Chapter - 1

Introductory Background: The Theoretical and Methodological Approach of the Study
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1.1 Economics of Education

There has been awareness amongst the economist about the importance of education in economic development since long. The economic value of education in the process of economic development is broadly evaluated by the resources involved in the formation of human capital and the resulting increments in the productivity of labour force. However, the viewpoint of economist on the economic role of education has undergone transformation over time.

The history of economic thought did not devote much space to this important contributor to economic growth. The educational investment and educated manpower orientation was hardly found in the economic thought of Mercantilists and Physiocrats. However, the word ‘art’ was there to symbolize the orientation towards the technical and non-technical efficiency of labour force. It was only later in the early 18th century that education was approved as the right of every individual and a significant role was assigned to the mass education in the economic development. Further, during later half of the 18th century education was recognised as essential for raising the productivity of agriculture (Latchanna, 2006)

Classical economists did not analyse the macro relationship between education and national economic development. However, they analysed the nature of micro relationship between education of a person and the benefits he received. For instance, Adam Smith, a classical economist, strongly believed that the production of human capital yields a considerable return in the form of greater lifetime income and recognised the importance of education and labour power in the creation of wealth. He strongly emphasised the need of education for the moral and civic peace. Later, Ricardo and Malthus described education as a mean of inculcating valuable habits, which will lead to limiting family size (Das, 1997). Till 1870 Universal Primary Education was not accepted as national goal in England. But economists like Adam Smith and J.S. Mill accepted mass education for moral betterment, civic order and general happiness (Latchanna, 2006).
In the socialistic school of economic thought, Karl Marx recognised education as a factor reducing human miseries and considered education as one of the correctives to the distortion and imbalances generated by the capitalist mode of production (Latchanna & Hussein, 2007).

Amongst all the neo-classical economists Marshall was interested in measuring the benefits of education. Keynes did not pay much attention to this type of study and was more concerned with short run theory of income and employment. During this period Keynes and other economist were not interested to the factors of long run consequences such as education. The post Keynesian economists such as Harrod Domar and Joan Robinson recognised the importance of human capital and laid emphasis on the factors that determine rate of economic growth. The studies subsequently undertaken in this direction have revealed that education is one of the critical elements of economic development (Veena, 1987).

It was Irving Fisher who, for the first time analysed human capital from an economic perspective in his abstract theory of capital in which he included the physical as well as human factors of growth. According to Fisher schooling is a form capital formation because investment in schooling represents an income potential embodied in human being. For a long period of time, economists overlooked the role of human capital and investment in human capital: This reluctance ended when Theodore W. Schultz’s paper and talks drew attention of the economist towards the ‘Economics of Education’. The birth of economics of education took place in 1960 from the presidential address of Schultz. He appreciated the importance of investment in human capital to transform the low productivity traditional agriculture into modern agriculture. He has defined the investment in education, health, on the job training, adult education as the investment in human capital. Later this concept of economics of education was enriched by Mary Jean Bowman, M. Blaug, G.S. Becker, Denison, Bowen and M. Woodhall and so on.

According to Woodhall (1987) the concept of human capital refers to the fact that the human beings invests in themselves, by means of education, training or other activities, which raises their future income by increasing their lifetime earnings. Becker (1964) believes that human capital is similar to physical means of production like factories and machines (a) one invests in human capital via education, training and medical treatment (b) one’s output depends partly on the rate of the human capital
one owes. Hence, human capital is a means of production into which additional investments yields additional output.

Schultz (1987) stated that the common view of capital is confined to material things. Physical capital however accounts for a small part of the stock of capital in the countries that have achieved a high level of per capita income. Moreover, physical capital consists in large part of knowledge: for example, advances in knowledge made the computer, modern communication facilities and the high yielding crop varieties possible. The vast improvement in the quality of most physical capital over time could not have been possible without the advancement in the knowledge.

Thus, the role of human capital has been recognised and acknowledged in the economic literature from the 1960s onwards. The main dimension of human capital is education and health.

1.2 Education: Meaning and Importance

Education is a lifelong process. It makes people superior to other forms of living things. It develops the power for critical thinking and enhances the power of rationality towards life. In fact education makes people educated, acquaints them with some need-based skill and, finally, it develops in them certain level of efficiency in the performance of work they do. Hence, education is a pre-requisite for the acquisition of knowledge, increasing skills, developing attitudes and values etc. and creates the human capital for the benefits of the society or for the country as a whole (Bordolo, 2011).

Etymologically the word "Education" has been derived from the Latin term "Educatum" which means the act of teaching or training. A group of educationists say that it has come from another Latin word "Educare" which means "to bring up" or "to raise". According to a few others, the word "Education" has originated from a Latin term "Educare" which means "to lead forth" or "to come out" (Sharma, 2007).

Education is a dynamic process. It changes with the changing of socio-politico and economic conditions and fast expanding knowledge over the years. It has always played an important role in shaping the destinies of societies through development of the whole individual and linking education to the task of social upliftment and national development within a highly competitive global scenario (Pathak, 2007).
Moreover, education is essential for the construction of globally competitive economies and democratic societies combined with macroeconomic policies. It is a key for creating, applying and disseminating new ideas and technologies which in turn increase labour productivity. As education increases more equitably, poverty and inequality reduce and this promotes economic growth. Education builds human capabilities which are important for individual to reflect, make choices, seek a voice in the society and enjoy a better life (Bruns, et al. 2003). According to Dreze and Sen (2002), education enables to ‘build up their capabilities’ thereby ‘broadening their entitlements’ and ‘facilitating expansion of freedom’ which in turn is the primary and principal mean of development.

Education is also found to contribute significantly towards improvement of health. The effects are more significant in case in case of women education. Investment in women education results in substantial social gain and economic benefits. Female education produces social gain by improving health, increasing child schooling and reducing fertility by increasing the demand for family planning and promoting more effective contraceptives use. In south Asia, women, with no education have seven children on average; women with at least seven years of schooling have fewer than four children (Birdsall, 1993).

Economic benefits are increased by female education as it provides women with greater opportunities for employment and income and increase in opportunity cost of their time in economic activities, compared with child rearing. Such economic gains motivate families to have fewer children, build the demand for family planning services and lead to decline in fertility rate. The vicious circle of high birth rates, high maternal and infant mortality and endemic poverty have been transformed into a virtuous circle by investing in human enhancing labour productivity, reducing fertility and mortality, raising economic growth thus securing domestic resources for investment in people (Birdsall & Sabot, 1994).

Thus, education is a mean to attainment of those ends which makes a person human and distinguishes him from other animal. Education is not only for his personal enrichment but also for effective participation in the development of society. The present study restricts itself to elementary education only. The emphasis on literacy and elementary education is intentional because these are the foundation of education system.
1.3 Elementary Education: Context and Significance

Elementary education in India is defined as education from class I to VIII and roughly covers children from the age of 6 to 14 years. Elementary education is further divided into two stages—Primary and Upper Primary education. Primary education lasts up to class I to V and covers children in 6-11 age group. Upper primary covers class VI to VIII and include children in the age group of 11-14 years (Govinda and Bandyopadhyay, 2008).

Elementary education constitutes a very important part of the entire structure of education. It is the time when a way of life begins. Primary school environment provides the child with the first hand experience of group of life outside the family. The education which he receives at school provides the foundation for his harmonious development. Sound elementary education gives a fillip to sound secondary and higher education (Pathania, & Pathania, 2006).

Moreover, primary or elementary education develops the capacity to learn, to read and to use arithmetic, to acquire information and to think critically about that information. It is the gateway to all higher level of education that train the scientist, teachers, doctors and other highly skilled professionals that every country, no matter how small or poor, requires (Patnajali, 2005). In developing countries like India meeting the basic learning needs of their younger sections is a primary task because of their large share in the world’s total school age population.

Many studies have shown that in the field of education, investment in elementary education yields highest rate of return as compared to secondary and higher education. In India the social rates of return is 29.3 per cent in primary education compared to 10.8 per cent in university level education (Tilak, 1994). It is not only monetary returns; the additional effects of primary education on labour productivity are to be very significant. Jamison and Lau (1982) concluded that on four years of primary education return is 7.4 to 8.4 per cent of increase in agricultural productivity.

Thus education is considered as one of the prime indicators of development as well as a tool to develop human capital. Consequently, there arose tremendous concern to educate the vast mass of the population in the world. This concern is apparent in Article 26 of Universal Declaration of Human Rights (UDHR) (Kumar, 2006).
Article 26 of United Nations's Universal Declaration of Human Right underscored everyone's right to education and stated that

“(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory;

(2) Education shall be directed to the full development of personality and to the strengthening of respect for human right and fundamental freedom;

(3) Parents have a prior right to choose the kind of education that shall be given to their children.”

(United Nation, Universal Declaration of Human Rights, 1948).

The first major international affirmation on Education for All (EFA) was at the World Conference on Education in Jomtien (Thailand) in 1990 when 155 countries including India resolved to universalize primary education and significantly reduce illiteracy before 2000. The conference adopted the vision that all children have the fundamental human right to basic education. Countries in their pursuit of the Jomtien goals were invited to set their own specific targets according to their situations and capabilities for the 1990s in terms of six dimensions.

The six dimension of EFA targets are as follows:

1. Expansion of Early Childhood Care and Development (ECCD) activities;
2. Universal access to and completion of primary education (or whatever higher level of education is considered as basic) by year 2000;
3. Improvement in learning achievement;
4. Reduction of adult literacy rate, to say, one half its 1990 level by the year 2000;
5. Expansion of provision of basic education and training in other essential skills required by youth and adults and;
6. Increased acquisition of knowledge, skills and values required for better living and sound and sustainable development.

(World Conference on EFA, 1994, UNESCO)

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1 It should be recognised that the Jomtien conference was necessitated by the adverse impact of structural adjustment programmes and liberalization policies on elementary education in several third world countries.
Later, in the World Education Forum at Dakar, Senegal (2000), 164 countries (including India) reaffirmed the goal of Education for All (EFA) as laid out at Jomtien and other international conferences. It urged governments to achieve quality basic education for all by 2015 or earlier with emphasis on girls' education. This was followed by UN Millennium Development Goal (MDG) 2000, which unite countries to ensure that all children everywhere complete primary education by 2015.

1.4 Elementary Education in India: Historical Perspective

The British laid the foundation of modern education in India. The educational organisation that emerged from the British rule can be classified into three categories; vernacular (primary), high school/secondary school and college/university education. Primary education (taught in regional language) remained neglected while higher education (taught in English) received a fillip. The neglect of primary education remained till it became a provincial subject.²

The British took keen interest in introducing the English language in India. They had many reasons for doing so. Educating Indians in the English language was part of their political expediency since the Indians would be ready to work as clerks on low wages while for the same work the British would demand much higher wages. This would reduce the expenditure on administration. It was also expected to create a class of Indians who were loyal to the British and were not able to relate to other Indians. This class of Indians would be taught to praise the culture and opinion of the British. In addition, they would also help to enhance the market for British goods. They wanted to use education as a means to strengthen their political authority in the country. They assumed that a few educated Indians would spread English culture to the masses and that they would be able to rule through this class of educated Indians. The British gave jobs to only those Indians who knew English thereby compelling many Indians to go in for English education. Education soon became a monopoly of the rich and the city dwellers.³

Charter Act of 1813

Education remained a neglected affair in the early days of East India Company. It was in the charter Act of 1813 that an education clause was inserted and

² www.zimpremjifoundation.org/pdf/state-budget.pdf
³ http://www.nios.ac.in/media/documents/SecSocSciCur/English/Lesson-05.pdf?page=17&zoom=auto,0.539
the British Parliament decided to spend a sum of Rupees one lakh for promoting western sciences in India. However no initiatives were undertaken to spend this amount for the next ten years and a controversy soon arose (Bolashetty and Giriya, 2004). Some wanted the money to be spent on advocating western ideas only. There were others who placed more emphasis on traditional Indian ideas. Some recommended use of vernaculars (regional languages) as the medium of instruction others were in support of English. In this confusion people failed to notice the difference between English as a medium and English as a subject for study. The British, of course, decided in favour of teaching western ideas and literature through the medium of English language alone. Macaulay in his ‘Minutes on Education’ (1935) strongly recommended that the aim of educational policy in India should be the spread of western learning through the medium of English language. He also suggested that the existing institutions of oriental learning\(^4\) should be closed forthwith and the funds released should be used for the promotion of English education (Nurullah and Naik, 1955).\(^5\)

**The Woods Despatch of 1854**

During the period of first forty years from 1813 to 1853, no significant progress could be made in Indian education, particularly in primary education. This period was mainly confined to the conquest and conciliation of the British power in India. Education was, therefore, a back-bench subject which came up for discussion at frequent intervals and received only an inadequate portion of the total administrative expenditure (Gupta, 1988). For the first time the British Parliament intended seriously and perhaps also sympathetically to the development of education in India. The Woods Despatch of 1854 was first official document which outlined the company’s role with regard to provision of schooling in British India. It asked the Government of India to assume responsibility for the education of the masses. Company now emphasised the importance of creating a mass schooling system with instruction in the vernacular medium. Given the high costs of building such a system, the Despatch introduced public subsidies known as ‘grant- in- aids’ to partially support schools

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\(^4\) Oriental learning refers to the study of Arabic and Sanskrit which was taught in oriental institutions like Maktab or Madaras and Gurukuls.

\(^5\) Referring to the question of the alleged prejudices of the Indian peoples against English education, Macaulay argued that it was the duty of the England to teach Indian what was good for their health, and not what was pleasant to their taste (Nurullah and Naik, 1955).
under private management that came to be known as aided schools (Chaudhary, 2007). As part of the directive given by the Woods Despatch, Departments of Education were instituted in all provinces and affiliated universities were opened in Calcutta, Madras and Bombay in 1857. A few English schools and colleges were opened instead of many elementary schools. But in reality, it was not sufficient to cater the needs of the Indian people. Further, no portion of the sum of Rupees on lakh was spent on female education. It was left to the people to provide for the education of the fair sex of their county (Basu, 1867).

The Indian Education Commission 1882

Subsequent reports and commissions noted this particular trend and highlighted the need to improve mass primary schooling. For example, the Indian Education Commission Report of 1883 made primary education a subject of critical importance with a declaration that “Elementary Education of the Masses, its provision, extension, and improvements, to be that part of the educational system to which the strenuous efforts of the State should now be directed in a still larger measure than heretofore” (Chaudhary, 2007).

Although the British created a new system of education, public investments in education were very small. Public spending accounted for over 50 per cent of total spending on education increasing to 60 per cent in the 1930’s as the Government of India (GOI) increased grants to expand mass schooling. Despite the absolute increase, education accounted for a small share of the total budget averaging 3.5 per cent in these decades. As late as 1931 the GOI allocated less than 1 rupee per-person to education and public spending accounted for 0.74 per cent of national income (Chaudhary, 2012).

By under investing in public education, colonial rule did restrain the development of primary education in India, but this does not mean that India would have enjoyed better outcomes as an independent state. The presence of numerous castes and religions combined with the hierarchal divisions in Indian society seriously undermined private and public attempts to expand basic education. Indian elites, defined by caste, wealth and occupation, were amongst the chief beneficiaries of English education. Many of these same elites actively blocked schemes for public expansion of primary schooling. Landed elites were reluctant to support public
education because they had to bear a disproportionate cost in terms of land taxes, the main source of local revenues for public primary schools. Educated elites belonging to the new urban intelligentsia were unlikely to promote mass education because it would increase competition for the much sought after GOI jobs. Hence, while public schools in principle were open to all members of society, in practice it was very difficult for the lower castes and classes to attend these schools (*Ibid*).

Thus, mass primary schooling was never achieved under colonial education policy and literacy rates remained fairly stable from 1850 to 1919 averaging less than 10 per cent in 1911. Average literacy was extremely low and female literacy was almost nonexistent - on average less than 1 in 100 women was recorded as literate, with the exception of Jains and Christians. Moreover, literacy rates varied tremendously between different caste and religious groups (Chaudhary, 2007). Colonial policies did not do much to eliminate these long standing inequalities between various groups.

### 1.5 Elementary Education in India since Independence

At the time of independence, India’s primary education was characterised by historical inequities. India inherited a system of education which was not only quantitatively small but also characterised by regional as well as structural imbalances. Only 14 per cent of population was literate and only one child out of three had been enrolled in primary school. The low levels of participation and literacy were aggravated by acute regional and gender disparities (Ayyar, 1997).

**Kothari Commission (1964-66)**

The need for a literate population and universal education for all children was recognised as a crucial input for nation building and consequently soon after the independence there have been several Commissions and Committees of the Government of India to identify major issues concerning the structure and functions of educational system. Notable amongst them are the University Education Commission (1948-49) and Secondary Education Commission (1952-53) (Anandakrishnan, 2008). But in spite of a number of Commissions and Committees on education satisfactory progress could not be achieved. Further, these commissions and Committees had examined specific sectors and specific aspects of education.
Hence a commission was needed which could cover the entire education system in its fold (Chand, 2007).

An important landmark in this direction was the setting up of the Education Commission also known as Kothari Commission (1964-66) under the chairmanship of Dr. Daulat S. Kothari. Historically, at time when the Education Commission was set up, the nation had just thrown out from its soil the colonial rule per se- British, French and the Portuguese, all put together. The country was trying to redefine its cultural and social identity alongside educational development. It was a tough job not because the scarcity of funds alone, but because the nation was suffering from lack of cohesiveness and rooted regional imbalance (Singh, 2008). In addition, it was the time when as an emerging democratic society, the country was engaged in public debates on model of development suitable for a society faced with issues and tensions relating to land reforms, cooperativeness, foreign aids, religious and linguistic identities, status of women, caste conflict and education.

The job assigned to the commission in its terms of references, reflected these problems and development challenges. Education was seen as critical for reduction of inequities, poverty alleviation, promoting social harmony and strengthening of national unity. In this context and driven by the vision of self-reliant India, the commission was assigned the task of recommending a national system of education encompassing all stages of education (Prakash and Biswal, 2008).

This commission has given Indian education a new direction. The Education Commission titled, “Education and National Development” turned out to be a landmark in many ways. The EC was the first commission in our educational history to look comprehensively at almost all aspects of education (Seshadri, 2008).

**Major recommendations of Kothari Commission**


The Commission has put forwarded many recommendations relating to various aspects of education India. A unique feature of the Commission was its
conviction that education is the most powerful instrument for the national development. While submitting the Report chairman of the Commission pointed out that “Education has always been important but perhaps never more so in man’s history than today. In a science-based world, education and research are crucial to the entire developmental process of the country, its welfare, progress and security…..” (Anandakrishnan, 2008). To achieve this, it placed highest priority to free and compulsory education up to the age of 14 and recommended five years of good education for all children by 1975-76 and seven years of such education by 1986. The Commission wrote that the, “Indian education needs a drastic reconstruction, almost a revolution. We need to bring about major improvements in the effectiveness of primary education, to improve the quality of teachers at all levels and provide teachers sufficient strength and to liquidate illiteracy” (Aggarwal, 1966).

The Commission recognising the need for public investments to achieve the goal of Universalisation of Elementary Education (UEE)\(^6\) suggested that public expenditure on education should be raised to 6 per cent of GNP in the next 20 years; that is by 1985-86. It also suggested that assistance should be raised from local communities, voluntary organisations and local authorities (Jha, \textit{et al.} 2008).

The Commission also made important recommendations relating availability, accessibility and quality of primary schools for every child without any discrimination such as the provisions for ‘common school system’, ‘neighborhood school system’, teacher’s training for improving the quality of education, child friendly curriculum and so on.

\textbf{National Policy on Education (1968)}

Based on the report and recommendations of Education Commission 1966, the government of India announced first National Policy on Education in 1968. The

\(^6\) Universal Elementary Education (UEE) implies a situation where every individual, by the age of 14 years, possesses basic skills such as the ability to read and write with fluency, numeracy, comprehension, analysis, reasoning and social skills such as teamwork (Gupta, Mili and Betelille, 2003). UEE basically involves four important things i.e. universal access, universal enrolment, universal retention, and universal achievement of all children. Universal access means availability of educational facility within a walking distance of 1 km at primary level and within 3 km at elementary level. Universal enrolment means that all children in the age group of 6 to 14 must be enrolled. Universal retention implies retaining or keeping a child in school until he or she completes all 8 classes. Universal achievement means ensuring expected level of learning amongst all children (Zachariah, 2005 and Bordoloi, 2011).
policy called for the provision of free and compulsory education for all children up to the age of 14 as stipulated by constitution of India, enhancement of teachers’ status through the increase in emoluments as well as teachers’ education.

**National Policy on Education (1986)**

The next major policy statement came in 1986. The National Policy on Education 1986 laid a special stress on universal education for all children up to the age of 14 years, removal of disparities across gender and various social groups and teacher education. The NPE, 1986 which was modified in 1992 as a ‘Program of Action (POA) made certain modifications in the earlier policy. It emphasised three aspects in relation to elementary education

- Universal access;
- Universal retention of children up to the 14 years of age;
- A substantial improvement in the quality of education to enable all children to achieve essential levels of learning.


The 1986 National Policy on Education emerged as a result of participatory process and in depth review of the Indian education system. This policy was aimed at providing a comprehensive framework to guide the development of education and to impart a sense of urgency to the long cherished but elusive goal of UEE. The NPE (1986) also resolved that “the New Education Policy will give the highest priority to solving the problem of children dropping out of school and will adopt an array of meticulously formulated strategies based on micro planning to ensure children’s retention at school”. This effort will be fully co-ordinated with the network of non formal education. Thus, National Policies on Education in 1968, 1986 and 1992 (revised) reiterated the resolve to achieve UEE and set the ground for launching several programme and schemes for expanding elementary education. Some of the centrally sponsored schemes are as follows:

**Operation Blackboard (1987-88)**

Operation Blackboard Scheme was launched in 1987-88 for improving human and physical resources in schools and to provide all the existing primary schools with certain ‘Minimum Standard’ of facilities. The norms set under the Operation
Blackboard covered the infrastructure of primary schools, the supply of teaching aids as well as supply of teachers. "There are three interdependent component of OB-

- Provision of at least two reasonably large rooms that are usable in all weathers with a deep verandah along with separate toilets facilities for boys and girls;
- Provision of at least two teachers, as far as possible one of them a woman in every primary school and;
- Provision of essential teaching and learning materials including blackboards, maps, charts, a small library, toys and games." (Kumari and Rao, 1996)

**District Primary Education Programme (DPEP, 1994)**

The Government of India launched the District Primary Education Programme (DPEP) in 1994 with the aim to attain the goal of universal elementary education through district specific planning, decentralised management and community participation. Initially DPEP was launched in 42 districts and later expanded in a phased manner to 242 (273 bifurcated districts) in 18 states with an aim to operationalise the strategies for achieving UEE through district specific planning (Pathania and Pathania, 2005). DPEP is a centrally sponsored scheme with the central government providing 85 per cent of funds and the state government providing the remaining 15 per cent. The share of the central government comes from external assistance from bilateral and multilateral agencies such as the World Bank, IDA, DFID, EC, UNICEF and the government of Netherlands. Some of these funds are in the form of soft loans while others are outright grants (Bajpeyi and Goyal, 2004).

**Mid-Day Meal (MDM, 1995)**

National Programme of Nutritional Support to primary education also known as Mid-Day Meal scheme was launched in 1995 to boost universalisation of primary education by increasing enrolment, retention and attendance and simultaneously impacting on nutrition of students in primary schools. The Mid-Day Meal scheme played an important role in drawing children of the deprived sections to schools. Under this programme, cooked Mid-day meals were to be introduced in all government aided primary schools (Dreze and Goyal, 2003).

Apart from these Centrally Sponsored Schemes there are also various state specific schemes which are externally aided programmes. These are:
Andhra Pradesh Primary Education Programme (APPEP, 1987)

Andhra Pradesh Primary Education Programme (APPEP) was launched in 1987 with the assistance from Overseas Development Bank (ODA). The objective of APPEP was to improve the quality of primary education in the project area by (a) providing school buildings and class-rooms of improved quality; and (b) enhancing the professional competence of teachers and supervisors of primary schools through training programmes (Colclough and De, 2010).

Shiksha Karmi Project (1987)

Shiksha Karmi Project was launched in 1987 in Rajasthan with the assistance from Swedish International Development Authority (SIDA). The project aims at universalisation and qualitative improvement of primary education in the remote and economically disadvantaged villages of Rajasthan with a focus on girls. The Shiksha Karmi Project has constituted Village Education Committees (VECs) in 2,000 villages to promote community involvement in primary education and encourage village-level planning. The role of the VEC is to mobilize resources for maintenance, repair, and construction of school infrastructures. The VEC also helps in determining the school calendar and school-day timings in consultation with the local community and Shiksha Karmis (educational workers). Shiksha Karmis are frequently used as substitutes to compensate for teacher absenteeism. Shiksha Karmi Project sought to provide better selection of local teachers by communities and provision of intensive pre and in-service training to address the problems of teacher absenteeism in difficult-to-access areas in Rajasthan (Colclough and De, 2010).

Lok Jumbish Project (1992)

Lok Jumbish Project was launched in 1992 in Rajasthan with the assistance from Swedish International Development Authority (SIDA). The primary objective of the Lok Jumbish Project is to achieve the universalisation of elementary education through mass mobilisation and the participation of people. It places special emphasis on the education of girls and disadvantaged sections of society and views education as a tool for empowerment.  

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7 http://education.stateuniversity.com/pages/652/India-PREPRIMARY-PRIMARY-EDUCATION.html#ixzz2TKyWD0AS
Bihar Education Project (1991)

Bihar Education Project was launched in 1991 and supported by United Nations Children Emergency Fund (UNICEF) with a purpose of bringing about quantitative and qualitative improvement in the elementary education system in Bihar. The project lays emphasis on the education of deprived sections of the society, such as SCs, STs and women (Patahnia & Pathania, 2006)

Uttar Pradesh Basic Education Programme (UPBEP, 1993)

Uttar Pradesh Basic Education Programme (UPBEP) was started in 1993 and supported by World Bank’s International Development Agency. The project envisaged capacity building and improvement in the quality of education. The districts chosen for initial implementation were those that had female literacy rates below the national average of 39 per cent and 8 out of 10 districts were selected that had female literacy below the state average of 26 per cent. The project was run parallel with the decentralisation efforts that have gained momentum nationally. Extensive learning assessment was established in the first projects. VECs (reporting to democratically elected panchayats) were asked to carry out micro-planning, survey the village children, and map attendance. Most of the funding was to be spent at the block and cluster levels; village committees contracted for school construction; teachers could spend money on materials they needed; and in-service training was carried out at the district level as well.

Furthermore, many gender specific programmes were initiated by the government for bringing girls to school and holding them there until they complete their elementary education.

Mahila Samakhya (MS, 1989)

The Mahila Samakhya (MS) programme was initiated in 1989 to translate the goals of the National Policy on Education (NPE) into a concrete programme for the education and empowerment of women in rural areas, particularly those from socially and economically marginalised groups. It was initially implemented in three states — Karnataka, Gujarat and UP.

National Programme for Education of Girls at Elementary Level (NPEGEL, 2003)

NPEGEL was launched in September 2003, as an integral but distinct component of the SSA. It provides additional provision for enhancing the education
of under privileged/disadvantaged girl at elementary level through more intense community mobilisation, the development of model schools in clusters, gender sensitisation of teachers, development of gender sensitive learning materials, early child care and education facilities and provision of need based incentive like escorts, stationery, work books and uniform etc. for girls (Status of Education in India National Report, MHRD).

**Kasturba Gandhi Balika Vidyalaya (KGBV, 2004)**

KGBV is a scheme launched in July 2004 for setting up residential school at upper primary level for girls belonging predominantly to SC, ST, OBC and minority communities. The scheme is being implemented in educationally backward blocks of the city where the female rural literacy is below the national average and gender gap in literacy is above the national average. The KGBVs are set up in areas of scattered habitations, where schools are at great distances and are a challenge to the security of the girls (Annual Report, 2010-11). The scheme provide for a minimum reservation of 75 per cent of the seats for girls belonging to SC, ST, OBC or minority communities and for the remaining 25 per cent priority is accorded to girls from families below poverty line.\(^9\)

**Sarva Shiksha Abhiyan (SSA, 2001-02)**

While a majority of schemes covered most parts of the country, such as Operation Blackboard, District Primary Education Programme (DPEP) and Mid-Day Meal Scheme, were specific intervention programme and there was no single programme for universalisation of primary education in the country. Sarva Shiksha Abhiyan (SSA) filled this gap by being first nationwide centrally sponsored scheme to achieve the goal of UEE. SSA a landmark programme for achieving UEE was launched in 2001-02. Central government started SSA as an umbrella programme, embracing the entire existing programme in it (Jha, *et al.* 2008). SSA is a historic stride towards achieving the long cherished goal of UEE through a time bound integrated approach, in partnership with states. SSA, which promises to change the face of the elementary education sector of the country, aims to provide useful and quality elementary education to all children in the 6-14 age groups by 2010. The

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assistance under SSA was on 85:15 sharing arrangement during the 9th plan, 75:25 during the 10th plan and 50:50 sharing thereafter between the central and the state government.\textsuperscript{10}

**Right to Education Act (2009)**

Recently, The Right to Education Act (RTE) or The Right of Children to Free and Compulsory Education Act 2009 was passed by the Parliament on 27th August 2009 and came into force on 1st April 2010. The Act describes the modalities of the provision of free and compulsory education for children between six to fourteen years under Article 21A of the Constitution. The RTE Act is a detailed and comprehensive piece of legislation which includes provisions related to schools, teachers, curriculum, evaluation, access and specific division of duties and responsibilities of different stakeholders (Garje, 2011). The Right of Children to Free and Compulsory Education Act, 2009, has been a historical moment in the history of independent India when the Act came into force on 1st April 2010 and India became one of 135 countries to make education a Fundamental Right of every child.\textsuperscript{11}

Key features of the Act include:

- Every child from 6 to 14 years of age has a right to free and compulsory education in a neighborhood school till completion of elementary education.
- Private schools must take in a quarter of their class strength from weaker sections and disadvantaged groups, sponsored by the government.
- All schools except private unaided schools are to be managed by School Management Committees with 75 per cent parents and guardians as members.
- All schools except government schools are required to be recognised by meeting specified norms and standards within 3 years to avoid closure.
- To decrease in dropouts, to prohibit physical punishment and mental harassment to child and to prohibit capitation fee & screening procedure for admission in schools.
- Financial burden will be shared between the state and the central government.

(Ministry of Law and Justice, *the Right of Children to Free and Compulsory Education Act 2009*, No. 35)

\textsuperscript{10} For the North-eastern states, the centre-state ratio under SSA is 90:10 (www.azimpremijifoundation.org/pdf/state-budget.pdf)

\textsuperscript{11} http://www.Pib.nic.in
1.6 Statement of the Problem

As a consequence of various efforts taken in the country, India made considerable progress in elementary education in terms of increased number of schools, students and teachers. But despite this progress and continued efforts made at national and state level, the universalisation of free and compulsory education has not so far been achieved in full. Though remarkable progress has been achieved in the field of elementary education in the recent years, many children in the age group of 6-14 years still remain out of school. In spite of quantitative expansion in elementary education system in India, significant variation in literacy as well as elementary education has been observed across the states and spread of literacy has not been uniform all over the country. Although, the educational system has phenomenally increased its coverage at the elementary level and enrolment rates have increased substantially, the high dropout continues to deplete the system. In addition, there is huge gender disparity at elementary level. Though the literacy rate for girls continues to improve, still girls had lower enrolment, lower attendance rates as well as higher dropout rates compared to boys.

The learning outcome amongst student is also not very encouraging. A sizable number of children dropped out from school without completing their eight years of schooling and those who are somehow able to complete their schooling, their ability is very poor in reading, writing and mathematical calculations. The low quality of education high dropout rate at primary and upper primary levels continues to be a matter of great concern even though the rates are decreasing steadily.

It is evident that in India even after 60 years of independence, we are not struggling for the issue that bother the educationist in the developed country like issues relating to relevance of education, quality and behavioral aspects of teachers, subjects taught in research courses and so on. Rather our struggle is limited to achieving 100 per cent literacy and enrolling and keeping all children in school. Thus, the journey of UEE appears to be long and hard. The goal of UEE does not appear to be close enough to be reached in short time period without significant change in strategy and increase in financial resources.

Studies have revealed that there had been a systematic blunting of expenditure on education in the post liberalisation period. This is because reduction in this sector
is achieved easily and is less opposed by pressure groups which seem to be weak in this area. This cut on social sector expenditure would have long term damage on the state economy in terms of slowing down the human capital formation in the process of economic growth. The reduction in education is being affected by not employing adequate number of teachers, their appointment on ad-hoc basis for a limited period and too on low salaries (Jain, 2008)

Education system, like all other organisations, runs on money. Due to lack of resources, many educational plans and reforms either failed or did not take off in several developing countries including India. It has been recognised by many that elementary education in India, due to apart from other factors suffered from insufficient allocation of financial resources. In India, because of large number of out of school children and still increasing child population, huge amount of fund will be required to achieve the target of universal elementary education. Though, public spending is not the only determinant of the infrastructure available and of issues of access and educational quality, since the efficiency of this spending is equally important. But to the extent that resources influence outcomes, the pattern and quantum of public spending on elementary education in educationally backward states pose huge challenges for the achievement of educational goal.

Though huge investments are made in education in post independent period, by both centre and state government, they are not adequate to meet the modest target of providing quality education to all the children and the constitutional directive of universalisation of elementary education in India, which was to be achieved 6 decades ago, still eludes.

1.7 Scope of the Study

The character and pace of economic and social development of a nation is determined by its human resources and not by its capital resources. Most of the developing countries have realised that rapid quantitative expansion of educational opportunities is the basic key to national development. Therefore these countries have committed themselves to the goal of universal elementary education in short period of time (Latchanna, & Hussein, 2007). Keeping in view the importance of education for the tasks of national reconstruction and strengthening of democracy, the government of India ensures in article 45 of the Indian constitution that state shall endeavour to
provide within ten years of the commencement of the constitution, free and compulsory education to all children from the age group of 6-14 years.

However, despite aggregate improvement in educational level, glaring disparities in elementary education continue to persist. It should be recognised that Indian scenario is too complex and varied that it cannot be captured effectively through aggregate national figure. Levels of educational attainment vary significantly across Indian states (Kumar and Rustagi, 2010). At the one spectrum, there is Kerala presenting a literacy rate of above 90 per cent, gross enrolment rate of 103 per cent at primary stage, every child completing elementary cycle and almost every school having at least five teachers and five classrooms. At the other end, there is Bihar where only one out of two children in the relevant age group was found to be in schools and majority of children who enter in school, fail to complete elementary stage. While Kerala, for instance, is attempting to carry forward universalisation to higher secondary stage, there are many states, which are struggling hard to attain total enrolment and universalisation of total enrolment.

The most of the educationally backward states are also bigger in size in terms of number of child population in the age group of 6-14 years. In fact, six major educationally backward states namely Bihar, Uttar Pradesh, Madhya Pradesh, West Bengal, Andhra Pradesh and Rajasthan, accounts for 60.5 per cent in the country's total 6-14 age group child population (Govinda, 2008). 7th all India Educational Survey estimated in 2002-03 that nearly 69 per cent of out of school children are concentrated in six states namely Andhra Pradesh, Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal (Govinda, 2005). Bihar accounts for 23.6 per cent, Uttar Pradesh 22.2 per cent, West Bengal and Madhya Pradesh 9 per cent and 8 per cent respectively and Rajasthan 5.9 per cent (11th Five Year Plan Document, 2007-12). Nearly 60 per cent of illiterate population is also accounted for by these six states which had been identified as educationally backward about three decades ago.

It is important to keep in mind that better performance of these six states would have a huge implication for reducing regional disparity. Hence, the present study will mainly focus on these six educationally backward states and includes Kerala and Himachal Pradesh for the sake of facilitating comparison on elementary education in educationally backward and forward states.
1.8 Objectives of the Study

The study aims to assess growth and problems in elementary education in India during the post reform period and attempts to analyse effects of SSA on various aspects of educational development in India. The specific objectives of the study are:

1. To analyse the growth, problems and gaps in elementary education at all India level and in the selected states.
2. To analyse the trends in public expenditure on education particularly on elementary education at all India level and in the selected states.
3. To analyse the relationship between public expenditure and outcome (in terms of attainment and improvement in infrastructural facilities) in elementary education at all India level and in the selected states.
4. To assess the progress of elementary education under SSA and spending pattern between centre and state on elementary education in the selected states of India.
5. Finally to come out with the findings and conclusion and to suggest solutions.

1.9 Hypothesis of the Study

1. There is no significant relationship between public expenditure and the enrolment at elementary level.
2. There is no significant relationship between expenditure and growth in number of schools at elementary level.
3. There is no significant relationship between expenditure and growth in number of teachers at elementary level.

1.10 Database

The study relies entirely on secondary sources of data collected from various official sources such as report, surveys and periodicals and websites of the government of India. The data on enrolment, dropout and other educational variables have been compiled from Education in India, Ministry of Human Resource Development (MHRD), Selected Education Statistics (SES), Ministry of Human Resource Development (MHRD) and State Report Cards, District Information System on Education (DISE), NUEPA. Data of expenditure on education are taken from Analysis of Budgeted Expenditure on Education, MHRD. Other important data of educational variables are taken from National Sample Survey Organisation (NSSO) 2007-08 which is available on the website www.mospi.gov.in. Public Report
on Basic Education in India (PROBE), 1999 and 2006, ASER a Report by PRATHAM have also been used. Data of Sarva Shiksha Abhiyan (SSA) are compiled from the website of SSA. Data on literacy rate are taken from census of India which is available at the website www.censusindia.gov.in.

Furthermore, the data on Gross Domestic Product, Net State Domestic Product and Gross Fiscal Deficit are compiled from Centre for Monitoring Indian Economy (CMIE) and Handbook of Statistics for State Government Finances, RBI, Handbook of Statistics on Indian Economy, RBI and Economic Survey, Government of India.

The data on educational variables at international level are compiled from various issues of Global Monitoring Report and data for 1991 has been taken from the Institute of Statistics, UNESCO.

1.11 Research Methodology

Research Methodology is a way of systematically solving the research problems by using scientific methods of statistics and econometric tools. The significance of a study to a great extent depends on the methods followed in the selection of sample area, collection of data and techniques adopted for their analysis. The techniques of analysis adopted in the study are given below:

The study uses Compound Annual Growth Rate to analyse the growth in the variables. Beside this, the study also uses coefficient of correlation technique in developing the nature of relation between the variables.

1) Compound Annual Growth Rate

The compound annual growth rate is calculated by two formulas. The first one is:

For computing the compound annual growth rate, in a regular time series (say $y_t$) with an interval of generally one year, compound annual growth rate in the series is usually obtained by estimating an exponential equation of the type:

$$y_t = b_0 b_1^t e^{u_t}$$

where,

- $e'$ stands for the base of natural logarithm.
- $u_t$ represents disturbance term associated with 'x' variable at time 't'.

The unknowns 'b0' and 'b1' are estimated through the ordinary least squares (OLS) method as applied to the linearized version (achieved through logarithmic transformation) of the given function. The growth rate 'r' in ($y_t$) is then computed as:
\[ r = [(\hat{b}_1)-1] \times 100 \]

where, ‘\(r\)’ represents compound annual growth rate.

The study examines the constancy, acceleration or deceleration in the rates of growth in the educational variables during the post-SSA period in India. The conventional approach for such analysis is to carry out for the usual growth rate analysis over the sub-periods (for pre-SSA period from 1991-92 to 2000-01 and, for the post-SSA period from 1991-92 to 2009-10). The conventional approach has two major drawbacks:

- The number of observations available for estimation of rates of growth should be fairly large (say \(\geq 14\)). However, sub-periodisation may result in a severe loss of degrees of freedom available for estimating of the rates of growth.
- The approach pre-assumes constancy in the rates of growth within each of the sub-periods which, however, may be far from reality in a multiplicity of situations (Sethi, 2008).

Keeping in mind these limitations associated with the conventional approach, the following alternative approach has been undertaken.

For this purpose, we may estimate an exponential equation of the type:

\[ y_t = b_0 b_1^{(1-D)t} b_2 D_t e^{ut} \ldots \ldots \ldots (i) \]

Where, \(D\) stands for a dummy variable, assuming values of 0 and 1 during pre and post-SSA periods respectively. During the pre and post-SSA period, equation (i) would be equivalent respectively to:

\[ y_t = b_0 b_1^t e^{ut} \quad \text{and} \quad x_t = b_0 b_2^t e^{ut} \ldots \ldots \ldots (ii) \]

Providing rate of growth in the corresponding periods as:

\[ r_1 = [(\hat{b}_1)-1] \times 100 \quad \text{and} \quad r_2 = [(\hat{b}_2)-1] \times 100 \ldots \ldots \ldots (iii) \]

Where, \(r_1\) represents the compound annual growth rate during the pre-SSA period and \(r_2\) denotes the compound annual growth of the post-SSA period. In fact, these two rates of growth would be computed respectively from the two sub-parts of the series. Nevertheless, as could be easily seen, the two rates could be obtained in a single stroke from the estimation involving the entire series. The equation (i) could be rewritten as:

\[ y_t = b_0 b_1^{(1-D)t} b_2 D_t e^{ut} \]
\[ y_t = b_0 b_1^t (b_2/b_1) D_t e^{ut} \]
\[ y_t = b_0 b_1^t c_2^2 e^{u_t} \] (iv)

where,
\[ c_2 = b_2/b_1. \]

From the entire series, the unknowns \( b_0, b_1 \) and \( c_2 \) [Hence, \( b_2 = b_1/c_2 \)] could be obtained through the OLS technique, as applied to the log-linear version of (iv). Therefore, the rates \( r_1 \) and \( r_2 \) are obtained through (iii).

Another formula which has been used for computing CAGR is the well-known compound interest formula

\[ Y_t = Y_0 (1+r)^t (1) \] (i)

Where \( r \) is the compound (i.e., over time) rate of growth of \( Y \). Taking the natural logarithm of the equation (1) can be written as

\[ \ln Y_t = \ln Y_0 + t \ln (1+r) \] (ii)

Let consider \( \beta_1 = \ln Y_0 \) and \( \beta_2 = \ln (1+r) \) then we can write equation (2) as

\[ \ln Y_t = \beta_1 + \beta_2 t \] (iii)

Adding the disturbance term from eq (3) then obtained

\[ \ln Y_t = \beta_1 + \beta_2 t + u_t \] (iv)

This formula has been used for computing CAGR where period has not been divided into sub-periods.

(2) Coefficient of Correlation

Correlation coefficient is a measure of the strength of linear association between two variables. Correlation will always between -1.0 and +1.0. If the correlation is positive, we have a positive relationship. If it is negative, the relationship is negative. Hence, in order to know the degree of association between two variables like public expenditure and enrolment at elementary level etc. the correlation coefficient is calculated by using the following formulae:

\[ r = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{[N \sum x^2 - (\sum x)^2][N \sum y^2 - (\sum y)^2]}} \]

Where,
\[ N = \text{number of values or elements} \]
\[ \Sigma xy = \text{sum of the product of the paired score} \]
\[ \Sigma x = \text{sum of x score} \]
\[ \Sigma y = \text{sum of y score} \]
\[ \Sigma x^2 = \text{sum of squares x score} \]
\[ \Sigma y^2 = \text{sum of squared y score} \]

To incorporate many variables simultaneously, correlation matrix has been calculated by using Microsoft Excel.

In order to know the level of significance of correlation coefficient, t-values have been calculated by using the following formula:

\[ t = \frac{r}{\sqrt{1-r^2}} \cdot \sqrt{N-2} \]

1.12 Limitation of the Study

➢ The present study is limited to the period from 1991-92 to 2009-10 which is described as reform period. The whole study is divided into two sub periods:

    Period I from 1991-92 to 2000-01 (Pre SSA Period)

    Period II from 2001-02 to 2009-10 (Post SSA Period)

➢ Further, the present study is confined to only eight selected states amongst which six are educationally backward states viz. Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, Andhra Pradesh and West Bengal and remaining two are educationally better performing states namely Kerala and Himachal Pradesh. There are several other states such as Orissa, Assam and Gujarat which are also educationally backward, further research can be carried out on these states.

➢ In the study for analysing growth in enrolment, we have taken Gross Enrolment Ratio (GER) as an indicator of educational attainment but GER has some flaws as overage children and repeaters are also get counted into it. Net Enrolment Ratio (NER) is more accurate and also acceptable internationally. But due to non-availability of time series data on NER, GER has been considered in the study.
The study included expenditure as a variable to determine the relationship with the enrolment in the states. Other factors such as parental and child interest, poverty, socio-cultural and demand side factors which also determine enrolment are not included in the study on account of two reasons. The reason being these factors cannot be quantified. The expenditure on elementary education can affects these factors by increasing incentives and infrastructural facilities in schools to boast enrolment. Hence, we have used expenditure as a variable to analyse the relationship.

The study is mainly based on different Reports of MHRD such as Selected Educational Statistics and Analysis of Budgeted Expenditure on Education. However, when this work was at the stage of compilation, actual data on some parameters were yet to be published, hence some provisional as well as revised estimates have been used in the study.

Apart from this, data on educational variable like net enrolment ratio, retention rate and single teacher schools is not available since 1990s; it was available only after 2000-01. Hence, they have been taken up from the year they were available.

Finally, since this research relies on secondary sources so it has to be taken with all its limitations.

1.13 Scheme of the Study

The whole study is organised into six chapters. The first chapter deals with the introductory background as well as theoretical aspects of the study and outlines the objectives, hypothesis to be tested, database used, methodology adopted and limitation of the study.

Chapter second makes an in depth review of existing literature available on different aspects of elementary education in India. The major studies which throw light on the issues such as dropout, gender disparity, basic facilities in schools, provision of teachers and expenditure pattern have been reviewed. The studies which focus on the link between education and economic development are also reviewed in this chapter.

Chapter third discusses growth, problems and gaps in elementary education in India. For evaluating the trend and growth in elementary education parameters such as
Gross Enrolment Ratio (GER), Net Enrolment Ratio (NER), Net Attendance Ratio (NAR), dropout ratio, are selected. It also analyses growth in the number of institutions and number of teachers in India and across the selected states. It also focuses on the problem of gender disparity in enrolment and dropout rate and explores the reasons behind the dropout of children from the schools. In addition, the chapter also analyses learning achievement amongst students and the problem of single teacher school and teacher absenteeism in India and across the selected states.

Chapter four analyses financing of education particularly elementary education in India and across the selected states by the centre and state governments. It analyses the expenditure on education as a percentage of GDP and expenditure on elementary education as a percentage of GDP in India. It also examines the expenditure on education as proportion of NSDP and expenditure on elementary education as a proportion of NSDP across the selected states. Pattern of inter-sectoral allocation and intra-sectoral allocation, centre and state government financing, plan and non-plan expenditure on education by centre and state and plan and non-plan expenditure on education by the selected state are also analysed in this chapter. It also analyses expenditure on education as a per cent of total budget expenditure of the state, expenditure on elementary education as a proportion of total expenditure on education and per student expenditure on elementary education across the selected state. The chapter also evaluates the expenditure on elementary education through the centrally sponsored schemes and foreign aids coming to elementary education. Finally, the relationship between public expenditure on elementary education and educational attainment as well as educational infrastructure development is analysed and hypothesis are tested.

Chapter five examines the achievement made in elementary education since the initiation of the Sarva Shiksha Abhiyan (SSA). It also analyses the centre and state government’s share under SSA financing and explores the gap in utilisation of available SSA funds by the states. Lastly, the gross fiscal deficits of the states are also analysed.

Chapter six of the thesis provides summary and conclusion of the study and makes suggestions regarding the improvement in elementary education.