

Chapter 2

Expenditure on School Education and Economic Development: A Theoretical Framework

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2.1. Introduction

Sustainable development of any country is possible only through substantial investment in human capital. The development and reconstruction of any country depends on the quality of its citizens. The quality of citizens in turn depends on the quality of education they receive from all sources. There is an intimate relationship between education and economics. Economics of education tries to explain and analyze what determines or creates education and what are the impacts of education on individual and society (Ozturk, 2001).

The primary focus of ‘economics of education’ is to identify opportunities for improved efficiency, equity and quality of education. It also looks into education-economy interdependence and gives importance to three aspects of equity, equality and efficiency in education. The study of ‘economics of education’ also correlates

education with labour market economies and also looks into the efficient and effective utilization of educational resources for the betterment of the society and economy and finally how education contributes to economic growth. Economics of education studies human behaviour in terms of human decisions, actions and reactions about schooling (Bababola, 2015). In short, it is the study of human behaviour affecting human development. Thus it is one of the branches of Economics. It is the study of how educational policy makers make official or approved choices from scarce available resources to make the best possible educational outcomes. This branch of Economics employs the use of some elementary concepts used in labour economics, public sector economics, welfare economics, growth theory and development Economics. It is the study of both the benefits and individual and social costs of education and training in addition to the economic and human aspects that link educational institutions to the global and social economy. This branch of economics will allow scholars to propose educational solutions that are effective and socially workable.

World known classical economists like Adam Smith, Alfred Marshall, John Stuart Mill had discussed education and development extensively, advocating for public investment in education. So, by 1950s economists gave importance to relationship between education and economic growth, education and income distribution and also financing of education. The modern analysis of economics of education had its origin (Schultz, 1961). He considered education as an investment in human capital. Individuals invest in their own education just as firms invest in new machinery. The investments in each case entails costs and yields future benefits, and an internal rate of return to the investment can be calculated. The modern economists established a close connection between education and economics. Thus from the ideas of economists all over the world, it is clear that there is scarcity of resources in the field of education. There are mainly three decision makers or stakeholders in the educational system. They are the Society, the institution or suppliers of education and finally the individuals or households or the purchasers of educational services. The twin problem of scarcity and choice are the challenges faced by these stakeholders. There are notable education economists who correlated between education and economic growth. The relationship between education and economic growth brought about by education is pointed out in the studies of (Hanushek, 2007).

2.2. Education and Economic Development

Contemporary discussions of education for economic development have been dominated by three main models: namely; the human capital, the modernization and the economic dependence theories. During the twentieth century, education, skills, and the acquisition of knowledge have become crucial determinants of a person's and a nation's productivity. One can even call the twentieth century the "Age of Human Capital" in the sense that the primary determinant of a country's standard of living is how well it succeeds in developing and utilizing the skills and knowledge, and furthering the health and educating the majority of its population (Jess, et.al, 1994). The past decades have seen extraordinary expansions in access to basic education throughout the Middle East. Many countries are now on the brink of a further increase in access to secondary and higher education and in effecting spectacular improvements in the quality of education offered at all levels. As increasing number of students complete their basic education, their demand for education at higher levels is similarly increasing.

In the 1960s mounting empirical evidence stimulated the "human investment revolution in economic thought" (Bowman, 1960). The seminal works of (Schultz, 1961) led to a series of growth accounting studies pointing to education's contribution to the unexplained residuals in the economic growth of western economies. Other studies looked at the impact of education on earnings or estimated private rate of returns (Becker 1964; Mincer 1974). Mincer gave importance to earnings from school education. A 1984 survey of growth accounting studies covering 29 developing countries found estimates of education's contribution to economic growth ranging from less than 1 percent in Mexico to as high as 23 percent in Ghana (Psacharopoulos, 1985). The study gave importance to returns to investment in education. The important relation between education and economic development, the change in socio- economic condition of a country through education, school's role in making the individual more productive and the returns to education and investment in education are studied by Weisbord (1962).

Proper education system helps in building a strong nation. The human capital is an essential condition of national survival and strong education is irreplaceable in India which is recently known as knowledge economy. Education helps in the creation of knowledge, skills and attitudes of a nation which creates a knowledge

economy. Education is an essential instrument of social transformation and economic development (Tilak, 2003). It is theoretically evident that expenditure on education leads to better education outcomes in the form of increased enrollment rates, lower drop-out rates and higher school completion rates. There are so many studies dealing with the positive relationship between expenditure on education and education outcome (Psachropoulos, 1994). Development is all about rising income which is possible through education and development is based on human development approach through education and health. Thus all these studies gave importance to the fact that investing or spending more on education lead to better education outcomes and lead to economic development of every nation.

2.3. Education as an Economic Good

Education is regarded as an economic good. It is a good that satisfies human wants and its availability is limited. Education is a non-material good. It is service rendered that satisfies human wants. It is also regarded as a producer's good in the sense that it produces professions like teachers, doctors, engineers, scientists who produce material and non-material goods. Education is the most important and valuable capital which directly promotes the quality and capacity of human beings. Education is the key to production of goods and services. Education increases production of goods and services which increases national income and increase in growth and development. Economists consider human beings as the most important form of capital (Becker, 1964). Education enriches the understanding of themselves and their world. It improves the quality of life of individuals and benefits the society and economy as a whole. It increases people's productivity and creativity by bringing about entrepreneurship and technological advances.

2.4. Human Capital Formation and School Education

Education increases the productivity and efficiency of workers by increasing the level of cognitive skills possessed by the workforce and to increase their stock of human capital (Schultz, 1960; Becker, 1964; Mincer, 1972). According to them, human capital is the stock of economically productive human capabilities, which is a product of innate abilities and investments in human beings. Examples of such investments include expenditures on education, on-the-job training, health and nutrition. Such expenditures increase future productive capacity at the expense of current consumption. The provision of education is seen as a productive investment in

human capital, which the proponents of the human capital theory has considered as equally or even more equally worthwhile than that in physical capital. In fact, contemporary body of knowledge in the United States of America acknowledges that investment in human capital is three times better than that in physical inputs.

It is not from a diffusion of the ownership of corporation stocks, but from the acquisition of knowledge and skill that produces economic value (Schultz, 1961). Human capital represents the qualitative differences in productivity of workers. Like other sorts of capital it requires a costly investment up-front produces a return and may depreciate. Human capital theorists have established that basic literacy enhances the productivity of workers in low-skill occupations. They further state that an instruction that demands logical or analytical reasoning or provides technical and specialize-knowledge increases the marginal productivity of workers in high-skill or professional positions. Moreover, they believed that the greater the provision of schooling, the greater the stock of human capital in a society and consequently, the greater the increases in national productivity and economic growth. In fact, the human Capital theory lays emphasis on skill acquisition as it affects development. Modern economists gave more importance to education and health as it improves human capital and ultimately increases the economic outputs of the nation (Becker, 1994).

Human capital is regarded as the most important component of sustainable development of a country (Lucas, 1998; Romer, 1989). According to Lucas, physical capital is attained through technological change, human capital through schooling and specialized human capital through learning by doing. Romer (1989) gave a theoretical framework and explanation of the role of human capital in a model of endogenous growth. The average number of schooling has been a convenient proxy of human capital based on Solow's growth model (Mankiw et.al, 1992). Barro (1996) studied about the determinants of economic growth by analyzing 100 countries from 1960 to 1990 and found out that higher growth rate is associated with higher initial levels of schooling and so many other factors. Barro (1991) found out that education has a positive and significant impact on economic growth. Countries with higher human capital have low rate of fertility and higher ratios of physical investments to GDP.

Becker (1930-2014) was one of the most original and path breaking economists of modern times. He was 1992 Nobel laureate in Economics for extending the domain of microeconomic analysis to a wide range of human behaviour and

interaction, including nonmarket behavior. According to him for most people, capital means a bank account, a hundred shares of IBM stock, assembly lines, or steel plants. These are all forms of capital in the sense that they are assets that yield income and other useful outputs over long periods of time. But such tangible forms of capital are not the only type of capital. Schooling, a computer training course, expenditures on medical care, and lectures on the virtues of punctuality and honesty are also capital. That is because they raise earnings, improve health, or add to a person's good habits over much of his lifetime. Therefore, economists regard expenditure on education, training, medical care, and so on as investments in human capital. They are called human capital because people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets. A positive role of education for human capital by modeling the growth of total factor productivity as a function of the level of education is given by Jess Benhabib and Spiegel (1994). Educated and knowledgeable workforce can contribute much to create, implement and adopt new technologies. Thus increased education leads to the enhancement of technological progress. Educated and literate people contribute much to the socio, economic, demographic, cultural and political development of a country.

The dominant model of the demand for education is based on human capital theory. The central idea is that undertaking education is investment in the acquisition of skills and knowledge which will increase earnings. Technological changes and knowledge based economies as a tool to attain economic development goals are studied by (Khefela, 2010). The study also found out that a country's most important crucial factor for economic development is human capital and knowledge and innovation with globalization can bring about high degree of economic development. Human capital indicators like education and employment are crucial elements to knowledge based economy. Later results attempted to allow for differences in returns across persons (indices) or level of education (signals). Statistics have shown that countries with high enrollment/graduation rates have grown faster than countries without.

The United States has been the world leader in educational advances, beginning with the high school movement (1910-1950). Thus in India, education seems to generate economic growth; however, it could be that we have "backward causality" relationship. For example, if education is seen as a luxury good, it may be

that richer households are seeking out educational attainment as a symbol of status, rather than the relationship of education leading to wealth. To advance this assumption, economists have propounded the theory of signaling (or the screening hypothesis) as an alternative model of the demand for education. Economists like Spence (1993), Arrow (1993) and Stiglitz (1975) regarded education as a screen or signal to productivity. The central idea is that the successful completion of education is a signal of ability.

The law of educational demand states that the higher the price of education, the lower the demand owing to substitution and income effects. However, this law may not hold when there is evidence of ostentatious, speculative and inferior educational services. Derived demand is because of enrollment demand. For example, a school employs teachers and builds classrooms to meet the demand created for them by the enrollment. Linked with the concept of demand is that of educational supply. Educational supply refers to the quantity of education in terms of the number of places that institutions of learning are willing as well as ready to offer at a given price over a period. Supply varies over a given period of time or from place to place.

These growth models known as endogenous growth models or theories regarded human capital as an integral part of the development process which was ignored in Solow's model. This theory transformed the neoclassical theory into increasing returns with the introduction of human capital. The introduction of human capital into production function, knowledge, accumulation and the importance to human and physical capital and determinants of technology were also formed in the theory. This model represents human capital by education and on job-the-training and technology. Thus role of human capital can be divided into two broad categories. The first category includes capital as human capital and second category include innovations models.

2.5. An Alternative Approach to Human Capital Theory

Human capital theory is an individualistic approach to education and success. According to this theory, regardless of the circumstances of birth, it is the cognitive power that makes individuals unequal and makes social divisions among them. So, it is not the high social status but the high cognitive ability that determines high life prospects of an individual. The efficient or rich cognitive ability along with good quality education creates efficient human capital. The theory assumes that natural

cognitive power or mind or intellect is the superior power and everybody is not endowed with it uniformly. So rich are rich, because they are richer in terms of cognitive ability and on the other hand, poor are poorer because they are poorer in terms of cognitive ability. The differences in educational achievements will exist even if everyone is furnished with good or quality education (Becker, 1975; Bradley, 2004, Royce, 2016). The theory also highlights the internal and external factors of cognitive ability. The success and failure of an individual are conditioned by the genes which an individual inherits.

The human capital approach to education says that other than ability and education in determining success there are some other factors such as employment, productivity and earnings. The theory also gave importance to personality traits in the field of education, selection of job and allocation of work. There is a widening gap between education and job not because of abundance of deficient human capital but because of lack of job opportunities. This is mainly because of deficient cognitive ability and unwise investment decision in education, training and job related skills. The more skilled and more professionally qualified persons are more in demand because of their high efficiency and productive power. It is also important that educationally regressive sections can be uplifted only by changing their behavior by investing more in education but the theory ignores the problems of resource inequality, social inequality and discrimination.

The alternative approach takes the individualistic and not the broader view of education and education can fairly function only if the society is fair. In a society where social particularities are dominant, education remain externally constrained and unfair. The individuals are more materialistic and not ready to invest their efforts in education because it would not actually produce efficient human capital always and would not provide employment opportunities because that depends on market forces and the availability of work opportunities (Banfield et.al, 1974).

There are factors other than ability and education that determines the success of an individual. Along with person's cognitive ability and education their social background, social network, cultural dispositions, acquired, non-cognitive personality traits are also important in public and private sectors of employment. There are upbringing affects, divided cultural groups in society, existence of advantaged and disadvantaged sections of society in the job market. Along with cultural traits,

personality traits also matter in the selection of job and allocation of work. Physical abilities are more appealing than cognitive abilities. The value parameters are also important as the contributory factors in employability and access to opportunities. The social connectivity of a person is also important as it generates relevant information to be used for progress in various fields. It creates employment opportunities and increases the push and pull factors of social mobility. The place of employment, nature of job and the facilities provided by the employers are known as the situational factors also create more employment opportunities (Durkheim et.al, 1956).

2.6. Economic Growth and Education

Economic growth is a sustained increase over a significant period of time, in the quantity of material goods and services produced in an economy. One important measure of economic growth is change in the per capita income. Education is one of the many elements that influence economic growth and it does so in four main ways. First, education inculcates skills such as typing, accounting teaching, medicine, law, engineering and electronics, which are useful in the productive process (extractive, manufacturing and construction, commercial and service sectors). Second, education imparts knowledge of economics, politics, science, history, arts, geography, philosophy, mathematics and logical reasoning that can contribute to the most important aspects of economic growth such as innovation, adaptation and entrepreneurship. Third, education provides job ethics and attitude conducive to production of goods and services. Finally, education serves as a screening device for selecting or identifying talents in the most efficient manner (Barro, 1991).

Productivity (or economic efficiency) is the output of goods and services per unit of input such as per unit of land (land productivity in an agrarian society where natural resources are the dominant factor of production), per unit of labour (labour productivity in an industrial society), per unit of learning (learning or intellectual productivity in a knowledge-based society) and per unit of all production inputs combined (national productivity often measured by GNP per capita or GDP per capita owing to measurement difficulty in respect of natural capital and human capital). Productivity has to do with efficiency in the allocation and utilization of resources to produce national income. Some inputs or resources are used in order to produce goods and services.

These resources include natural resources (from forest, land, air and sea; renewable and non-renewable), labour, human capital, physical capital, knowledge capital, social capital and so on. One allocates or uses these resources efficiently if it is not possible to reallocate them (that is to say increase the quantity of some goods or services at the expense of other goods or services) without reducing welfare. The relationship between education, human capital and economic growth was studied by (Obradovic, 2009). Education raises the standard of living of the people and is regarded as the primary component of human capital formation and brings about technological changes in the economy. Thus investment in human capital is crucial for countries to attain self-sustained growth and that makes realized through education. Thus education is a good indicator of technological changes and better quality of life of a nation (Catherine, 2011).

2.7. Household Production Function

Households play an important role in an economic system as a producing and consuming unit (Becker, 1965). Becker's contribution was mainly in the field of importance given to households and on Family Economics. The economic importance of household production was recognized in the work of (Reid, 1934). The modern approach to household production was studied by (Becker, 1965). The household derives utility from the children in their family getting healthy and educated. Housing related inputs and household expenditure on education play an important role in demand for inputs and affects the residual income to purchase other inputs (Becker, 1965; Ben 1967). The household consume so many varieties of goods and it is known as the utility function of households. A household production function of the model of the production of child health and education is studied by (Kutty, 2008). The study asserts that households derive utility from their children by spending on the health and education of their child. Household expenditures play an important role in the demand for household inputs and they are ready to spend more on the education and health of their children.

2.8. Education Production Function

An education production function is an application of the economic concept of a production function to the field of education. It relates various inputs affecting a student's learning (schools, families, peers and neighborhoods) to measured outputs including subsequent labour market success, college attendance, graduation rates, and,

most frequently, standardized test scores. The Coleman Report, published in 1966, concluded that the marginal effect of various school inputs on student achievement was small compared to the impact of families and friends (Jagero, 2014). The effects of school resources on students' academic achievement are being investigated in the study of (Arshad, 2010; Jagero, 2013). An analysis of universe of education production function studies was assembled in order to utilize meta-analytic methods to assess the direction and magnitude of the relations between a variety of school inputs and student achievement is explained (Rob, et.al 1996).

2.9. Engel Demand Function

Engel curve describes how household expenditure on goods and services is interrelated to household income. The term is associated its origin with the German statistician (Engel, 1857). This is popularized by (Houthakker, 1952). The theory states that when income increases from the normal level there will be a corresponding increase in the expenditure pattern of a rational household. Increase in income is not proportionate with increase in expenditure on food, and the expenditure on clothing and lodging remain the same but there is a corresponding proportionate increase in the amount of goods and services such as education and health. This is because of the fact that amount and quality of food a family can consume in a month or week is fairly limited in price and quantity.

2.10. Financing of Education

Financing of education constitutes another issue in the economics of education. Economists are particularly interested in issue of sharing the financial burden of education among the beneficiaries. Economists believe that whoever derives more from education should pay more for such education. They want to know what should be the balance between public and private sources of finance. The difference between the social and the private rates of return reflect the degree of public subsidy of education, and since education is generally highly subsidized, there is usually a wide gap between social and-private rates of return. If individuals were expected to contribute a greater share of the costs of education themselves, by means of fees or some other forms of payment, then the gap between the social and the private rates of return would be reduced.

However, there are very few cases where individual students pay the whole of the cost of their education themselves, and thus private rates of return exceed social rates of return (Bray, 2002). In most countries a significant part of the costs of education, particularly at the primary and secondary levels are borne out of general taxation or other government revenue, and pupils receive free schooling or pay low fees. In the case of private schools, fees may be substantial. In fact, they may be the only source of revenue. Nevertheless, in the case of private schools, there is often some degree of public subsidy, either by means of tax concessions for institutions, or direct subventions for teacher salaries.

In most countries school education is predominantly financed and provided by governments. Public funding and provision also plays a major role in higher education. Although there is wide agreement on the principle that education, at least at school level, should be financed mainly by governments, there is considerable debate over the desirable extent of public provision of education. Supporters of public education argue that universal public provision promotes equality of opportunity and social cohesion. Opponents of public provision advocate alternatives such as vouchers (Tilak, 1993). The importance of school education funding policies, its governance, the budgetary responsibilities of schools, distributing school funding, planning of school funding, evaluation of school funding policies, efficiency and equity in school funding and investing teacher quality are studied by (OECD, 2017). The study is followed by report based on chapters and gave stress on the importance of school funding framework in countries, analyzes the strengths and weaknesses of school funding mechanisms and provided recommendations for improving school funding strategies.

2.11. Investment in Education

The importance of education as investment is well explained in the studies of (Walsh, 1935). Education helps in the formation of human capital and money spent on education is regarded as investment. It changes man into manpower. Factors affecting human capital formation are investment in formal education, improved health, on job training, manpower rehabilitation, migration etc. Formal education increases the economic value of human capital by developing the earning power. It also increases the current asset value of human beings. Thus in economic terms, education is itself an investment. It helps to eradicate poverty, ignorance and produce skilled labourers.

It creates awareness among people to lead a better living. With investments in human capital, there are three economic effects.

- a) Increased expenses.
- b) Increased productivity
- c) Return on Investment.

The study of economics of education includes private and social rates of returns to education, human capital and Signaling theories of education, non-pecuniary benefits of education, education and economic development, contribution of education to the economy, measuring educational expenditure, manpower planning, educational planning and human resource development, educational cost, cost analysis, educational production, educational effectiveness and efficiency, cost-efficiency and cost effectiveness, cost-benefit analysis and economics of teacher supply and educational equity. The economic view of education traditionally has employed the human capital framework developed by (Becker, 1964). In this framework, education is viewed primarily as an investment wherein individuals forgo current labour market earnings and incur direct costs in return for higher future wages.

The original theoretical work by (Becker, 1964) spurred a tremendous amount of empirical work, which has generally supported the implications of the human capital model by (Freeman, 1986). As individuals and nations increasingly recognize that high levels of knowledge and skills are essential to their future success, spending on education is increasingly considered an investment into a collective future, rather than simply as individual consumption. However, investment in education competes for limited public and private resources. The challenge of expanding educational opportunities while maintaining their quality and ensuring their equitable distribution is linked to questions of education finance.

Education is seen as an investment because it entails costs in the present and because it increases productive capacity and income (of the educated individual to be sure but also of society in general) in the future. Private returns accrue to individuals, while social returns accrue to the whole society (including the individuals). In most cases, private returns are greater than social returns because governments give more in subsidies than they take away in taxes (Psacharopoulos, 1985). Developed nations around the world invest an average of 6% of their gross domestic product (GDP) in systems of public schooling.

Thus higher productivity of well educated workers is one of the factors that led to higher GDP and higher incomes. There is a strong correlation between GDP and education. It is for this reason that rich countries afford more on education. The national importance of education is based on the significant positive influence it has on individual lives and on the welfare of communities. Education is primarily a way to train children in the skills they will need as adults to find good jobs and live well. But education also has broader social and economic benefits for individuals, families, and society at large. A population that is better educated has less unemployment, reduced dependence on public assistance programs, and greater tax revenue. Education also plays a key role in the reduction of crime, improved public health, and greater political and civic engagement (Psacharopoulos, et.al, 2002). Investment in public education results in billions of rupees of social and economic benefits for society.

Productivity (or economic efficiency) is the output of goods and services per unit of input such as per unit of land (land productivity in an agrarian society where natural resources are the dominant factor of production), per unit of labour (labour productivity in an industrial society), per unit of learning (learning or intellectual productivity in a knowledge-based society) and per unit of all production inputs combined (national productivity often measured by GNP per capita or GDP per capita owing to measurement difficulty in respect of natural capital and human capital). Productivity has to do with efficiency in the allocation and utilization of resources to produce national income. Some inputs or resources are used in order to produce goods and services. These resources include natural resources (from forest, land, air and sea; renewable and non-renewable), labour, human capital, physical capital, knowledge capital, social capital and so on. One allocates or uses these resources efficiently if it is not possible to reallocate them (that is to say increase the quantity of some goods or services at the expense of other goods or services) without reducing welfare (Psacharopoulos, 2002).

Economy-wide, the effect of human capital on incomes has been estimated to be rather significant such that 65% of wages paid in developed countries has been attributed to payments to human capital (educated skilled workers) and only 35% to raw labour (unskilled labour). The higher productivity of well-educated workers is one of the factors that explain higher GDPs and, therefore, higher incomes in

developed countries. A strong correlation between GDP and education is clearly visible among the countries of the world. It is less clear; however, how much of a high GDP is explained by education. In any case, it is also possible that rich countries can simply afford more education. On the other ground, low-income countries might not be able to afford more of quality education (Barbara et.al, 2002).

2.12. Stages of Growth and Investment in Education

Rostow's stages of economic growth model are one of the major historical models of economic growth. It was one of the structuralist models of economic growth developed by W. W. Rostow in 1960. The model postulates that economic growth in five different stages: They are:- (1) The traditional Society, (2) The preconditions for Take-off, (3) The take-off, (4) The drive to maturity and (5) The age of high mass consumption. These stages were designed to tackle a number of issues. The first stage was feudalistic in nature and in the second stage the economy undergoes a process of economic change. The third stage is the stage of dynamic economic growth and in the fourth stage there happened sustained economic growth. The last and final stage is the contemporary comfort. So, for sustained economic growth, the third stage is more important (Rostow, 1959). It is the drive to maturity stage that involves the diversification of the industrial base, multiple industries, and expansion of existing ones and shifts the investment to the social infrastructure such as schools, universities, hospitals etc. Thus, it is in the stage of drive to maturity stage there is the possibility of educational investment.

2.13 Quantity and Quality of Children and Expenditure on Education

The Darwinian argument gave importance to natural selection of the population tend to be dominated by the highly fertile one (Darwin, 1958). The most important Malthusian theory of population also gave importance to the unlimited increase in it unless if it is checked exceeds the subsistence and fewer children falls to adulthood (Malthus, 1933). Malthus does not give importance to quality of children and he believes in the biological capacity. The relationship between quality of children and the parental expenditure on expenditure were not explained in these theories. A reduction in the number of children in families no doubt is regarded as a major representation of them in the future generations and thereby increases investment in education. Thus, all these theories when combined give the idea that it is important to optimize the quantity of children and thereby can optimize quality of

children, their expenditure on education and quantity on other commodities (Becker, 1993).

The households maximize their utility function subject to the budget constraints, the nature of production function with a fixed cost of quality and the shadow price of the quality of the children which in turn depends on the number of children and household's contribution to quality. An exogenous change in the quantity and quality of children would induce further changes through quality and quantity interaction. The income elasticity for quality is greater than quantity of children. Thus, household expenditure per child decreases with increase in the quantity of children. So, there is an inverse relationship between quantity and quality of children. Household's total expenditure is divided among number of children and reduces the quality. This can be extended to the macro level also. There is a negative relationship between population growth and human capital investment in a country (Becker, 1993).

2.14. Quality of Education and Expenditure on Education

Quality in simple terms means the standard of something, how well or bad it is when compared to something other. Education is the most powerful weapon that can change the world for self- enlightenment. Quality of education is regarded as the educational outcome or what is the end result of education. It is the capability of interpreting things in the right way and applying the acquired information gathered in real life situations (Rao, et.al, 2008). It is a necessary component of sustainability of a nation. It encompasses a wide variety of factors like learning resources, technology, program enrolled, modules done, lecturing methodology, attachments, qualifications, co- curricular activities, performance awards, students and lecturers perspective in the institution operating management and also their opinion and appraisal towards education.

Quality of education is important in the sense that what a person acquired through education affects their mind-set and lifestyle and in total, affects their day to day decision making in life. The main pillars of quality of education are: effectiveness, efficiency, equality, relevance and sustainability and these pillars are difficult to attain simultaneously (Hill et.al, 2014). When we mention about quality of education it is important to differentiate between education and schooling. Education provides the development of desirable qualities on people and school is an institution

which provides the services of education. Schooling can be defined as the basis of human fulfillment, agent of social change and transformation and it is a preparation for life. Thus school is the basis for providing and ensuring quality of education for the development of the society and economy (Garira et.al, 2019). Quality of education is a worldwide agenda of education after 2015 (UNESCO, 2014). In schools how the curriculum will be implemented depends on the quality of processes within the school and the quantity and quality of inputs provided by other levels of education. Thus proper utilization provided to schools by other levels of education system helps in the realization of quality of education and improvement of schools (Garira, et.al, 2019).

2.15. Inequality and Education

Education and equity are regarded as the two key important factors in the 21st century as the widely accepted themes by several development agencies. The differences in income and family status of different generations are known as intergenerational inequalities are regarded as an important determinant of intergenerational mobility. If the sum of the degree of inheritability and prosperity to invest in children exceed unity, a compensated increase in the endowment of parents would increase the income of grand children by more than the income of children (Blanden et.al, 2014).

Thus the degree of inheritability and size of endowments are not determined by the biology of human inheritance but by the social organization. The intergenerational mobility depends on so many factors like degree of inheritability of endowments, number of children, consumption, non-human capital transfers to children and random factors. The perfect assortative mating is one of the major determinants of intergenerational mobility. It is the perfect matching in marriage and it affects educational investment positively. But whenever there is imperfect assortative mating parents may compensate it through bequests and gifts (Becker, 1993). The effect of marriage is less obvious than it appears in families. Parents often anticipate the marital sorting of their children.

2.16. Gender and Education

The relationship between gender and education and how gender differences have an impact on educational attainment and achievement across countries are important. Only few growth models explicitly considered the impact of gender

inequality in education. Knowles et.al (2002) extended the Solow model by considering the male and female capital as separate and considered it as imperfectly substitutable factors of production. The study also found out that a more balanced distribution of education among them can bring about a steady state per capita income. The high level of female literacy of a nation helps it to make and sustain a high level of economic growth.

The gender gaps in education and earnings reduce the economic growth mainly through demographic effects. Gender inequality in education leads to high fertility, low economic growth, poverty trap and aggravates the economic condition of the economy. Economic growth narrows gender gap in earnings, lower fertility and advances economic growth. This is possible only through gender equality in educational opportunities (Hussain, 2010). Thus economies should distribute its resources among males and females in the best possible equal manner to promote economic development.

Household Expenditure on School Education in India: A Preliminary Investigation

- 3.1. *Introduction*
- 3.2. *Global Trends in Education Expenditure*
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3.1. Introduction

Human capital in the form of education promotes and raises a country's overall productivity of labour and economic competitiveness. The theory of human capital considered education as not a form of consumption, that only represents costly expenditure from the part of the government but considered as an investment that improves the economic worth of individuals which is called human capital (Schultz, 1960). It is widely accepted that expenditure on education in India is one of the important factors for sustainable development (Rao, 2014).

In India, expenditure on education is incurred in two ways: individual and institutional. Individual expenditure refers to the expenditure made by the students or their parents. So it is also referred to as household expenditure on education. Institutional expenditure is referred to as government or non-government expenditure on education. In India, household expenditure on education is quite sizeable, even households from lower income groups all spend considerable amounts on acquiring education (Tilak, 2002). Even in the case of government primary and upper primary schools, students have to pay the huge amounts of examination and other fees. The

annual household expenditure at primary level is much higher in rural areas compared to secondary, higher secondary and higher education levels. In the urban areas, acquiring primary and higher secondary education is very costly.

Many households do not spend adequately on good clothing for children or on purchase of sufficient number of textbooks and stationery. The Indian government has been spending millions of rupees on primary education with the slogan of Universal Primary Education (UPE) for many years. The government also introduced number of programmes and provided plenty of incentives to improve access to education. Even if the government spends more on education, the problem of quality of education still remains as the most important challenge to Indian education system. Globally also, the countries and development institutions like United nations Educational, Scientific and Cultural Organization (UNESCO) and world bank also made a tremendous effort in the development of education and especially to that of the developing countries of the world (UNESCO, 2020).

3.2. Global Trends in Education Expenditure

It is shown in the Table 3.1 that Norway spends more on education, i.e. 6.6% followed by New Zealand and United Kingdom, i.e.6.3% each. Russia spends least, i.e. 3.4%. The OECD average is 4.9%. Thus it is clear that there are wide differences with respect to education spending as a share of GDP in different countries. All the countries spend more on school education than higher education.

Table 3.1
Education Spending as a Share of GDP in Selected Countries in 2017

Country	% of GDP for School Education	% of GDP for Higher Education	Total
Norway	4.7	2.0	6.6
New Zealand	4.6	1.7	6.3
United Kingdom	4.3	2.0	6.3
United States	3.6	2.6	6.1
Canada	3.6	2.3	5.9
France	3.7	1.5	5.2
OECD average	3.5	1.4	4.9
Spain	3.0	1.3	4.3
Germany	3.0	1.2	4.2
Japan	2.6	1.4	4.0
Italy	3.0	0.9	3.9
Russia	2.4	1.1	3.4

Source: Organization of Economic Co-operation & Development, 2018

In most of the countries, basic education is considered not only as a right, but also the duty and responsibility of the government to ensure it at a certain basic level.

It is no doubt that, the global education expansion in the 20th century resulted in a historical reduction of education inequality to a certain extent (Table 3.1). In the case of education over the countries of the world, there are not only big differences in the case of educational attainment but also the amount of a country's resources which are spent on the investment in this sector. The expenditure on education by the private and public authorities plays a very important role in the progress and development of a nation (Roser, et.al 2016). Total expenditure on education promotes social and economic development. It is seen over the world that the families in low income countries pay more for their child's education and households in many of the developing countries of the world spend a far greater share of average GDP per capita on education than in developed countries (Roser, et.al 2016).

Thus there is a growing commitment and concern of families over the world, for the education of their child. Along with the Millennium Development Goals and the increase in the international capital flows, the prioritization of development assistance for education at all levels and regions can have large distributional effects particularly within low income countries. In the case of education, there are not only big differences in attainment levels across the world, but differences exist in terms of the amount of a country's resources spent on investment in this sector (OECD, 2017). There are differences in terms of different countries spending on education and the percentage of GDP spent for school education and higher education. Public education spending as a percentage of GDP in BRICS Economies in 2007 and 2016 is being compared in Table 3.2.

Table 3.2
Public Education Spending as a Percentage of GDP in BRICS Economies

Country	2007	2016	% change in public expenditure
India	2.6	2.9	11.53
China	3.2	4.3	34.37
Russia	4	3.6	-10.0
Brazil	4.4	5.7	29.54
South Africa	5.5	6.9	25.45

Source: BRICS Joint Statistical Publication on Education Expenditure, 2017

India's education spending do not show a sharp increase and it is very low (2.6 to 2.7 %, only 11.5 percent increase) compared to other BRICS economies. South Africa's spending on education is higher which increased from 5.5 per cent in 2007 to 6.9 per cent in 2016 (25.45 increase). China and Brazil also showed a positive and progressive increase from 2007 to 2016. The education spending as a share of GDP in

selected countries in 2014 and 2015 is being compared in the Table 3.3. Norway's education spending as a share of GDP was 6.20 in 2014, which increased to 6.38 % (2.9 percent increase). Iceland's education spending decreased considerably. Countries like New Zealand, United Kingdom, United States and France also showed a negative change.

Table 3.3

Education Spending as a Share of GDP in Selected Countries in 2014 & 2015

Country	Education spending as a share of GDP(2014)	Education spending as a share of GDP(2015)	% change in public expenditure
Norway	6.20	6.38	2.90
New Zealand	6.40	6.31	-1.40
United Kingdom	6.60	6.23	-5.60
United States	6.20	6.09	-1.77
Australia	5.80	5.95	2.58
France	5.30	5.20	-1.88
Iceland	6.0	3.47	-42.16

Source: Computed from the data of Organization of Economic Cooperation & Development (OECD), 2016

Thus the nature of expenditure on education of the developing and developed countries of the world differs very much in all aspects. As India's expenditure pattern and spending is low compared to the developed countries of the world, it is important to examine the development in the Indian education system.

3.3. Education System in India

After Independence, Indian economy witnessed an increased emphasis on education, as a means of national development. Educational reconstruction was the main focus which was supported by a number of committees and commissions including University Education Commission (1948-49) and the Secondary Education Commission (1952-53). The Education Commission (1964-66), also known as Kothari Commission was appointed to advise the Indian Government on the general principles and policies for the development of education at all stages and in all aspects. It was a comprehensive attempt to review the entire Indian education system and emphasized education as a powerful means to attain national development. The National Knowledge Commission (2009) was assigned to deal with the educational challenges in 21st century. The main aim was to impart quality, access and equity in higher education (Anderson, 2019).

The national policies on education were implemented with a view to prepare a detailed roadmap for implementing the schemes of education. The first National

Policy on Education (NPE) (1968) was under the Indira Gandhi Government and the second by Prime Minister Rajiv Gandhi in 1986. It was revised in 1992 with some modifications. This move was mainly as per the recommendations of Kothari Commission and gave importance to reconstruct the education system by improving quality of education at all stages. The main aim of all these educational policies was to adjust the educational scenario according to the current situation of the economy (Geeta, 2007). The NPE 2019 aimed to transform our nation sustainably into an equitable and vibrant knowledge society by providing high quality education to all. It is based on the foundational pillars like access, equity, quality, affordability and accountability. The policy also aimed to integrate technology in education and provided an integrated yet flexible approach to education. The NPE 2020 aims to transform the Indian education system as a whole by making India a global knowledge superpower. The NPE proposed a national framework for curriculum as a means to meet the needs of India's diversity of geographical and cultural values along with academic components.

To achieve the goal of education for all, a common school system (CSS) was introduced as per the recommendations of Education Commission (1964-66). The neighbourhood schools and alternate schools were also introduced as a part of CSS. The NCE was designed by the National Council for Educational Research and Training (NCERT) in 1975 and subsequently revised in the years 1988, 2000 and 2005. As a part of universalization of elementary education, Sarva Shiksha Abhiyan (SSA) as a flagship programme for India was introduced in 2001. Other initiatives like National Program for Education of Girls at Elementary education (NPEGL) in 2003, Mid-Day Meal Scheme in 1995, Right to Education (RTE) in 2009, Rashtriya Madhyamic Shiksha Abhiyan (RMSA) in 2009, Scheme for Infrastructure Development in Minority Institutes (IDMI), Scheme to Provide Quality Education in Madrasas (SPQEM) were also regarded as milestone developments in India's school education system.

Samagra Shiksha is regarded as an overreaching programme for school education sector extending from pre- school to class 12 to prepare with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes. It subsumes the three schemes such as SSA, RMSA and Teacher education (TE). It is highly true that Indian education

system has made significant progress in recent years particularly in terms of access. The twelfth five year plan (2012-17) gave greater focus on expanding education and improving the quality and access aspects of school education. The expenditure on education has increased rapidly in recent years from Rs.97,000 crores (\$ 11 billion) in 2004-05 to Rs.560,000 (\$63 billion) in 2015-16 according to MHRD budget analyses. When this increase expressed as a percentage of GDP, it is seen that it was 4.1% in 2000-01 down to 3.3% in 2004-05, back up to 4.4% in 2013-14 and down again to 3.3% in 2019-20, according to government figures.

3.3.1. School Education in India

The school education system in India is the largest in the world meeting the needs of over 260 million young people each year. Indian school education system is jointly managed by the national and state levels. Many initiatives have been undertaken from time to time to improve access to quality schooling particularly for the economically and socially disadvantaged sections of the society. India with over 1.5 million schools, over 8.7 million primary and secondary teachers and more than 260 million enrolments is the most complex education system in the world. India is demographically one of the youngest countries in the world and be regarded as the country at the peak of its demand for educational provision. According to the 2011 census, the national literacy rate is estimated as 74 per cent and Kerala with highest 94% and Bihar with 64%. Uttar Pradesh is the most populous state with 17% of the country's population. The literacy rate in Bihar is too low due to high rural population suggesting a high correlation between literacy rate and population (Anderson, et.al, 2019)

As per the Indian constitution, school education was originally a state owned subject, the programmes and policies are implemented at the national level but each state have the complete freedom to make changes in it from time to time. In India school education has at four levels, lower primary (std. I-IV), Upper primary (std. V-VII), high school or secondary education (VIII-X) and higher Secondary (XI-XII). Schools are owned by government and private sectors. There are government schools, government aided schools, private schools and unaided schools in India. There are so many educational initiatives undertaken by the government from time to time for the development of the educational sector. There are so many educational institutions and apex bodies to improve the education sector from time to time (Alex, 2005). There

happened a lot of improvements in the school education system from time to time since independence but still there needs more structural transformations and changes to be brought about looking into the future of Indian education system.

3.4. Public Expenditure on School Education in India

Education has been regarded as one of the important drivers of economic growth. Divergence between the social and private rate of return from education is the rationale for intervention of the government in ensuring equity in opportunity to the population. It is in this context that many governments undertake the responsibility of investing in education (Anuradha et.al, 2008). It is a widely accepted fact that there is a large scope for education improvement in both the central and state level in terms of the quality of publicly funded education in India. In India, education has become an integral part of the planning process since its inception (1951-56). India has made a tremendous increase and expansion in the education sector. The expenditure share of GDP was 0.64% in 1951 slowly rose to 3.36% in 2011.

There are mainly three sources of financing of education in India. They are: (1) financing through central government; (2) state government and non-government sectors such as parents; (3) non- government organizations, banks, philanthropic contributions and (4) as a part of corporate social responsibility activities amongst others. It is the government that is the most responsible authority to invest more on education due to the social returns associated with it. Even though, public investment in social infrastructure is considered as critical to economic growth, government expenditure on education as a percentage of GDP is not considerably increasing in India. There is unimpressive investment in social infrastructure in India due to lack of fiscal space to invest more on critical social infrastructures like education and health (Mukherjee et.al, 2019).

Expenditure on education increases the skill and productivity of the workforce and contributes to economic growth and development of the economy. Government expenditure on education is thus an important indicator of economic progress as it provides an incentive and motivation for other sectors to invest in education (Mukherjee et.al, 2007).

3.4.1. Trends in the Share of Expenditure on Education in GDP

The trends in the share of expenditure on education in total GDP are an important indicator of public expenditure on education (Table 3.4 (a)). It is measured

by various indicators such as GDP at current prices at various years, Expenditure on education, spending on elementary education and education as a total percentage of GDP. Trends in the share of expenditure on education in GDP in India are shown in the Table 3.4(a). From 2006-07 there seems to be an increase in GDP at current prices from Rs.3953276 crores to Rs.5439338 crores in 2007-11. The same trend is also seen in the case of expenditure on education, elementary education spending. It is also seen that there is no much improvement in the case of expenditure on education as a % of GDP. It was 3.5% in 2006-07, reduced to 3.4% in 2007-08, shown a slight increase 3.6% in 2008-09, 4% in 2010-11 and again decreased to 3.7% in 2010-11.

Table 3.4 (a)
Trends in the Share of Expenditure on Education in GDP in India

Year	GDP at current prices (Rs. in crores)	Expenditure on Education (Rs. in crores)	Elementary Education Spending (Rs. in crores)	Expenditure on education as a % of GDP	
				Education	Elementary Education
2006-07	3953276	138727	59755	3.5	1.5
2007-08	4582086	1557684	68883	3.4	1.5
2008-09	5303567	192395	79000	3.6	1.5
2009-10	6108903	244687	95573	4	1.6
2010-11	7248860	297311	119581	4.1	1.6
(2007-11)	5439338	206161	84558.6	3.7	1.5
CAGR	13.0	16.0	15.0	3.0	2.0

Source: Analysis of Budgeted Expenditure, Various Years, MHRD

The expenditure of elementary education as a % of GDP also shown a stable state and it was 1.5% in 2006-07 and same as in 2010-11. Thus it is clear that compared to expenditure on school education and expenditure on elementary education, the expenditure on education as a % of GDP do not show a positive increase. GDP at current prices during these years increased at 13%, expenditure on education at 16%, expenditure on elementary education at 15% and expenditure on education and expenditure on elementary education as a % of GDP increased only at 3% and 2% respectively.

Trends in the share of expenditure on education in GDP are shown in the Table 3.4 (b). The GDP at current prices from 2006-07 to 2015-16 shows that there was an increase from Rs.3953276 crores to Rs.13764037 in the same period. The expenditure on education also increased but at a slow rate, from Rs.138727.03 crores to Rs.587439.5 crores and elementary education from Rs.59755 crores to Rs.169823.8 crores. Thus it is clear that there was a 10% increase in GDP from 2006-07 to 2015-16 and 12% in expenditure on education, 8% increase in the spending of elementary education, 2% increase in the share of education expenditure to GDP and -2%

decrease in elementary education's contribution to total GDP. The percentage share of both elementary education and education also not showed a remarkable improvement. It increased from 3.5% to 4.3% and elementary education from 1.5% to 1.4%. So it is clear from the Table 3.4 (a) and 3.4 (b) that there was a considerable improvement in GDP at current prices, expenditure on education and expenditure on elementary education it shows a stable position and in some cases it shows a negative trend in the case of elementary education.

Table 3.4 (b)
Trends in the Share of Expenditure on Education in GDP in India

Year	GDP at current prices (Rs in crores)	Expenditure on Education (Rs in crores)	Elementary Education Spending (Rs in crores)	Expenditure on education as a % of GDP	
				Education	Elementary Education
2011-12	8736329	337082	137667	3.9	1.6
2012-13	9944013	368133	152499	3.7	1.5
2013-14	11233522	433641	164134	3.9	1.5
2014-15(RE)	12467959	502929	195954	4	1.6
2015-16(BE)	13764037	587440	198865	4.3	1.4
(2012-16)	11229172	445845	169824	3.9	1.5
CAGR	10%	12%	8%	2%	-2%

Source: Analysis of Budgeted Expenditure, Various Years, MHRD

Thus it is a clear cut problem to be taken into consideration that the percentage share of education expenditure to total GDP share need to be increased, only then there will be an improvement in this sector. But compared to these positive trends, the expenditure on education as a per cent of GDP in the case of education and that of elementary education do not show an increase and in some years it showed a negative trend.

3.4.2. Expenditure on Education in India

The expenditure on school education of primary and secondary education is shown in the Table 3.5. Expenditure on primary education is expressed as a percentage of total general government expenditure on education. General government usually refers to local, regional and central governments. Expenditure on primary education (% of government expenditure on education) in India was 28.40 as of 2013.

The highest value over the past 14 years was 37.56 in 2000, while its lowest value was 25.21 in 2010. The percentage of government expenditure to primary education during these years does not show a positive trend, i.e. it is shown an increase and decrease during these years. Expenditure on secondary education is

expressed as a percentage of total general government expenditure on education. General government usually refers to local, regional and central governments. Expenditure on secondary education (% of government expenditure on education) in India was 41.35 as of 2013. The highest value over the past 14 years was 42.89 in 2005, while its lowest value was 34.92 in 2009. Expenditure on tertiary education is expressed as a percentage of total general government expenditure on education. General government usually refers to local, regional and central governments. Expenditure on tertiary education (% of government expenditure on education) in India was 28.53 as of 2013.

Table 3.5
Expenditure on Primary and Secondary Education in India

Year	% of Government Expenditure on Primary Education	Percentage change in primary education expenditure	% of Government Expenditure on secondary Education	percentage change in secondary education expenditure
1999	30.05	0.00	37.80	0.00
2000	37.56	24.99	40.09	6.05
2003	36.08	-3.94	41.67	3.94
2004	36.38	0.83	41.62	-0.11
2005	35.59	-2.17	42.89	3.05
2006	35.38	-0.59	42.50	-0.90
2009	26.68	-24.59	34.92	-17.83
2010	25.21	-5.50	36.99	5.92
2011	26.55	5.31	36.96	-0.08
2012	27.21	2.48	38.73	4.78
2013	28.40	4.37	41.35	6.76

Source: Computed from the UNESCO Institute for Statistics (<http://uis.unesco.org/>), 2015

The highest value over the past 14 years was 36.45 in 2009, while its lowest value was 17.54 in 1999. It also shows a mild increase and decrease over the years. The government spending on education is an important factor determining the resources diverted to education. It is clear from the Table 3.6 that India spends a considerable amount of money for school and higher education sectors.

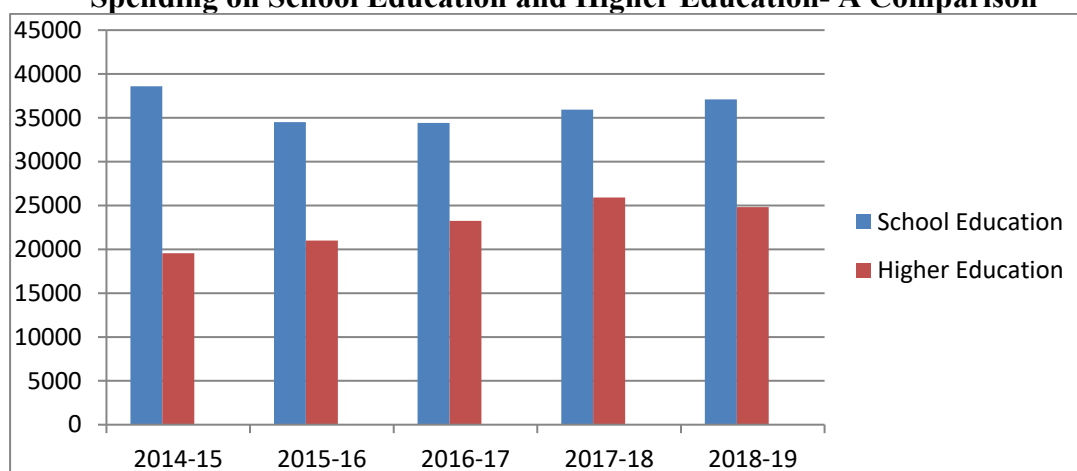
Table 3.6
Spending on School Education & Higher Education- A Comparison

Year	Spending on school education (in crores)	Spending on higher education (in crores)
2014-15	38607	19549
2015-16	34508	21001
2016-17	34415	23237
2017-18	35928	25916
2018-19	37111	24817

Source: Calculated from the Government of India, various issues, Budget Documents, Various Years

It is also apparent that compared to higher education Indian Government spends more on school education and at the same time school education expenditure shown a negative trend, i.e. Rs.38607 crores in 2014-15 to Rs.34508 crores in 2015-16, Rs.34415 crores in 2016-17 and shown an improvement in the years 2017-18 and 2018-19 to Rs.35928 crores and Rs.37111 crores respectively. India's spending comparison on school and higher education is given in the Figure 3.1. India spends more on school education than higher education. In 2014-15, spending on school education was 38,607 crores which were lowered to 37,111 crores in 2018-19. The spending on school education is not steadily improving over the years and the government spending on higher education is steadily improving over these years.

Figure 3.1
Spending on School Education and Higher Education- A Comparison



Source: Calculated from the Government of India, Budget Documents

Thus even though the government is spending more to the school education sector, the amount spent for each year on school education compared to higher education decreased from 2014-15 to 2018-19. Thus the resources the government devoted to school education sector must undergone a change.

The Public Expenditure on Education as a Percentage of GDP in India in various years is shown in the Table 3.7. The total expenditure on education by education and other departments from 1951-52 to 2014-15 showed a tremendous increase, ie, Rs. 64 crores to Rs.502929.34 crores. The expenditure on education as a % of GDP which was 0.64% in 1951-52 increased to 4.04% in 2014-15. The expenditure on education as a % of GDP and GSDP is shown in the Table 3.7. The total expenditure on education by education and other departments showed a tremendous increase over the years 1951-52 to 2014-15. It increased to Rs.64.46

crores to Rs.502929.34 crores during the same period. The percentage change in the total expenditure on education shows that the increase is not in a smooth and steady manner. The increase was fast and steady during the initial years and it showed a decline after 2000-01. The percentage change shows that public expenditure increased much faster rates from 1951-52 to 2000-01. After that it showed a decline then a slight increase and decrease showing that public expenditure do not increased at a faster rate.

Regarding the expenditure on education by education and other departments as a per cent of GDP also there was not much impressed progress. It was 0.64 in 1950-51 and increased to 4.04 per cent in 2014-15. The percentage change also shows that in some years the increase was negative and even if there is some increase in some years the pace was very slow indicating the importance of increasing the share of education as a per cent of GDP.

Table 3.7
Public Expenditure on Education as a Percentage of GDP in India

Year	Total Expenditure on education by Education & other Departments (Rs crore)	Percentage change in total expenditure on education	Expenditure on education by Education & other Departments as % of GDP	Percentage change in total expenditure on education as a % of GDP
1951-52	64.46	0.00	0.64	0.00
1960-61	239.55	270.47	1.48	131.25
1970-71	892.36	272.51	2.11	42.56
1980-81	3884.20	335.27	2.98	41.23
1990-91	19615.85	405.01	3.84	28.85
2000-01	82486.48	320.50	4.14	7.81
2005-06	113228.71	37.26	3.34	-19.32
2006-07	137383.99	21.33	3.48	4.19
2007-08	155797.27	13.40	3.40	-2.29
2008-09	189068.84	21.35	3.56	4.70
2009-10	241256.02	27.60	3.95	10.95
2010-11	293478.23	21.64	4.05	2.53
2011-12	333930.38	13.78	3.82	-5.67
2012-13	368132.87	10.24	3.70	-3.14
2013-14 (RE)	433640.59	17.79	3.86	4.32
2014-15(BE)	502929.34	15.97	4.04	4.66

Source: Ministry of Human Resource Development & Analysis of Budgeted Expenditure, various years

3.4.3. Intra-Sectoral Allocation of Public Expenditure on Education

Government spends more on elementary and secondary education altogether. But the importance and the share to these sectors showed a slow decline during the same period and the importance to higher education and technical education showed a mild increase. The share of elementary education was 50.91% in 2001-02 decreased

to 44.59% in 2013-14 is presented in the Table 3.8. The share of secondary sector also decreased from 33.80% to 24.86% in the same period. The share of higher education increased from 11.34% to 15.29%. The importance of technical education also improved progressively during the same period.

It is also seen that elementary education and its share despite its decline occupies almost half of the per cent of the total expenditure devoted to whole education system. In the case of secondary education it is also seen that it is about just half of the expenditure for elementary education. It is also seen that as years' changes the discrepancy in elementary and secondary education went on decreasing.

On the other hand, the importance given to university and higher education and technical education also improved over the years. Household expenditure on education is an important component of economic growth and thus sustainable development. In India, household expenditure on education forms an important component of education expenditure and it is also known as parents investment on education. The items included in expenditure of school education includes tuition fee, exam fee, other fees and & payments, books & stationary, uniform, transport, private coaching and other expenses.

Table 3.8
Intra Sectoral Allocation of Public Expenditure on Education in India

Years	Elementary Sector	Secondary Sector	University & higher education	Technical Education	Other Sector including adult education etc.
2001-02	50.91	33.80	11.34	2.32	1.64
2002-03	49.12	34.91	11.95	2.42	1.59
2003-04	49.57	34.95	11.61	2.28	1.59
2004-05	51.45	30.13	11.67	3.82	2.93
2005-06	46.56	25.80	19.31	7.96	0.89
2006-07	45.17	23.27	19.30	11.98	0.28
2007-08	44.62	22.98	24.47	7.67	0.26
2008-09	42.47	24.24	24.30	8.79	0.20
2009 -10	39.63	25.87	23.59	8.91	2.0
2010-11	42.09	24.31	21.34	11.95	0.31
2011-12	44.66	25.62	16.14	13.28	0.30
2012-13	45.21	25.19	14.70	14.62	0.28
2013-14	44.59	24.86	15.29	14.95	0.31

Source: Analysis of Budgeted Expenditure on Education, MHRD, Government of India, various issues

The average annual item- wise expenditure per student in rural and urban areas shows that household expenditure on education is much higher in urban areas than in rural areas (Nair, 2004)

3.5. Household Expenditure on School Education in India

The studies on household expenditure on education in India indicate that there is nothing like free education in India. The cost parents incurred on their child's education are of three types. These are direct, indirect and opportunity costs. Fees & transport form the most important item of expenditure at any levels of education. These are known as the direct cost of education. Indirect costs are expenses which are not considered as the part of direct learning process. Opportunity costs are the cost that forego to participate in the learning process (Tilak, 2000). There is an acute shortage of resources in the education sector in India. India's total public expenditure on education as a percentage of GDP also declined. Thus it is the duty of the government to provide more incentives to rural households and making education more affordable at each level of education (Rao, 2014).

Over the last two decades, there was a greater emphasis on literacy and promoting primary education through schemes such as Sarva Shiksha Abhiyan (SSA) and it made a tremendous impact on household spending on education. It has increased considerably and increased by 9% per annum, while at the same time the overall consumer market grew at 6% annum. The top three education markets in India are Maharashtra, Uttar Pradesh and Tamil Nadu. Kerala the top literate state stands the seventh position in the education market, which shows that there is no relation between literacy and spending on education.

There are rural urban differences and gender differences to some extent. One of the most promising factors to increase the household spending on education was no doubt, the growth of private institutions and the high preference of parents towards these over government sector especially in the school education sector in India (Tilak, 2000). In spite of the adequate number of government schools in India, more than one third of the elementary school students are the private sector in 2014-15. According to District Information System for Education (DISE) data, about 75% of the schools in India at the elementary level are in the government sector, in 2014-15, showing the importance of government in providing education. As per the Ninth Annual Status of Education Report, the enrollment in the private sector (6-14 age groups) increased considerably, 18.2% in 2007 to 29% in 2013.

3.5.1. Item-wise Expenditure on Education

In terms of average spending per household, the inequality between the rich and the poor is evident. The rich spend more on higher education than the poor and the rich- poor divide in terms of spending on education is stronger in urban India, an urban household spends 3-4 times more than a rural household. Thus in India, it is clear that the education system has huge potential for investment, there is a strong need to revamp the system to meet the desired skill requirements for economic growth as well as the aspirations of parents (Tilak, 2006). Thus in the case of school education at all levels there was an increase in the growth rate of household expenditure on education than higher education.

Average item- wise expenditure (Rs.) per student in rural areas is shown in the Table 3.9. From 1995-96 to 2012-13 there were a substantial increase in the items of expenditure like tuition fees, exam fee, other fee and payments, books and stationery, uniform, transport, private coaching and other expenses. In 1995-96, in case of primary and secondary education books, stationery and uniform hold the major share of household expenditure. In the case of higher secondary education, exam fee, other fees & private coaching also are the major expenses. In 2012-13, apart from these items transportation, private coaching and tuition fee are also considered as the major items of expenditure. This clearly shows that there is a shift from the priority of households regarding different items of expenditure on education and these requirements of education have shown a change over years.

In the case of higher education, the major item of household expenditure on education in 1995-96 was books and stationery, but it was tuition fee among the household items of expenditure in 2012-13. In urban areas tuition fee and transportation are also included in the major items of expenditure. Urban households in 1995-96 spent more on tuition fee, exam fee, books and private coaching. In 2012-13, the amount spent on these items increased, and tuition fee, books and private coaching occupied the major share of expenditure. This clearly shows that the expenditure on education by the urban households is entirely different from that of rural households (Table 3.10). In the case of primary education of urban households, the major item was tuition fee over these years and in case of secondary education, the households spent more for books and stationery in 1995-96 and it changed to tuition fee in 2012-13.

Regarding higher secondary education, in 1995-96, it was private coaching which occupied major share but in 2012-13 it was tuition fee. In the case of higher education, the major item of household expenditure on education in 1995-96 and 2012-13 was tuition fee. Thus it is clear that the items of expenditure on education at different levels and different categories differ over time as per the requirements of the society. The different items of expenditure on education at all levels from primary to higher education comparatively from 1995-96 to 2012-13 showed a tremendous improvement and increase. In the case of primary education in 1995-96 and 2012-13 the major item was tuition fee (27.67%) and (42.30%) respectively. But in the case of secondary education it was books and stationery, 25.40% in 1995-96 but tuition fee, 39.95% in 2012-13. It is also clear that in the case of higher secondary and higher education also in both years tuition fee occupies the major form of expenditure. Thus comparatively, when looking into the different items of education expenditure tuition fee forms the major form of expenditure. The average annual expenditure in general, technical and vocational education shows that expenditure on general education is much lower than that of vocational and technical/professional education. Households spent more on technical/ professional and vocational education than general education and it increased considerably from 2007-08 to 2014.

Table 3.9
Average Item- wise Expenditure (Rs) per Student in Rural Areas

Level of Education	Tuition Fee	Exam fee, other fees & Payments	Books & stationary	Uniform	Transport	Private coaching	Other Expenses	Total
1995-96								
Primary Education	31 (10.43)	29 (9.79)	102 (34.34)	82 (27.60)	11 (3.70)	23 (7.74)	19 (6.40)	297 (100)
Secondary Education	36 (5.63)	61 (9.53)	246 (38.44)	170 (26.57)	18 (2.81)	71 (11.09)	38 (5.93)	640 (100)
Higher Secondary	73 (6.18)	140 (11.85)	423 (35.82)	212 (17.95)	87 (7.37)	182 (15.41)	64 (5.42)	1181 (100)
Higher education	375 (16.35)	414 (18.04)	680 (29.64)	101 (4.40)	395 (17.22)	154 (6.71)	175 (7.63)	2294 (100)
2012-13								
Primary Education	335 (26.05)	170 (13.22)	288 (22.40)	214 (16.64)	123 (9.56)	93 (7.23)	63 (4.90)	1040 (100)
Secondary Education	403 (20.83)	226 (11.68)	524 (27.08)	296 (15.30)	147 (7.60)	257 (13.28)	82 (4.23)	1935 (100)
Higher Secondary	1089 (23.89)	683 (14.98)	1101 (24.15)	440 (9.65)	357 (7.83)	699 (15.33)	189 (4.15)	4558 (100)
Higher education	3619 (37.14)	1878 (19.27)	1739 (17.85)	221 (2.23)	1205 (12.37)	750 (7.69)	332 (3.41)	9744 (100)

Note: Figures in parenthesis shows percentage

Source: Computed from NSS 52nd round Report No.439 (52/25.2/1), 72nd Round NSS KI (71/25.2)

Households spent Rs.2461 in 2007-08 and it increased to Rs.6788 in 2014 for general education. In the case of technical/professional education it was Rs.32112 and Rs.62841 over the same years. In the case of vocational education it was Rs.14881 and Rs.27676 respectively during the same time period. Average expenditure per student pursuing general education at different levels is shown in the Table 3.10.

Table 3.10
Average Item- wise Expenditure (Rs) per Student in Urban Areas

Level of Education	Tuition Fee	Exam fee, other fees & Payments	Books & stationary	Uniform	Transport	Private coaching	Other Expenses	Total
1995-96								
Primary Education	318 (27.67)	117 (10.18)	223 (19.41)	231 (20.10)	93 (8.01)	125 (10.88)	42 (3.65)	1149 (100)
Secondary Education	316 (22.80)	148 (10.68)	352 (25.40)	306 (22.07)	97 (6.99)	245 (17.67)	59 (4.26)	1523 (100)
Higher Secondary	397 (19.85)	223 (11.15)	307 (15.36)	307 (15.36)	114 (5.70)	560 (28.01)	91 (4.55)	1999 (100)
Higher education	931 (29.05)	515 (16.07)	865 (26.99)	74 (23.09)	325 (10.14)	400 (12.48)	94 (2.93)	3204 (100)
2012-13								
Primary Education	2473 (42.30)	945 (16.16)	774 (13.24)	434 (7.42)	627 (10.72)	438 (7.49)	155 (2.65)	5846 (100)
Secondary Education	2645 (39.95)	839 (12.67)	965 (14.57)	476 (7.19)	573 (8.65)	936 (14.13)	186 (2.80)	6620 (100)
Higher Secondary	4280 (36.25)	1443 (12.22)	1630 (13.80)	575 (4.87)	689 (5.83)	2810 (23.80)	379 (3.21)	11806 (100)
Higher education	4673 (37.94)	2261 (18.36)	2001 (16.2)	172 (1.39)	1389 (11.27)	1405 (11.40)	413 (3.35)	12314 (100)

Source: Computed from NSS 52nd round Report No.439 (52/25.2/1) & 72nd Round NSS KI (71/25.2)
Figures in parenthesis shows percentage

Compared to rural areas the expenditure at all levels are very much high. The differences in male and female are also high at all levels. At the school level, expenditure is more at the higher secondary and secondary levels. The expenditure on school education in the urban areas is more than double at the rural areas. In the case of higher education, this difference is not much wider compared to that of school education. In the case of school education, the differences in male and female expenditure at different levels are comparatively high compared to that of higher education. The average annual expenditure per student pursuing general education for different items of expenditure is given in the table. Households in urban areas spent more on different items of expenditure than the rural households. Both in rural and urban areas households spent more on male than female population. Uniform, books,

private coaching & stationery occupies major share by households both in rural and urban areas. The household spend differently for different items of expenditure but they spend more on uniform followed by tuition fee and books and spend least on other expenses and transport.

Table 3.11
Average Expenditure per Student Pursuing General Education in India in 2012

Gender	Primary	Upper Primary	Secondary	HS	Graduate	PG and above	Diploma
Rural							
Male	3061	3603	5568	9820	11306	13017	15209
Female	2512	2813	4534	8012	11813	16715	10706
Person	2811	3242	5100	9031	11527	14604	13422
Urban							
Male	10604	11864	13781	21681	17480	19090	23040
Female	9489	10940	13284	18442	16161	16565	21249
Person	10083	11446	13547	20179	16771	17744	21947
Rural + Urban							
Male	4895	5775	7805	13511	13324	15417	16920
Female	4273	4922	7049	11509	13649	16641	14918
Person	4610	5386	7459	12619	13478	15999	15997

Source: Computed from NSS 71st Round (2014), NSS KI (71/25.2):

Thus different items of expenditure requires in different quantities to household spending on education. Proportion of students incurring expenditure on different items (as % of corresponding estimated number of students of sector-sex) is shown in the Table 3.12.

Table 3.12
Proportion of Students Incurring Expenditure on Different Items in India 1995

Item of Expenditure	Rural			Urban			Rural+ urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Tuition fee	16.7	12.5	15.0	48.8	43.5	46.3	25.5	22.8	24.4
Exam fee	64.5	59.9	62.7	64.9	63.3	64.2	64.6	61.1	63.2
Other fee & payments	60.1	57.1	58.9	61.0	59.9	60.5	60.4	58.0	59.4
Books	80.6	79.1	80.0	90.0	88.7	89.4	83.2	82.3	82.8
Stationery	97.5	97.1	97.3	97.8	97.8	97.8	97.6	97.3	97.5
Uniform	47.2	49.4	48.1	70.1	72.1	71.0	53.5	57.0	54.9
Transport	8.8	6.1	7.8	17.0	17.3	17.2	11.1	9.9	10.6
Private coaching	14.1	12.6	13.5	29.6	25.2	27.6	18.4	16.8	17.7
Other Expenses	51.0	48.4	9.0	48.0	47.7	47.9	50.2	48.2	49.3

Source: NSS (52nd Round) 1995-96, Report No.439 (52/25.2/1)

Households in urban areas spent more on different items of expenditure than the rural households. Both in rural and urban areas households spent more on male than female population. Among the items of expenditure stationery, books, exam fee and other fees are the major items of expenditure. There exist rural urban differences,

gender differences and item wise differences in terms of student expenditure on education in India. India is one of the world's largest economies with more number of youth populations. The households are ready to spend for their children irrespective of their financial background.

In India, the consumer expenditure increases from year to year and education is one among the important items for which people spends more.

3.6. Per-capita Spending on Education in India

Consumer spending on different items also known as personal consumption expenditure (PCE) is a good indicator of the financial health of an economy. The consumer spending per capita on various items of expenditure is given in the Table 3.13. The total per capita spending of consumer is Rs.77085 in 2017-18. The consumer spends more on groceries (27.88%) followed by housing (17.24%) and transportation (16%). Expenses for clothing is Rs.5485(7.12%), health (4.90%) and education (4.27%).It is clear that consumer spends more on meeting the day to day expenses such as groceries (27.88%), housing (17.24%) and transportation (16%). Education expenses (4.27%) are almost as important as health (4.90%) and clothing (7.12%).

Table 3.13
Consumer Spending Per Capita in India in 2017-18

Items of consumer expenditure	Amount spent to each item of expenditure	% of expenditure to each item of expenditure
Groceries	21491	27.88
Housing	13293	17.24
Transportation	12333	16.0
Clothing	5485	7.12
Health	3774	4.90
Discretionary	3765	4.88
Education	3292	4.27
Communication	1465	1.90
Miscellaneous	12186	15.80
Total	77085	100

Source: Ministry of Statistics & Programme Implementation (MoSPI) – 2(018)

Apart from these major items people are also willing to spend on discretionary items 4.88% and miscellaneous expenses also form a major part, 15.80% of total expenses.

3.6.1. Average Household Expenditure on Education in India

Expenditure (Rs.) per student on education relating to basic course during the current academic year in 2017-18 (all- India) is shown in the Table 3.14. There are gender differences in terms of the average spending on education; the spending on

male is grater in rural and urban areas. Regarding the area wise expenditure, urban expenditure per student is more than that of rural areas. Regarding the type of courses, professional and technical courses show more expenditure than general courses and in that also, expenditure on males and expenditure in urban areas are greater than females and rural areas. The male female differences in terms of education expenditure regarding courses can be seen everywhere whether rural or in urban areas. The expenditure in urban areas is almost double as that in rural areas regarding all courses and regarding gender. Thus expenditure per student per course clearly indicates the rural- urban differences, gender differences in terms of expenditure on education.

The percentage distribution of average expenditure relating to basic course per student pursuing general course during by item of expenditure is shown in the Table 3.14. In rural and urban areas the major item of expenditure includes course fee including tuition fee, examination fee, development fee & other compulsory payments. Books, stationery & uniform, transport, private coaching and other expenses occupy the next positions respectively. Regarding the different items of expenditure also, there exists gender differences and area differences. The average expenditure (Rs) relating to basic course per student pursuing general course during the academic year for each level of current attendance is seen in the Table 3.15.

Table 3.14

Expenditure per Student on Education in Basic Course in 2012

Type of course	Average Expenditure (Rs)		
	Male	Female	Person
Rural			
General course	5579	4812	5240
Technical/ professional course	32376	31622	32137
Any course(general/ technical/ professional)	6362	5277	5887
Urban			
General course	17123	15282	16308
Technical/ professional course	68700	58120	64763
Any course(general/ technical/ professional)	21381	17978	19893
Rural+ Urban			
General course	8797	7742	8331
Technical/ professional course	51844	47421	50307
Any course(general/ technical/ professional)	10721	8955	9948

Source: Computed from NSS (75th Round, 2017-18), NSS KI (75/25.2)

In rural areas, at the school level, the expenditure on higher secondary education is more and that of males are more than that of females. The expenditure is lowest in case of primary education. In the case of expenditure on education after school education, expenditure on post-graduation & above courses is more. The expenditure is lowest in case of diploma/ certificate course below graduation. In urban areas, the amount spent on all levels of education shows a tremendous increase than that of rural areas.

At the school level, the expenditure on higher secondary education is more and that of males are more than that of females. The expenditure is lowest in case of primary education. In the case of expenditure on education after school education, expenditure on diploma/certificate course below graduation shows much increase than that of other sectors. The expenditure is lowest in the case of graduation. The average expenditure per student pursuing general Education at different levels of education is given in the Table 3.16 (b).

Table 3.15

Percentage Distribution of Average Expenditure per Student Pursuing General Course -2016

Item of expenditure	Percentage		
	Male	female	Person
Rural			
Course fee including tuition fee, examination fee, development fee & other compulsory payments	43.9	41.5	42.9
Books, stationery& uniform	25.3	26.6	25.9
Transport	13.6	14.0	13.8
Private coaching	11.1	11.4	11.2
Other expenses	6.1	6.6	6.3
All- items	100	100	100
Urban			
Course fee including tuition fee, examination fee, development fee & other compulsory payments	57.5	57.3	57.4
Books, stationery& uniform	15.0	15.9	15.4
Transport	10.2	10.9	10.5
Private coaching	12.9	11.5	12.3
Other expenses	4.4	4.3	4.4
All- items	100	100	100
Rural + urban			
Course fee including tuition fee, examination fee, development fee & other compulsory payments	51.3	50.2	50.8
Books, stationery& uniform	19.8	20.7	20.1
Transport	11.7	12.3	12.0
Private coaching	12.1	11.5	11.8
Other expenses	5.2	5.3	5.2
All-items	100	100	100

Source: Computed from NSS (75th Round, 2017-18), NSS KI (75/25.2)

In the case of expenditure on education after school education, expenditure on diploma/certificate course below graduation shows much increase than that of other sectors. The expenditure is lowest in case of graduation. Expenditure on education is lower in the case of primary and upper primary education. The total average expenditure considering all levels of education, rural, urban, male and female are equal to Rs.8331. This clearly shows that there are wide differences with respect to average expenditure on education at rural and urban areas and males and females. Thus the average expenditure per student at different levels of education at school education and higher education shows how much the households spend for their child at different stages of education.

Table 3.16 (a)

Average Expenditure per Student at Different Levels of Education in 2016

Level of Attendance	Average Expenditure (Rs)		
	Male	female	Person
	Rural		
Pre-Primary	5879	5378	5655
Primary	3780	3250	3545
Upper primary/ Middle	4267	3570	3953
Secondary	6154	5479	5856
Higher secondary	9943	8106	9148
Diploma/ certificate below graduate	8017	9228	8545
Diploma/ certificate graduate and above	13386	11579	12415
Graduate	11748	11993	11845
Post graduate & above	16174	15368	15827
All	5579	4812	5240
	Urban		
Pre- primary	15370	13433	14509
Primary	14000	12878	13516
Upper Primary/ Middle	15986	14537	15337
Secondary	18548	16210	17518
Higher secondary	25887	21081	23832
Diploma/ certificate below graduate	35785	10189	22281
Diploma/ certificate graduate and above	27198	10543	19979
Graduate	19241	17669	18485
Post graduate & above	20369	20515	20443
All	17123	15282	16308

Source: NSS (75th Round, 2017-18), NSS KI (75/25.2)

It is shown from the Table3.16 (b) that at the school level, the highest average expenditure per student is at the higher secondary level and the lowest is at the primary level. Regarding higher education, the highest expenditure is for post graduate and above courses and the lowest expenditure is for diploma and certificate courses below graduation. So it is important both from the part of Government and

household level to increase more resources for education to increase its expenditure and thereby increasing the quality of human capital. So it is understood from the above table and the analysis of household expenditure on school education in India that household invests less for female compared to male and there are rural urban differences in terms of household investment.

Table 3.16(b)
Average Expenditure per Student at Different Levels of Education in 2016

Level of Attendance	Average Expenditure (Rs)		
	Male	female	Person
	Rural + urban		
Pre- primary	9475	8405	8997
Primary	6365	5591	6024
Upper Primary/ Middle	7273	6367	6866
Secondary	9516	8376	9013
Higher secondary	15077	12221	13845
Diploma/ certificate below graduate	14197	9510	12045
Diploma/ certificate graduate and above	18411	11296	14823
Graduate	14288	14313	14264
Post graduate & above	18103	18119	18110
All	8797	7742	8331

Source: NSS (75th Round, 2017-18), NSS KI (75/25.2)

From the table 3.16 (b) it is evident that for pre- primary education, Rs.8997 is spent, for primary education it is Rs.6024, for upper primary education it is Rs.6866, for secondary education it is Rs.9013 and for higher secondary education it is Rs.13845. The expenses for diploma course below graduate are Rs.12045, diploma course above graduate are Rs.14823. The expenditure for graduate courses is Rs.14264 and post-graduation and above are Rs.18110. The average expenditure for all courses is Rs.8331. It is also seen that acquiring primary education is expensive in India. At all levels of school education it seems that educational expenses are high. It indicates the importance of argument against free education in India. Even the poor have to pay for the education of their child as the rich do for their child.