditures responsible for disparities in literacy.

Sujatha (1987) conducted a study on “Inequity in educational development of Tribes: a case study of Andhra Pradesh.” Literacy rate was taken as the indicator of educational development. Educational inequalities have been measured using the modified version of Sopher’s Disparity index.

Kareem (1989) conducted a study on “Developmental Implications of educational backwardness: A study with special reference to Indian Muslims”. The conclusion of the study is that there exists a positive association between he educational level and socio-economic advancement.
Lin (2007) examined the education expansion, educational inequality and income inequality in Taiwan starting from the late 1980s. The study shows that higher level of schooling generates lower income inequality and a lower educational inequality will also cause a lower income inequality.

Wedgwood (2007) conducted a study on education and poverty reduction in Tanzania. The study stressed the poverty reduction potential of current programmes to develop the primary and secondary education systems.

Kim and Taylor (2008) examined the role of alternate education to break the cycle of educational inequality. They found that the school provided a caring environment for students and gained their trust but the school did not offer a meaningful and equitable alternative education that benefited the students.

Lin and Yang (2009) analysed educational inequality in Taiwan. The study shows that educational expansions in Taiwan resulted in a remarkable improvement of human capital accumulation which is consistent with the long run goal of education in improving individual well being and international competitiveness.

The foregoing review of related studies throws light on the nature of work done relating to the problem under study. It helped the investigator a lot in defining the problem, limiting the scope and formulating hypotheses.
It is fairly evident from the studies reviewed that while some attempts have been made to explore the relationship between education and economic growth, not much work seen to have been done to study the impact of education on the earnings and economic status of households. Besides, there were no studies to find out the inter-group differences in the earnings and economic status of households. A systematic study of this kind needs to be conducted especially in the educationally backward areas. The review of literature also helped the investigator to plan a suitable methodology for the present study. The details of the methodology adopted for the present study has been presented in chapter four titled “Methodology”.